The Price-Anderson Act: A Constitutional Dilemma

John Galiette
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I. INTRODUCTION

The pressing need for expanded energy sources has stimulated the proliferation of nuclear power plants and evoked heated debate concerning their benefits, hazards, and waste disposal problems. A prime source of contention in this debate has been the Price-Anderson Act, which sets a $560 million ceiling on the total amount of damages recoverable by the victims of a nuclear accident. Ralph Nader, for example, has commented that "in the history of common law in the United States it has not been our practice to . . . limit liability in one industry," concluding that "the people of this country should not have to expose their assets to risk" in order to support the nuclear power industry.

The constitutionality of Price-Anderson has been attacked in only two cases. In Conservation Society of Southern Vermont v. AEC, environmental groups opposed to the spread of nuclear power facilities asserted that the Act contributed to the construction and operation of such facilities in violation of their interests, and requested the court to declare the Act unconstitutional under the due process clause of the Fifth Amendment. The district court dismissed the action for lack of justiciability, and the decision was not appealed.

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1 See Great Nuclear Debate, TIME, Dec. 8, 1975, at 36; How Safe is Safe Enough?, N.Y. TIMES MAG., June 20, 1976, at 54.
3 Quoted in [1977] 7 ENVIR. REP. (BNA) 1915.
5 U.S. CONST. amend. V reads: "No person shall . . . be deprived of life, liberty, or property, without due process of law. . . ."
6 Conservation Society of Southern Vermont v. AEC, No. 19-72 (D.D.C. Apr. 16, 1975),
In Carolina Environmental Study Group v. AEC, a group of citizens claimed to be injured by the operation of a nuclear power plant near their homes in North Carolina and brought suit against the AEC and Duke Power Company, a nuclear utility, seeking a declaration that Price-Anderson's limitation of liability unconstitutionally denied them both due process and equal protection of the laws, as guaranteed by the Fifth Amendment. Judge McMillan held for the plaintiffs, and the case is now before the United States Supreme Court.

Since no nuclear incidents requiring the invocation of Price-Anderson's limited remedies have occurred, plaintiffs challenging the constitutionality of the Act have been forced to base their claims on harms other than inadequate compensation. Claimants in both Vermont Society and Carolina Study Group alleged the presence of injuries resulting from the proliferation of nuclear power plants—injuries due to a constant exposure to minor harms such as continuous emissions of low levels of radiation and small scale ecological changes near the facilities, as well as injuries based on the fear of a smaller catastrophe such as a "core melt" or major radiation leak which would contaminate vast tracts of land and people. The Vermont Society plaintiffs focused on the general detrimental effect of these injuries on society as a whole, while the Carolina Study Group plaintiffs argued the particular detrimental effect on themselves personally. In addition, the Vermont Society claimants emphasized Price-Anderson's role in fostering the construction of harmful nuclear power plants, while the Carolina Study Group claimants emphasized the inadequacy of the Act as a tort remedy for nuclear injuries. These varying approaches profoundly affected the judicial responses to the claims. The Vermont Society suit was


8 Id. at 205.
9 U.S. Const. amend. V.
10 The equal protection guarantee applied to the states by the Fourteenth Amendment is applicable to the federal government through the Due Process clause of the Fifth Amendment. Johnson v. Robison, 415 U.S. 361, 364 n.4 (1974); Bolling v. Sharpe, 347 U.S. 497, 499 (1954).
11 This case was decided by the Supreme Court in June. Duke Power Co. v. Carolina Environmental Study Group, 46 U.S.L.W. 4845 (1978). Although this article was written prior to the decision, it substantially agrees with the Court's reasoning.
perceived as questioning the soundness of a congressional policy and so fell beyond the permissible scope of judicial review; the *Carolina Study Group* case was seen as questioning the validity of a legislatively-imposed tort remedy, thereby falling within traditional court concerns.

This article will utilize the two cases as a framework for analyzing the constitutionality of the Price-Anderson Act. The article will first trace the legislative history of Price-Anderson. It will then analyze the constitutionality of the Act as investigated in the two lawsuits. Finally, the article will compare the statutory recovery mechanism provided by Price-Anderson with the common law mechanism which it supplants.

II. THE PRICE-ANDERSON ACT IN CONGRESS

From its legislative birth the Price-Anderson Act has been conceived as providing both a tort recovery mechanism for nuclear accident victims and an incentive for the development of a private nuclear industry. Prior to 1954, nuclear research and development was conducted under military supervision pursuant to the Atomic Energy Act of 1946. With passage of the Atomic Energy Act of 1954, nuclear policy shifted, emphasizing private investment in nuclear energy programs under rigid federal regulatory control and licensing. Soon after the enactment of this legislation, however, the unwillingness of private corporations to subject their assets to the possibly astronomic liability claims of those injured by a nuclear accident became apparent, as did the reluctance of the insurance companies to provide coverage for more than a fraction of the total estimated liability. In 1957, Congress enacted the Price-Anderson Act in an attempt to promote the private development of atomic energy.

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\* S. REP. No. 296, 85th Cong., 1st Sess., reprinted in [1957] U.S. CODE CONG. & AD. NEWS 1803, 1803. Although Congress believed unlimited liability was not "the most important deterrent—that appears to be the current lack of economic incentive," id. a staff attorney for the AEC later wrote that it was "well recognized by all parties" that unlimited liability was a "substantial deterrent, even if not a 'roadblock,' to the fledgling [private] nuclear power industry." However, it was believed that its emphasis might cause public apprehension as to the safety of nuclear power. Green, *Nuclear Power: Risk, Liability, and Indemnity*, 71 Mich. L. Rev. 479, 490 (1973). 
energy by removing the threat of unlimited liability.\textsuperscript{18} However, establishing an incentive to nuclear power was not Congress' sole purpose in enacting the Act. The legislation was also designed to protect the public by providing funds for payment of any liability claims arising from a nuclear incident.\textsuperscript{19} Congress sought to ensure that some recovery fund be available to claimants even if the nuclear user were left with few or no assets following an accident.\textsuperscript{20} This dual purpose exemplifies the congressional perception of the Act as both a remedy and a policy.

Price-Anderson initially imposed a ceiling on a nuclear user’s potential liability for injuries resulting from the operation of atomic facilities\textsuperscript{21} equal to the maximum amount of insurance coverage privately available plus $500 million in additional government indemnification.\textsuperscript{22} This limitation applied only to those licenses to be issued before August 1, 1967, a ten-year period during which Congress hoped additional information on nuclear energy could be obtained.\textsuperscript{23} Congress based its authority to enact this legislation on several of its constitutional powers.\textsuperscript{24} The lawmakers reasoned that interests of national security\textsuperscript{25} were involved in the policy decision to develop the private nuclear industry, and that the bankruptcy clause\textsuperscript{26} empowered them to act to limit the victims’ remedies in light of the likelihood of economically disastrous damage claims against a nuclear user. The power to regulate interstate commerce,\textsuperscript{27} the power to protect the public health and safety,\textsuperscript{28} and the power

\textsuperscript{18} Id. at 1803.
\textsuperscript{19} Id. at 1810.
\textsuperscript{20} The Committee's concern with this purpose was more sub silentio than forthright; the Committee Report speaks more of the low probability of a nuclear accident than of ensuring recovery in the event of one. Id. at 1803-04, 1807-08. Although they were establishing governmental indemnity, the committee members apparently believed it was a precaution and that use of the indemnity would be unlikely.
\textsuperscript{22} Id. §§ 2210(c), (d).
\textsuperscript{25} U.S. CONST. art. I, § 8, cl. 1.
\textsuperscript{26} U.S. CONST. art. I, § 8, cl. 4.
\textsuperscript{27} U.S. CONST. art. I, § 8, cl. 3.
\textsuperscript{28} U.S. CONST. art. I, § 8, cl. 1.
to promote the general welfare of the nation,\textsuperscript{29} provided additional bases for congressional authority.

Congress continued to invoke energy policy justifications for its subsequent alterations of Price-Anderson. In the 1965 amendments,\textsuperscript{30} which included the Act's extension to August 1, 1977, the Senate emphasized the continuing need for a strong nuclear power industry to meet the nation's increasing energy demands. The Senate also noted the benefit of Price-Anderson in acting as an incentive to nuclear development without requiring direct expenditures of federal funds, thereby freeing federal monies for use on advanced theoretical nuclear projects not properly undertaken by private profit-seeking users.\textsuperscript{31}

Although Congress offered such justifications for its actions in extending and modifying Price-Anderson, the actual amendments to the Act did not focus on the legislation as an incentive to nuclear development, but rather sought to improve the Act's operation as a tort remedy. In the 1965 modifications, Congress limited aggregate liability for a single nuclear incident to an absolute ceiling of $560 million.\textsuperscript{32} Relying on accident estimates by the AEC, the lawmakers concluded that the limitation "does not, as a practical matter, detract from the public protection afforded by this legislation."\textsuperscript{33} Congress also noted with concern that plant operators could interpose certain technical tort defenses to block the successful prosecution of a nuclear victim's claim.\textsuperscript{34} For instance, proof of the causal relationship between the nuclear occurrence and a physical disease such as cancer might be difficult, especially where the injury resulted from excessive radiation.\textsuperscript{35} Moreover, where the damage is discovered several years after the occurrence of the injury (an extremely likely occurrence when moderate doses of radiation are involved), statute of limitation problems could arise.\textsuperscript{36} In 1966, Congress directly addressed these concerns by enacting a statutory requirement that users of atomic energy waive certain common law defenses in ex-
change for federal indemnification; those waived are defenses regarding the negligence or fault of either the claimant or the person indemnified, the defense of assumption of the risk, and charitable or governmental immunity. To avoid the operation of state statutes of limitation, the Act also requires the waiver of any defenses based on such statutes if suit is instituted within three years from the date on which the claimant first knew, or reasonably should have known, of the injury or damage, but in no event more than ten years after the date of the nuclear incident.

This waiver of defenses, however, does not apply to all suits against nuclear users, but is conditioned on a declaration by the Nuclear Regulatory Commission (NRC) that "an extraordinary nuclear occurrence" has taken place. The statute defines such an occurrence as a "discharge or dispersal" of nuclear material "which the Commission determines to be substantial, and which the Commission determines has resulted or will probably result in substantial damages to persons offsite or property offsite." Although Congress mandated the issuance of written criteria for determining whether an extraordinary nuclear occurrence has taken place, no such regulations have been promulgated. Such a broad statutory definition and the lack of written standards effectively give the NRC wide latitude in determining whether an extraordinary nuclear occurrence has taken place. Moreover, once the determination has been made, the NRC decision is unappealable. This congressional scheme demonstrates a policy decision to require differing burdens of proof for continuing small-scale harms and extraordinary cata-

40 Id.
41 Id.
strophic injuries, despite the application of the same limitation on liability to both types of injuries.

The 1966 amendments also granted original jurisdiction over claims arising from a nuclear accident to the federal district court in the district where the accident occurred. This court has authority to make emergency payments to injured persons without requiring a release of their claims, pending final resolution of the case. Additionally, if the court determines that aggregate claims will exceed the liability limit, it must devise a plan for an equitable apportionment of the fund among the claimants. This provision allows a degree of flexibility in the Price-Anderson recovery procedure.

In 1975, Congress extended Price-Anderson to August 1, 1987. However, Congress determined that the government’s role as indemnitee should be phased out more quickly than provided for in the prior legislation, which had envisioned a rise in private insurance coverage to replace government indemnity. Consequently, the legislators added a “deferred premium system” under which every reactor will be assessed a “deferred premium” in the event of a nuclear incident. The size of this premium (ranging from $2 million to $5 million per reactor) will depend on both the amount of available insurance and the number and size of reactors in operation. The government will indemnify the nuclear user for any claims exceeding the sum of the private insurance coverage and the deferred premiums, up to the ceiling of $560 million. As more reactors become operational, the total of the deferred premiums will eventually decrease the government’s liability to zero; moreover, the aggregate coverage to the claimants will rise above $560 million whenever the sum of the private insurance coverage and the deferred premiums exceeds that value. Through this system of deferred prem-

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44 See text at note 12, supra.
46 Id. (o).
47 Id.
52 For example, suppose that private insurance provides coverage of $125 million and that there are 100 reactors on line, each assessed at an average of $3 million. The total private fund would amount to $425 million, leaving the government an indemnitee for $135 million. If there are 150 reactors on line, with the same average assessment, the total private fund
iums, Congress hoped to guarantee the existence of a compensation fund for nuclear victims while at the same time keeping government contributions to a minimum.

The lawmakers did not merely address the composition of the liability fund, but also reaffirmed their belief in the adequacy of the coverage under Price-Anderson, citing recent studies of the probability of a major nuclear accident. While conceding the possibility, however remote, of incidents causing several billions of dollars in damages, Congress asserted that the $560 million compensation fund provides adequate coverage for any "credible accident" which might occur.

In sum, even in 1957, Congress was concerned with the Price-Anderson Act as a tort recovery mechanism. All subsequent amendments have been directed toward improving this mechanism, and not toward increasing the incentive to nuclear development. Thus, Congress has defined the dominant concern of the Act to be its legislatively imposed tort remedy. This congressional emphasis demands that any judicial review focus on the remedial aspects of the Act.

III. The Price-Anderson Act in Court

A. Justiciability

A comparison of the court's treatment of the justiciability issue in Vermont Society and Carolina Study Group graphically illustrates the differing focuses of the two cases. Plaintiffs in the latter case succeeded by basing their claims on current personal injuries rather than on the potential harm to those "who might be injured in a nuclear accident." These plaintiffs concretized their interest in nonproliferation by pleading the actual injuries which they allegedly had already suffered. The Vermont Society plaintiffs, on the other hand, merely pleaded either general injuries to their personal interest in nonproliferation or particular injuries to unknown future claimants. This distinction created a sufficiently justiciable cause of action upon which the Carolina Study Group claimants could base their claims.

would be $575 million, obviating any need for any government indemnity. The Senate Committee (in 1975) envisioned government indemnity dropping to zero by 1985.

53 Id. at 2265-66.
54 Id. at 2266.
1) Standing

The doctrine of standing focuses on the plaintiff involved and not on the issues being litigated; it inquires whether the plaintiff is the proper party to prosecute the cause of action. A dismissal on standing grounds thus says nothing about the merits of the suit. The concept of standing stems from the “case or controversy” requirement of Article III of the United States Constitution. Standing ensures the constitutionally-mandated concrete adverseness necessary for a lawsuit. Functionally, it limits access to scarce judicial resources. Standing also provides a vehicle for courts to dispose of “troublesome questions” which they consider unsuited for judicial determination.

Over the years, the Supreme Court has formulated differing tests of constitutional standing. The current test sets out a two-pronged...


59 Scott, supra note 56, at 670.

60 Id. at 683-84.

61 Early attempts focused on the necessity for a plaintiff to show the violation of a legal interest before he could gain access to the courts. Tennessee Power Co. v. Tennessee Valley Authority, 306 U.S. 118, 137-38 (1939). This test proved quite restrictive, and the claims of many plaintiffs were dismissed for failure to satisfy this threshold requirement. See, e.g., Perkins v. Luken Steel Co., 310 U.S. 113 (1930) (competitive injury does not constitute violation of a legal interest). However, beginning in 1968, the Court undertook to loosen the requisites for standing. In its fledgling attempts, the Court focused on the implicit grants of standing which certain congressional legislation and constitutional provisions bestow on given classes of plaintiffs. For example, in Hardin v. Kentucky Utilities Co., 390 U.S. 1 (1968), the Court determined that those plaintiffs within the class which a statute is designed to protect have standing to sue to protect their interests under that statute. In Flast v. Cohen, 392 U.S. 83 (1968), a plaintiff’s status as a taxpayer was deemed sufficient under the Constitution to challenge the legality of congressional spending activities. By such justifications, the Court implied that the judiciary was not itself granting standing, but merely effectuating the standing implicitly bestowed by Congress or the Constitution. But see Schlesinger v. Reservists Committee to Stop the War, 418 U.S. 208 (1974) (Flast distinguished). In two 1970 cases, Association of Data Processing Service Organizations v. Camp, 397 U.S. 150 (1970) and its companion case, Barlow v. Collins, 397 U.S. 159 (1970), the Court established a two-pronged standing test—injury in fact, plus the presence of an interest judged to be “arguably within the zone of interests to be protected or regulated by the statute or constitutional guarantee in question.” 397 U.S. at 153. However, the “zone of interests” test proved to be no obstacle
requirement. First, the plaintiff must allege that he has suffered "injury in fact, economic or otherwise." While injury in fact may encompass non-economic harm, a plaintiff must allege facts sufficient to show that he is himself among those harmed. A plaintiff will not achieve standing by alleging an abstract or generalized grievance common to all members of the public. And, while the harm may be prospective, the threat must be real and immediate, rather than remote or conjectural. The second factor mandated by the court requires that a plaintiff demonstrate that his injury is "likely to be redressed by a favorable decision," in effect necessitating the establishment of a causal link to ensure that the court's remedy will in fact redress the alleged harm. This causation requirement ensures that the plaintiff has a sufficient personal stake in the outcome of the controversy.

Satisfaction of the two-pronged requirements of constitutional standing does not necessarily guarantee that the court will hear the case. There is also a prudential aspect to standing. In Warth v. Seldin, Justice Powell asserted that, even if the plaintiffs' harm were sufficient to "satisfy the case-or-controversy requirement of Article III, prudential considerations strongly counsel against according [the plaintiffs] standing to prosecute this action." These prudential considerations incline the Court not to consider issues which could more effectively be directed to the elected branches of government. In addition, the Court can exercise a certain degree of flexibility in determining on other grounds whether or not to hear a case.

The Vermont Society court, although not explicitly discussing

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footnotes:

standing, did attempt to articulate the plaintiffs' alleged injury. The court initially stated that the injuries giving plaintiffs standing to sue were "the consequences of a proliferation of nuclear plants." However, later in the opinion, the court rejected that definition of the plaintiffs' interest, noting that "the interest in which plaintiffs' attack on the provision's validity is rooted is not their interest in nonproliferation [sic] atomic energy plants. Rather, it is the property interest of those who might be injured in a nuclear accident." Practically, the difference is inconsequential, since neither injury satisfactorily fulfills the requirements of constitutional standing. The former is an abstract and generalized grievance common to all members of the public, while the latter, conditioned on the possible occurrence of a nuclear incident, is conjectural in its assumption that some future nuclear victims will not be fully compensated under Price-Anderson and does not allege that plaintiffs are among the victims to be harmed by an inadequate recovery. Therefore, under neither formulation of the harm did the Vermont Society plaintiffs satisfy the constitutional requirements of injury in fact.

The Carolina Study Group plaintiffs based their standing on the presence of personally suffered injuries, namely a "small amount of chronic damage" (low level radiation and ecological changes) and an apprehension of "future, and perhaps major damage" (core melts or large scale radiation leakage) resulting from the operation of the nuclear plant. The former harm clearly constitutes an adequate injury in fact. Plaintiffs' closeness to the plant and their subsequent constant exposure to low level radiation gives them a concrete injury not shared by the public generally. On the other hand, the latter harm, if merely an abstract apprehension of injury, would fail to qualify as an adequate injury in fact. However, the plaintiffs asserted that this apprehension caused some of them to move from

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77 Id.
82 Id.
the area of the nuclear plant and caused at least one other to plan to do so. These specific actions resulting from the plaintiffs' apprehension of injury should represent constitutionally sufficient harm.

Having established an injury in fact, the Carolina Study Group plaintiffs still had to demonstrate that granting the relief they sought—a declaration of the unconstitutionality of Price-Anderson—would redress their injuries. Plaintiffs reasoned that since the Act's limitation of liability caused the operation of nuclear power plants, and since operation of the Duke nuclear power plant caused constant exposure to minor harm and continuous apprehension of catastrophic injury to those living in its vicinity, Price-Anderson's limited liability caused their injuries. The first premise, however, is open to question. Although witnesses at the 1957 congressional hearings on Price-Anderson were definite in their belief that nuclear power plant expansion would cease without a limitation on liability, witnesses in 1975 were more qualified in their assertions. Senator Tunney, opposing the 1975 extension of the Act, asserted that power plants will continue to be built and operated without Price-Anderson. Duke Power itself stated that it would continue its nuclear power plans with or without Price-Anderson. Yet, while plaintiffs' assertion that nuclear power will cease to proliferate in the absence of Price-Anderson is not unassailable, it should be sufficient to establish standing. Standing does not go to the merits of the cause of action, and, when analyzing this justiciability issue, the court must decide all factual issues in the plaintiffs' favor.

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79 At the 1957 hearings of the Joint Committee on Atomic Energy, partially quoted in Carolina Environmental Study Group v. AEC, 431 F. Supp. 203, 215 (W.D.N.C. 1977), witnesses testified that: "The matter of protection against accidents and failures in the nuclear portion of a plant loom as the largest obstacle. . . . If the financial protection needed is not reasonably available, we will not be able to go ahead with the Westinghouse testing reactor [at Waltz Mill, Pa.]" Id. (emphasis by court).

However, at the 1975 hearings of the Joint Committee on Atomic Energy, partially quoted in Carolina Environmental Study Group v. AEC, 431 F. Supp. 203, 215-18 (W.D.N.C. 1977), witnesses testified that: "Suppliers of nuclear system components . . . will probably remain unwilling or reluctant to undertake new projects if their risks are not constrained . . . . [I]n the event of unfavorable congressional action, we may well be forced to reconsider our role in the nuclear industry." Id. (emphasis added).

Had plaintiffs focused on the Act as a tort remedy, they could have utilized a simpler, more direct method of satisfying the causation requirement. Plaintiffs alleged current harms for which Price-Anderson established the recovery process. They could have alleged that the abolition of the limitations on their recovery would have increased the likelihood that they would be fully compensated for the harms actually suffered due to the plant's operation. Indeed, Judge McMillan found this to be the case: "Recoveries in cases of injury to and death of a human being have been known in recent years to exceed a million dollars and more. Without even considering property damage, it appears that death or major injuries to 500 or 1000 people could produce legitimate losses vastly exceeding $560,000,000." Under this view, the causal relationship between the plaintiffs' injuries and Price-Anderson is clearly evident.

While constitutional standing received substantial analysis by Judge McMillan, the prudential considerations of standing received no explicit attention in his opinion. One could argue that the court should not interfere once Congress has declared that a mechanism devised for the promotion of nuclear energy is in the best interests of the nation. Nevertheless, "federal courts on occasion interpret the Constitution in a manner at variance with the construction given the document by another branch." The severity of

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83 See text at note 79, supra.
84 Having discussed the necessary injury in fact and causation, thereby laying a foundation for constitutional standing, the court also noted other standing tests, such as the Flast nexus tests, Flast v. Cohen, 392 U.S. 83, 102-03 (1968), the Baker v. Carr "personal stake" test, Baker v. Carr, 369 U.S. 186, 204 (1962), and the general discussion of standing in Arlington Heights v. Metropolitan Housing Development Corp., 429 U.S. 252, 260-64 (1977). Carolina Environmental Study Group v. AEC, 431 F. Supp. 203, 218-19 (W.D.N.C. 1977). However, none of these tests is apposite to the instant situation. Flast is a taxpayer suit, for which the requirements of standing are not necessarily the same as those for plaintiffs in other constitutional challenges. See Association of Data Processing Service Organizations v. Camp, 397 U.S. 150, 152 (1970). The Baker test is really a restatement of the Article III mandate of "case or controversy," which the Court defined in Barlow v. Collins, 397 U.S. 159, 172-73 (1970), as being satisfied by the presence of an injury in fact. And the discussion of standing in Arlington Heights merely refines the definition of injury in fact, reiterating the Court's prior decisions that it may include non-economic harm, United States v. SCRAP, 412 U.S. 669, 686-87 (1973); Sierra Club v. Morton, 405 U.S. 727, 734 (1972), but must be a concrete injury, Schlesinger v. Reservists Committee to Stop the War, 418 U.S. 208, 220-22 (1974), fairly traceable to the defendant's acts or omissions, Simon v. Eastern Kentucky Welfare Rights Organization, 426 U.S. 26, 41-2 (1976).
86 See text at notes 13-18, 25-29, supra.
the current, personal threat which Price-Anderson’s limited liability poses to the plaintiffs appears to be sufficient to overcome any prudential basis for the Court’s deferring to legislative pronouncements, so that plaintiffs should be deemed to have standing.

2) Ripeness

The issue of ripeness concerns the timing of a lawsuit. Like standing, ripeness has both constitutional and prudential foundations. Its constitutional basis rests in the case or controversy requirement of Article III, for issues must be well defined and clarified before a court will undertake its adjudicatory function. The prudential basis of ripeness lies in the judiciary’s reluctance to decide cases which it perceives to contain “problems of prematurity and abstractness,” by hearing only real and present problems, the courts conserve judicial resources.

Although the Supreme Court has stated that a mere time delay between judicial intervention and expected harm will not preclude the existence of ripeness, no standard delimiting the requirements of this justiciability concept has been consistently applied. In suits challenging actions of administrative agencies, the Court has described a two-part test of ripeness: the issues must be fit for judicial decision, and there must be the potential for hardship to the parties if judicial consideration is withheld. However, no such standard has been articulated in other types of challenges. In different cases the Court has spoken of the need for establishing the “immediacy” of sustaining a direct injury, or the “distinct possibility” of suffering harm, or the “impending” nature of future adversities. Such seemingly variant tests, however, may be expositions of the same two-pronged standard utilized in administrative law ripeness. The underlying factors in a determination of the “immediacy,” “distinct
possibility,” or “impending” nature of the harm require an evaluation of the fitness and clarity of the issues for judicial determination and the hardship to the litigants should the court refuse to hear the matter. Indeed, this interpretation finds support in recent Supreme Court cases on ripeness.87

In Vermont Society, the district court assumed that the plaintiffs suffered sufficient injury in fact to establish standing,88 but summarily found that the cause of action lacked ripeness because the petitioners failed to “base their claim on a legally protected interest which is currently threatened by the Price-Anderson provision.”89 The court based its ripeness analysis on the plaintiffs’ concern about the inadequate tort recoveries of persons who in the future may be injured in a nuclear incident.90 Not only does this interest fail to establish an adequate injury in fact,91 but it also fails to establish a sufficiently ripe controversy. Although the possibility of inadequate recoveries in the future may be sufficient to clarify the issues for adjudication,92 delaying judicial relief will not create any hard-

87 For example, in Buckley v. Valeo, 424 U.S. 1 (1976), the Supreme Court invoked the “impending” test of ripeness to determine whether it could adjudicate the constitutionality of the method of appointing members of the Federal Election Commission. In its opinion, the Court noted that the functions of the Commission were either already or soon to be exercised, thereby concluding that sufficient facts were present for adjudication. The Court also noted Congress’ desire to have finally adjudicated as many issues as possible relating to the Commission, implying that failure to find the issues ripe could cause hardship to the parties. Id. at 114-17. In the Regional Rail Reorganization Act Cases, 419 U.S. 102 (1974), the Court invoked the “distinct possibility” test to determine whether it could adjudicate the constitutionality of the Rail Act. Plaintiffs alleged that the forced continuation of existing conditions regarding railroad operation would constitute a gradual “taking” of their property without just compensation—an “erosion taking.” In its opinion, the Court found the issues sufficiently clarified even though there had been no definitive determination that an unreasonable “erosion taking” had yet occurred. The Court also noted that continued compelled rail operations would accelerate the erosion of plaintiffs’ interests, so that delay in adjudication would cause hardship to the parties. Id. at 123-25.


89 Id. The interest which the plaintiffs alleged, but the court rejected as not being their true interest, was a general concern in “the consequences of a proliferation of nuclear plants.” Id. Violation of such an interest apparently states a sufficiently ripe cause of action; the consequences of nuclear proliferation are adequately defined, and any delay in adjudication would permit further multiplication of atomic plants to the plaintiffs’ hardship. However, violation of this interest does not establish a justiciable cause of action since it fails to create a constitutionally sufficient injury in fact. See text at note 72, supra.


91 See text at notes 73-74, supra.

92 Issues likely to be presented include the establishment of the particular type of injury (e.g., radiation-induced cancer or genetic damage) and proof of the causation between the injury and the nuclear incident. (e.g., radiation-induced cancer or genetic damage) and proof of the causation between the
ships to plaintiffs who have not yet sought compensation for nuclear injuries. The occurrence of the injuries, if any, will be at some indeterminate point in the future.

In Carolina Study Group, plaintiffs alleged the presence of actual, personal injuries in the nature of exposure to low level radiation, area-wide ecological changes, and fear of sudden, catastrophic occurrences. The court compared these harms to those resulting from the so-called "erosion taking" under the Regional Rail Reorganization Act. Both situations present the possibility of personal resources being impaired without the guarantee of adequate compensation. Since the possibility of an erosion taking sufficiently frames the issues for adjudication by the court, and since the immediacy of the nuclear harms imposes a true hardship on the plaintiffs, the court held that the claimants had presented a controversy ripe for judicial review.

Such an elaborate discussion of ripeness, however, need not have been gone into by the court. The Carolina Study Group court noted that the plaintiffs suffered "present everyday" injuries. Since the plaintiffs alleged that they had already suffered harm, the court did not have to resort to the erosion taking analogy. The occurrence of currently suffered injuries resulting from constant exposure to low levels of radiation presented a case that would be ripe for adjudication by any standard.

B. The Merits

Since the Vermont Society plaintiffs failed to establish the justiciability of their cause of action, the court never reached the merits of their case. The Carolina Study Group plaintiffs, however, having established justiciability, proceeded to a two-pronged attack on the constitutionality of the Price-Anderson Act as violative of both due process and equal protection.

1) Due Process

The plaintiffs in the North Carolina suit alleged that the limita-

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104 See note 97, supra.
107 Id. at 221.
108 See text at notes 75-76, supra.
tion on the liability of a nuclear user constituted not only a "taking of property without just compensation," but also a denial to nuclear victims of access to the courts and to common law remedies, and an imposition of geographically non-uniform bankruptcy procedures. The district court did not discuss each of these contentions individually, but investigated them together under the general heading of due process. Due process issues can be divided into two categories—procedural due process, which emphasizes the legitimacy and fairness of the procedures utilized by the state to effect a given objective, and substantive due process, which emphasizes the basis for the state's interference with the protected rights of the individual. The Carolina Study Group case involves both these categories.

a) Procedural Due Process

Statutory limitations on the pre-existing common law right to a full tort recovery, such as exist under the Price-Anderson Act, are not new. In the past, such limitations have withstood procedural due process challenges, the constitutional analysis often centering on the adequacy of the legislation as a quid pro quo for the supplanted common law remedy. A quid pro quo analysis weighs the benefits of the legislative scheme against those of its common law alternative. However, a slight preponderance of benefits for the common law scheme does not establish a violation of procedural due process; rather, only if there is a significant imbalance of benefits does such a violation exist. This weighing process closely parallels that utilized in substantive due process analysis.

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109 Id. at 23.
110 Id. at 25. See also text at note 26, supra. Plaintiffs alleged that the Act imposes different bankruptcy procedures for nuclear users and nuclear victims than for other debtors and creditors, and that the differences are based solely on the geographic area affected by the nuclear incident.
112 Id. at 379.
113 See Redish, Legislative Response to the Medical Malpractice Insurance Crisis: Constitutional Implications, 55 Tex. L. Rev. 759, 785 (1977). In this context, quid pro quo refers to that which is given up in order to receive that which is desired.
114 The Court also employs another procedural due process test besides quid pro quo. This standard is "flexible and calls for such procedural protections as the situation demands." Mathews v. Eldridge, 424 U.S. 319, 334 (1976). The Court focuses on the governmental and private interests affected by the legislation as well as on the "fairness and reliability of the
The most widely recognized and generally accepted statutory modifications of common law remedies are state workmen's compensation laws, which, though varying from state to state, generally provide that an injured worker may recover for injuries without regard to fault, the amount of his recovery being stipulated by statute. The employee is assured of compensation, while the employer is assured of limited compensation expenses. The classic constitutional justification for workmen's compensation against a due process attack appears in *New York Central R.R. Co. v. White*.\(^{117}\)

The statute under consideration sets aside one body of rules only to establish another system in its place. If the employee is no longer able to recover as much as before in case of being injured through the employer's negligence, he is entitled to moderate compensation in all cases of injury, and has a certain and speedy remedy without the difficulty and expense of establishing negligence or proving the amount of the damages. . . . On the other hand, if the employer is left without defense respecting the question of fault, he, at the same time, is assured that the recovery is limited, and that it goes directly to the relief of the designated beneficiary.\(^{118}\)

The employee's limited recovery is constitutionally justified by the relative equivalency of the exchange between employer and employee. An uncertain method of recovery is replaced by a lesser but more certain recovery.

Another modification of common law remedies occurs in no-fault automobile insurance.\(^{119}\) No-fault statutes generally eliminate the requirement of fault as a condition of recovery in auto accidents and limit the categories and amounts of damages for which an accident victim may recover.\(^{120}\) None of the no-fault statutes has been found

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\(^{118}\) Id. at 343. This procedural due process test, analyzing the relative governmental interests and personal rights affected by a piece of legislation, closely parallels the substantive due process test discussed in Section III(B)(1)(b), infra.


\(^{120}\) Kornblum, *No-Fault Automobile Insurance—A Comparison of the State Plans and the Uniform Act*, 8 *Forum* 175, 177 (1972).
to be constitutionally infirm. Similarly, in the Limitation of Vessel Owner’s Liability Act, Congress has sought to encourage domestic shipping by limiting a shipowner’s liability to the value of the vessel and the freight pending. This Act, however, does not establish liability without fault; a plaintiff must prove negligence. Although the shipowner thus receives the preponderance of benefits from the statute, no direct constitutional challenges have succeeded. The Warsaw Convention Treaty, while imposing a limitation on the liability of air lines engaged in “international transportation,” holds the airline company liable for all damages arising from accidents “on board the aircraft or in the course of . . . embarking or disembarking,” except where the carrier can establish the exercise of due care. Constitutional challenges to the Treaty have been as few and as unsuccessful as those against the shipowner’s limited liability. One court went so far as to dismiss a due process challenge with the succinct explanation that “[s]tatutes for the limitation of liability are no novelty.” State laws imposing ceilings on medical malpractice liability have also been subjected to due process attack. Such legislation has on one occasion withstood a due process challenge. On another, however, a state court found that the alleged societal benefits of lower insurance premiums and lower medical costs did not outweigh the burdens placed on those seriously injured by medical malpractice, and that the statute

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121 For example, in Pinnick v. Cleary, 360 Mass. 1, 271 N.E.2d 592 (1971), the first challenge to the Massachusetts no-fault act, the Supreme Judicial Court upheld the legislative trade-off in no-fault as being “at least as adequate as those provided to New York employers and employees in return for rights taken by the act in [New York Central R.R. Co. v. White, 243 U.S. 188 (1917)].” Id. at 23, 271 N.E.2d at 607.


124 Id. at 107 n.15; Coleman v. Jahncke Service, 341 F.2d 956, 958 (5th Cir. 1965), cert. denied, 382 U.S. 974 (1966).

125 One court summarily dismissed the contention that the liability limit violated equal protection as having “no sound basis,” Murray v. New York Central R.R. Co., 287 F.2d 152, 153 (2d Cir. 1961), and there have been no due process challenges.


127 Id. at 3019 art. 22.

128 Id. art. 17.

129 Id. art. 20.


131 See, e.g., IDAHO CODE §§ 39-4204, 39-4205 (1977); ILL. REV. STAT. ch. 70 § 101 (Smith-Hurd 1969). For an explanation of these statutes, see Redish, supra note 114, at 763-65.

132 Jones v. State Board of Medicine, 97 Idaho 859, 555 P.2d 399 (1976).
therefore failed to provide an adequate *quid pro quo*. This analysis focuses on the Act’s indirect societal benefits rather than on any direct individual benefits afforded a medical malpractice victim.

The court in *Carolina Study Group* found the Price-Anderson trade-off constitutionally inadequate because of the illusory nature of the Act’s alleged benefits. The AEC and Duke Power asserted that Price-Anderson’s benefits to nuclear accident victims include: certain, albeit possibly partial, recovery; prompt release of funds, including emergency relief, without prolonged litigation; waiver of certain defenses; coverage even if the only person liable is one who might otherwise be without substantial insurance protection; and waiver of any short statute of limitations. The true value of these benefits, however, is questionable. While the certainty and promptness of the substituted recovery are important considerations in judging the relative equivalence of the *quid pro quo*, an assured, rapid award is not guaranteed under Price-Anderson, since a victim’s recovery may remain “partial or contingent” for a time in order to provide sufficient reserves for late filed or lately discovered claims. A great deal depends on the ability of the district judge to devise a workable plan for the disposition of varied and complex claims. For example, the plan must estimate the total number and severity of potential claims to prevent premature depletion of the fund, including future claims by unborn generations for radiation-induced genetic defects. Further, the waiver of common law defenses is only effective in the aftermath of an “extraordinary nuclear occurrence” and thus plays no part in claims based on the constant exposure to minor radiation or ecological harms. Finally, although the statute of limitation provisions provide an additional opportunity to file damage claims, no benefits accrue to those whose injuries are undiscovered, or undiscoverable, for more than ten

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132 Wright v. Central Dupage Hospital Association, 63 Ill. 2d. 313, 328, 347 N.E.2d 736, 742 (1976).
134 *Id.*
135 *Id.*
136 *Id.* at 224.
137 *Id.* at 223.
140 See text at notes 39-43, *supra*.
141 See text at note 38, *supra*.
years—a class which conceivably would include a large portion of
those who suffer radiation injury, especially where genetic damage
is at issue.\textsuperscript{143}

Judge McMillan's opinion in \textit{Carolina Study Group} also empha-
sized distinctions between Price-Anderson and other legislation es-
tablishing alternative tort recovery mechanisms. Workmen's com-
ensation laws and the Warsaw Convention both provide certain
amounts of compensation; yet, the amount of recovery under Price-
Anderson is not certain because the Act limits aggregate claims
rather than individual claims, thereby causing the individual recov-
eries to vary with the number of claimants.\textsuperscript{144} Moreover, while the
Warsaw Convention and the Limitation of Vessel Owner's Liability
Act give potential passengers and shippers the option of utilizing
these or other modes of transportation, those living near the nuclear
plant site have no such readily available choice.\textsuperscript{145} These distin-
guishing characteristics weaken the viability of the analogy between
these valid statutory trade-offs and the Price-Anderson Act.

Although the benefits of the Price-Anderson Act preponderate to
the advantage of the nuclear user, and despite the Act's distinction
from other legislative schemes found to comport with the require-
ments of procedural due process, it is unlikely that the Supreme
Court will find the Act to be constitutionally infirm. The degree of
imbalance between the Act's benefits and those of the common law
is not significantly greater than that present in the other legislative
schemes upheld by the courts, such as the Warsaw Convention and
the Limitation of Vessel Owner's Liability Act. In Price-Anderson,
claimants are at least assured of some recovery, even against a
nuclear user with few assets.\textsuperscript{146} In some instances, claimants need
not prove fault but can recover without regard to certain common
law defenses which Price-Anderson requires the plant licensee to
waive. Distinguishing Price-Anderson on a piecemeal basis from the
other legislative schemes does not establish a sound foundation for
an analysis of its constitutionality. The \textit{quid pro quo} standard re-
quires an evaluation of the scheme as a whole, and not as segregated
into distinguishing components which may be contained in some

\textsuperscript{143} For example, twenty years has been suggested as the latency period for leukemia result-
ing from irradiation. See Estep, \textit{supra} note 12, at 278.

\textsuperscript{144} \textit{Carolina Environmental Study Group v. AEC}, 431 F. Supp. 203, 224 (W.D.N.C. 1977).

\textsuperscript{145} \textit{Id}. In addition, the Warsaw Convention is an international treaty subject to a different
degree of analysis than ordinary congressional legislation. \textit{Id}.

\textsuperscript{146} See Section IV, \textit{infra}, which discusses the relative ability of Price-Anderson and the
common law to actually provide compensation funds to those injured in a nuclear incident.
acts but not others. Thus, in this more general light, the overall weighing of benefits under Price-Anderson is comparable to, if not more acceptable than, that in the other valid acts.

b) Substantive Due Process

Besides weighing the relative benefits of the Price-Anderson Act by a procedural due process analysis, Judge McMillan also apparently utilized a substantive due process test, asserting that "[t]he amount of recovery is not rationally related to the potential losses." Since substantive due process focuses on the state’s interference with the protected rights of the individual, the outcome of any judicial analysis depends upon the particular interests involved. That is, different standards are applied to legislation involving different interests. Legislation adversely affecting an economic interest or non-fundamental personal right generally can withstand a substantive due process challenge if merely rationally related to a legitimate governmental concern. Over the past forty years, the Court has so tolerantly applied the rational basis standard to economic interests that a suit grounded on such an interest is extremely unlikely to succeed. Legislation which infringes upon a "fundamental" personal right, however, can withstand a substantive due process challenge only by furthering a compelling state interest. To qualify as fundamental, the personal right cannot be merely statutorily derived, but must have a constitutional foundation in the Bill of Rights, as does, for instance, the right to bodily integrity.

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150 McCloskey, supra note 149, at 36-40.
152 According to varying judicial rationales, that foundation must exist either in the explicit guarantees of the Bill of Rights, Griswold v. Connecticut, 381 U.S. 479, 530-31 (1965) (Stewart, J., dissenting), in the penumbras created by those guarantees, id. at 482-84 (Douglas, J., opinion), or in the residuum of interests incorporated into the Bill of Rights by the Ninth Amendment, id. at 488 (Goldberg, J., concurring).
153 Such a right is implicit in Roe v. Wade, 410 U.S. 113 (1973) and Griswold v. Connecticut, 381 U.S. 479 (1965). Other rights found warranting this special status include the right to teach and be taught, Pierce v. Society of Sisters, 268 U.S. 510 (1925); the right to travel abroad, Apteker v. Secretary of State, 378 U.S. 500 (1964); and the right to privacy in one’s own home, Stanley v. Georgia, 394 U.S. 557 (1969).
The success on appeal of the Carolina Study Group plaintiffs' substantive due process challenge hinges on the definition of the interest affected by the Price-Anderson Act. Analyzing the Act as either an incentive to nuclear power or a hindrance to full tort recovery, the individual interest affected appears to be economic. Judge McMillan, though recognizing that only the rational relationship test applied, nevertheless held that the Act failed to satisfy this lesser constitutional standard. However, the facts indicate that Price-Anderson is rationally related to a legitimate governmental concern. The Act provides an incentive to the development of nuclear energy by lowering industry costs through limiting the potential liability of the nuclear user.

To overturn Price-Anderson, plaintiffs must assert the infringement of a fundamental personal right. In an alternative analysis, Judge McMillan concluded that Price-Anderson contravened substantive due process through the Act's alleged violation of the policy created by the Atomic Energy Act to preserve "the health and safety of the public." This interest, however, is statutorily derived and thus nonfundamental. Plaintiffs also asserted that the Act violated the fundamental right to sue, citing Boddie v. Connecticut, which held that indigents could not be denied access to the courts to obtain a divorce due to their inability to pay a filing fee. The Boddie Court, however, emphasized the state's monopoly over marriage and divorce, centering its decision on the fundamentality of the marital relation. More recently, United States v. Kras held that there is no fundamental right to sue for a recomposition in bankruptcy. The Court's decisions as a whole, therefore, do not establish the existence of an absolute constitutional right to sue.

Nonetheless, a fundamental right against invasion of one's bodily integrity does exist, and it encompasses both security from physical intrusions and personal choice in matters concerning one's body. The Carolina Study Group court alluded to this privacy interest,
referring to the intrusion of nuclear radiation into the homes of the plaintiffs and the invasion of foreign particles into their bodies.\textsuperscript{162} The intangibility of radiation, however, makes it difficult to liken its presence in one’s home and person to an “invasion of bodily integrity,” which generally encompasses tangible physical intrusions.\textsuperscript{163} Carrying the analogy to its logical extreme, the presence of sonic booms or television and radio signals could also constitute such invasions. Nor are the plaintiffs prevented from making decisions about their own bodies as in the abortion cases, since they may remove themselves from the area of the nuclear radiation.\textsuperscript{164} It thus does not appear that the plaintiffs in the present case can fashion a constitutional violation of a fundamental right.

Even assuming that plaintiffs could establish the infringement of some fundamental right, Price-Anderson would still not violate substantive due process if it furthers a \textit{compelling} state interest. The Supreme Court has not offered a general definition of what governmental interests are compelling. A mere concern for ease of judicial or administrative procedures is not compelling,\textsuperscript{165} nor is the state’s interest in conserving the public fisc.\textsuperscript{166} However, the state’s interests in the health of a mother after the first trimester of pregnancy\textsuperscript{167} and in the life of a fetus after the second trimester\textsuperscript{168} are compelling, thus suggesting that a state is more likely to have a compelling interest in its concern for human life or health than in its concern for property. In the Price-Anderson Act, the governmental interests basically deal with property, either the promotion of capital investment in nuclear power or the amount of compensation allowable to nuclear tort plaintiffs. Although a purpose of the Atomic Energy Act

\textsuperscript{162} “These radioactive emissions will invade the air and water and the bodies and genes of plaintiffs and others in the neighborhood.” Carolina Environmental Study Group v. AEC, 431 F. Supp. 203, 220 (W.D.N.C. 1977).

\textsuperscript{163} The state’s “invasion of bodily integrity” in Roe v. Wade, 410 U.S. 113 (1973), concerned physical restraint from the ability to have a legal abortion, while in Griswold v. Connecticut, 381 U.S. 479 (1965), the state’s intrusion sought to restrain any couple from obtaining contraceptives. Such inability to procure an abortion or contraceptives produces greater consciousness of an actual intrusion than does the imperceptible presence of radiation in one’s home.

\textsuperscript{164} While those living near a nuclear plant do not have a “readily available choice” of removing themselves from the presence of the radiation, see text at note 145, \textit{supra}, such a move is, at least, theoretically possible. For those seeking an abortion or contraceptives, not even a theoretical possibility existed to legally circumvent the state’s prohibitions.


\textsuperscript{168} \textit{Id.}
as a whole is the protection of the public health and safety, such a concern only tangentially relates to Price-Anderson itself, which focuses not on the preservation of the public health but on remedial measures after its disruption. The Act, therefore, does not further a compelling state interest. Thus, if the Carolina Study Group plaintiffs could establish the presence of a fundamental right, its infringement by the Price-Anderson Act would contravene substantive due process. As previously demonstrated, however, the establishment of a fundamental right is unlikely.

2) Equal Protection

Plaintiffs in Carolina Study Group also attacked the Price-Anderson Act as violating the guarantee of equal protection of the laws embodied in the Fifth Amendment. In essence, equal protection ensures that people similarly situated will be similarly treated. The first step in equal protection analysis is the identification of three distinct factors: (1) the character of the classification in question, (2) the individual interests affected by the classification, and (3) the governmental interests asserted in support of the classification. The judicial standard of review applicable to a particular case depends on the discovered nature of these factors.

The most usual standard of equal protection review is the "minimum rationality" standard. If a rational relationship exists between the classification employed and the governmental interest sought to be furthered, the test is met. If, however, the classification used by the lawmakers is defined as "suspect"—that is, based upon factors such as race, ethnic origin, or alienage—or if the individual interests affected by the classification are defined as "fundamental," a more rigorous standard, the "strict scrutiny" test, must be satisfied. Under strict scrutiny, the state must show

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170 The same guarantee of equal protection applicable to the states under the Fourteenth Amendment is applicable to the federal government under the Fifth Amendment. Bolling v. Sharpe, 347 U.S. 497, 499 (1954).
that its legislatively-created classification is necessary to further a compelling governmental interest.\textsuperscript{178}

Judge McMullan stated that Price-Anderson distinguishes between those living near a nuclear power plant and those who do not. He found this classification to be based on "geographical happenstance," remarking that the burden of the Act is placed "upon people who happen to live in the areas which may be touched by radioactive debris,"\textsuperscript{177} and determined that the governmental interest behind the legislation was the encouragement of nuclear power production.\textsuperscript{178} On the basis of these definitions, the judge correctly invoked the minimum rationality test, yet concluded that Price-Anderson violated the plaintiffs' right to equal protection by "irrationally"\textsuperscript{179} placing the burden of society's benefits from nuclear power on those who are injured by radioactive debris.

There are problems with this analysis, however. Any recovery mechanism contains the possibility of judgment-proof defendants. Even under the common law, if the nuclear user has insufficient

\textsuperscript{174} Marston v. Lewis, 410 U.S. 679 (1973) (50 day durational voter residency requirement was "necessary" to promote the State's "important interest in accurate voter lists"); Tribe, \textit{American Constitutional Law} 1000-02 (1978). For a discussion of compelling state interests, see text at notes 165-68, \textit{supra}.

Intermediate equal protection tests have also been postulated as a potential middle ground between the two alternatives discussed in the text. These would be used when the legislative classification does not qualify as suspect but yet deserve more scrutiny than the rational relationship test provides. These intermediate tests have been implicitly utilized by the Court. See Dandridge v. Williams, 397 U.S. 471, 519-22 (1970) (Marshall, J., dissenting). In his dissent in \textit{San Antonio Independent School District v. Rodriguez}, 411 U.S. 1 (1973), Justice Marshall wrote:

A principled reading of what this Court has done reveals that it has applied a spectrum of standards in reviewing discrimination allegedly violative of the Equal Protection Clause. This spectrum clearly comprehends variations in the particular classifications, depending, I believe, on the constitutional and societal importance of the interest adversely affected and the recognized invidiousness of the basis upon which the particular classification is drawn. \textit{Id.} at 98-99.

Varying characterizations of these intermediate standards have been suggested. Under the "means-focus" test, the legislative classification must "substantially further" governmental ends. Gunther, \textit{In Search of Evolving Doctrine on a Changing Court: A Model for a Newer Equal Protection}, 86 Harv. L. Rev. 1, 20-24 (1972). Alternatively, under the "demonstrable basis standard," a statute is validated only if "the means used bear a factually demonstrable relationship to a state interest capable of withstanding analysis." Nowak, \textit{Realigning the Standards of Review Under the Equal Protection Guarantee-Prohibited, Neutral and Permissive Classifications}, 62 Geo. L. J. 1071, 1081, 1092-94 (1974). Plaintiffs in \textit{Carolina Study Group} did not invoke an intermediate equal protection test, nor did the court utilize one in its analysis.

\textsuperscript{177} Carolina Environmental Study Group v. AEC, 431 F. Supp. 203, 225 (W.D.N.C. 1977).

\textsuperscript{178} \textit{Id.}

\textsuperscript{179} \textit{Id.}
assets to cover all claims, the burden of operating nuclear plants will be placed on the less-than-fully compensated victims.\footnote{\textsuperscript{180} See Section IV, infra.} Moreover, the mere presence of this possibility does not make the scheme irrational. Rather, the court should consider that the encouragement of nuclear power is inherently an economic decision by Congress, the kind of decision which the judiciary typically leaves to legislative wisdom.\footnote{\textsuperscript{181} See Williamson v. Lee Optical Co., 348 U.S. 483, 488-89 (1955).} Congress certainly did not act unreasonably in devising a compensation scheme which places no greater potential burden on nuclear tort victims than do other recovery mechanisms.

Recognizing this difficulty in invalidating Price-Anderson on equal protection grounds, plaintiffs defined the governmental interest furthered by Price-Anderson as a desire to ensure adequate tort recoveries.\footnote{\textsuperscript{182} See Brief for Plaintiffs at 22, Carolina Environmental Study Group v. AEC, 431 F. Supp. 203 (W.D.N.C. 1977).} Their objection to the Act focused on the distinction drawn between nuclear tort victims, whose recoveries are limited by Price-Anderson, and other tort victims, whose recoveries have no comparable ceiling. Judge McMillan alluded to this analysis when he asserted that "[t]he Act irrationally and unreasonably places a greater burden upon people damaged by nuclear accidents than upon people damaged by other types of accidents, such as motor vehicle or electrical accidents, involving power companies."\footnote{\textsuperscript{183} Carolina Environmental Study Group v. AEC, 431 F. Supp. 203, 225 (W.D.N.C. 1977).} Considering the conceivably astronomic damage claims resulting from a nuclear catastrophe, however, a governmental effort to ensure some proportional compensation to all claimants is far from irrational. Price-Anderson, therefore, should satisfy the rational basis test whether the governmental interest is oriented toward either economic and policy concerns or the tort recoveries and remedies of nuclear accident victims.

Judge McMillan also utilized a "less drastic means" analysis, an aspect of the strict scrutiny standard which investigates whether the asserted governmental objective can be accomplished by "less restrictive means."\footnote{\textsuperscript{184} Id. See Dunn v. Blumstein, 405 U.S. 330, 343 (1972); Shelton v. Tucker, 364 U.S. 479, 488 (1960); see also Developments in the Law—Equal Protection, supra note 172, at 1101-04 and Gunther, supra note 176, at 21.} The judge wrote that "[t]he limitation [on liability] is unnecessary to serve any legitimate public purpose. Other arrangements rationally related to the interests asserted
could easily be devised.” However, there does not appear to be any basis for invoking a stricter standard than the rational basis test, since neither a suspect classification nor a violation of any fundamental right is involved. Consequently, the existence of any violation of equal protection is unlikely.

IV. THE PRICE-ANDERSON ACT AND THE COMMON LAW

Challenges to Price-Anderson evidently are based on the belief that victims of a nuclear catastrophe would be in a better position without the legislation in effect. Congress, as evidenced by its several extensions of the Act, has determined otherwise. A comparison of the benefits of the Act and those of its common law alternative would aid all persons concerned with Price-Anderson in determining whether a continuation of the legislation would be in the best interests of the nation. Further, such an analysis helps in determining the rationality of the Act.

Both proponents and opponents of the Price-Anderson Act agree that any recovery mechanism for nuclear tort victims should accomplish four basic goals: (1) provide adequate compensation, (2) spread the risk as much as possible, (3) avoid the forced contribution by non-beneficiaries of atomic energy to its maintenance—that is, decrease the externalization of atomic energy’s cost, and (4) avoid undue cost. The optimum tort recovery system would satisfy all of these objectives.

Under the common law, tort victims recover to the full extent of their damages as ascertained by a court, provided the defendant is not partially or totally judgement-proof. Under Price-Anderson, nuclear accident victims recover a proportion of the indemnity fund, depending on the number and amount of claims and the allocation system devised by the district court. While both mechanisms provide the potentiality for full recovery, neither system guarantees

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186 It is, moreover, unlikely that the present Supreme Court will add to the list of suspect classifications or fundamental rights. See Gunther, supra note 176, at 12.
187 See text at notes 146, 180-81, supra.
188 Both the Senate Committee and Senator Tunney, although holding opposite views regarding the extension of Price-Anderson, cited with approval the criteria propounded by the Columbia Legislative Drafting Research Fund for evaluating any recovery mechanism for the victims of a nuclear disaster. S. REP. No. 454, 94th Cong., 1st Sess., reprinted in [1975] U.S. CODE CONG. & AD. NEWS 2251, 2257, 2276.
189 Id.
complete reimbursement to the nuclear accident victim; in either instance, total claims may exceed the assets available for disbursement. The insolvency of the nuclear user is as possible as the exhaustion of the $560 million fund.\footnote{191}

Although the amount of recovery under either system could be adequate, claims under the Price-Anderson Act and the common law may differ in the likelihood of the plaintiffs' receiving any recovery at all. Price-Anderson utilizes a system of waivers of potential defenses by the atomic users. The common law utilizes the remedy of strict liability for "ultrahazardous activities;"\footnote{192} this doctrine imposes liability without regard to fault for damages due to activities "not a matter of common usage" and that involve "a risk of serious harm to the person, land or chattels of others which cannot be eliminated by the exercise of the utmost care."\footnote{193} In comparing the Act to its common law alternative, the pivotal question is whether state courts would, in the absence of Price-Anderson, denominate the operation of nuclear power plants as an ultrahazardous activity. One noted authority believed "with a good deal of confidence"\footnote{194} that they would. But as atomic energy proliferates and becomes more and more "a matter of common usage," the prediction may prove false, especially if atomic power's good safety record continues.\footnote{195} Technological advances have caused some states to move such industries as the airlines from strict liability to an ordinary negligence standard.\footnote{196} Courts may, at some point in the future, determine that nuclear power is not an ultrahazardous activity, thereby requiring nuclear victims to prove fault in order to recover damages.

A common law tort recovery would, in so far as the nuclear victim recovers against the nuclear user's assets or insurance, pass the risk of loss to the nuclear power operator and, through increased rates, 

\footnotesize{\bibitem{191} Memo, supra note 25, at S22363.}
\footnotesize{\bibitem{192} See Rylands v. Fletcher, L.R. 3 H.L. 330 (1868); Yommer v. McKenzie, 255 Md. 220, 257 A. 2d 138 (1969); Restatement (Second) of Torts, § 519.}
\footnotesize{\bibitem{193} Restatement (Second) of Torts, § 520.}
\footnotesize{\bibitem{194} Prosser, Torts 516 (4th Edition 1971).}
\footnotesize{\bibitem{195} How good this safety record may actually be is open to dispute. The sixty plants now on line have accumulated over 220 reactor years without a death or serious injury outside the reactor building. Critics say this is due to sheer luck, and point to some near-catastrophic accidents at Brown's Ferry, Alabama and Morris, Illinois. See How Safe is Safe Enough?, N.Y. TIMES MAG., June 20, 1976 at 54.}
to the energy consumer. To the extent actual damages exceed the realized recovery, the risk of loss is also spread to the accident victim. Under Price-Anderson, the risk of loss due to the operation of atomic plants may be passed to three distinct groups: the nuclear user and his customers (up to the amount of his insurance coverage), the government and its taxpayers (up to the amount of government indemnification), and the accident victims (up to the amount of his unrecovered losses). Price-Anderson thus adds an extra group—the government and its taxpayers—over which to spread the risk of operating nuclear plants.

As the risk of loss is spread over more non-nuclear user groups, more non-beneficiaries of atomic energy are required to bear the cost of its maintenance, thereby increasing the externalization of the cost of nuclear power. However, the government and its taxpayers, the additional group sharing the loss under Price-Anderson, arguably qualify as beneficiaries of nuclear power in light of the societal benefits of an increased energy supply. Under this view, Price-Anderson would cause no greater externalization of cost than its common law alternative.

In the absence of Price-Anderson, the cost of operating nuclear plants would probably rise, perhaps to prohibitive levels, depending on the cost of the added insurance users would have to purchase.197 This higher price tag must be compared to the current scheme which costs the government nothing to administer and costs the nuclear user only nominal indemnity fees. In terms of minimizing

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197 Ralph Nader contends that elimination of the Price-Anderson Act would make nuclear power economically unfeasible. [1977] ENVIR. REP. (BNA) 1916. However, private insurance provides coverage of between $250 million and $300 million per accident for the airline industry, and there is no reason why similar amounts would not be available to nuclear users at reasonable cost, especially given their safety record. See S. Rep. No. 454, 94th Cong., 1st Sess., reprinted in [1975] U.S. CODE CONG. & AD. NEWS 2251, 2273. In his statement dissenting from the Congress' 1975 extension of Price-Anderson, Senator Tunney estimated, based on conversations with insurance experts, that coverage of $500 million for the average 1000 megawatt nuclear power plant would cost only an extra one tenth mill per kilowatt hour. Id. at 2273-74. The availability of such insurance should be no problem either. In 1957, when Price-Anderson was first enacted, the Senate Committee Report mentioned that the possibility of obtaining insurance from Lloyd's of London had been considered, but rejected in favor of limiting the required coverage to that available in the United States. S. Rep. No. 296, 85th Cong., 1st Sess., reprinted in [1957] U.S. CODE CONG. & AD. NEWS 1803, 1817. It appears that, even at that early stage, the insurance companies recognized the profit potential of nuclear insurance and wanted to be assured of a share in that business, albeit a safely limited share.
costs, then, Price-Anderson appears to be superior to the common law.\(^{198}\)

In sum, the mechanics of recovery under the common law necessarily may not be more equitable than the system developed under the Price-Anderson Act. Analyses based solely on the probable severity of a nuclear accident and the size of the resultant claims fail to investigate the actual funds available under the various mechanisms of recovery and thus are not particularly helpful in comparing Price-Anderson with its common law alternative. Serious doubts exist as to the superiority of the common law over Price-Anderson, in terms of providing actual money damages to nuclear accident victims, thereby providing evidence of the Act's rationality. Moreover, the inadequacy of the common law recovery mechanism which would exist in the event Price-Anderson is declared unconstitutional demonstrates the need for a comprehensive legislative approach to

\(^{198}\) The various relationships determining the comparative benefits of the recovery systems under the Price-Anderson Act and the common law may be schematically depicted as follows:

\[
\text{CLAIMS} = f(\text{PLANT LOCATION, WEATHER, REACTOR SIZE . . .})
\]

\[
\text{RECOVERY FUND}_{ \text{CL}} = f(\text{ASSETS, INSURANCE})
\]

\[
\text{RECOVERY FUND}_{ \text{PA}} = f(\text{DEFERRED PREMIUMS, INSURANCE, INDEMNITY})
\]

\[f(\ ) \text{ means "function of"}
\]

CL means "common law"

PA means "Price-Anderson"

The amount of benefits available under the common law may be no greater than the recovery provided under the Price-Anderson Act, depending upon the interrelation of certain variables. The total amount of recovery funds available to compensate victims under the common law would depend on the assets of the nuclear user and his insurance coverage, while under Price-Anderson the total amount of recovery funds would depend on the deferred premium payments, the insurance available, and the government indemnity. The total amount of claims is, of course, proportional to the severity of the accident, which in turn is a function of such factors as plant location, weather, and size of the reactor. Green, supra note 16, at 481.

In any given accident, to the extent CLAIMS exceeds the Price-Anderson recovery fund more than CLAIMS exceeds the common law recovery fund, the common law provides greater compensation to accident victims. But the recovery fund under Price-Anderson may exceed the recovery fund under the common law if the user's assets are small or if the deferred premiums are large. Moreover, if the ASSETS and INSURANCE factors under the common law generate greater funds than the DEFERRED PREMIUMS and INSURANCE factors under Price-Anderson, the common law would externalize the cost of nuclear power to a lesser degree than Price-Anderson. However, Price-Anderson is likely to externalize the cost of nuclear power to a lesser degree than the common law if the accident involves a small nuclear user or there are many reactors on line to pay deferred premiums. In addition, all victims may not share in the common law recovery fund if strict liability is not recognized by the state courts, just as all may not share in Price-Anderson's recovery fund if defenses are not waived in the absence of the declaration of an "extraordinary nuclear occurrence."
the continuing problem of nuclear liability rather than an appeal to judicial processes.

V. CONCLUSION

Even if the Carolina Study Group court correctly determined that the plaintiffs had established standing and the ripeness of their cause of action, it erroneously declared Price-Anderson violative of both the due process and equal protection provisions of the federal Constitution. Whether the purpose of the Act is the encouragement of nuclear power or the provision of compensation to nuclear accident victims, the Act is a reasonable mechanism for accomplishing its goals.

While the probable resurrection of the Price-Anderson Act by the Supreme Court might be a psychological blow to environmentalists, its true impact on their cause should not be overstated. Even were the Act ultimately to fall, those groups seeking a moratorium on the continued expansion of nuclear power would not have won their goal. The pressures underlying the demand for nuclear power would remain. Although various groups have tried to portray the limited remedies of nuclear victims under Price-Anderson as a cause of atomic plant proliferation, and although it may indeed have contributed to such growth in the industry's infancy, the continuing viability of that contention is doubtful.

Price-Anderson should be perceived simply as a modification of common law remedies in a situation where Congress deems them inadequate. This outlook properly focuses on the basic inquiry, whether the Act provides as adequate a recovery mechanism for victims of a nuclear accident as does the common law, rather than on whether the government should promote nuclear power through Price-Anderson's limited liability. In the event the Act is declared unconstitutional, the remedies of the nuclear accident victim would change, but not necessarily improve. This alteration of remedies would have no effect on nuclear policy. Indeed, such a decision would not affect in any way the policy discussion as to whether the creation of potential "nuclear accident victims" should be permitted to continue.

200 See text at notes 79-81, supra.