

LIABILITY COVERAGE UNDER THE PRICE-ANDERSON ACT
FOR HIGH LEVEL WASTE SHIPMENTS AND DISPOSAL

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ABSTRACT

The Price-Anderson Act provides the basis for a national system of liability protection for accidents arising out of nuclear activities. Private nuclear liability insurance and/or government indemnity is provided to certain Nuclear Regulatory Commission (NRC) licensees (principally operators of nuclear reactors) and certain Department of Energy (DOE) contractors (those whose activities DOE considers involve a risk of public liability for a substantial nuclear incident). As presently envisioned, both the coverage extended by the NRC to its licensees shipping spent fuel from reactors and the indemnity coverage extended by the DOE to its contractors operating a DOE repository under the Nuclear Waste Policy Act will be utilized to provide public liability protection for spent fuel shipments and disposal. Increased attention is being given to assuring a seamless web of protection provided under the Price-Anderson Act to Federal licensees and contractors.

The early efforts to implement the Nuclear Waste Policy Act of 1982 have been accompanied by increased concerns with the unresolved issue of liability. Since 1957 the Price-Anderson Act has provided the basis for a national system for assuring funds for meeting liability claims for accidents arising out of nuclear activities, and it is this Act that the Department of Energy anticipates will form the backbone of liability protection for high level waste activities. Yet a review of the Act would suggest to casual observers that it is legislation oriented basically toward the risks associated with licensed nuclear power reactors. Is there sufficient flexibility in the Act to provide for its adaptation to high level waste activities? What are the pros and cons of using Price-Anderson to provide such liability protection rather than some new legislation?

The Price-Anderson Act was enacted by Congress to meet two basic objectives:

- (1) to ensure that adequate funds would be available to satisfy liability claims of members of the public in the unlikely event of a very low probability catastrophic nuclear accident;
- (2) to remove the deterrent to private sector participation in the use of nuclear energy presented by the threat of potentially large liability claims if such an accident were to occur.

Price-Anderson provides a system to pay funds for claims by members of the public for personal injury and property damage resulting from a nuclear accident.

When the law was enacted, and until ten years ago, one agency, the Atomic Energy Commission (AEC)

carried out both the regulatory and licensing activities of the present Nuclear Regulatory Commission (NRC) and the defense, production and research and development activities of the present Department of Energy (DOE). As a consequence, the Price-Anderson Act authorized the AEC to provide a system of liability protection for its licensees and a similar, but not identical, system for the private contractors that operated its government-owned facilities.

APPLICATION TO LICENSEES

With respect to the regulated/licensed sector, utility holders of licenses to operate large commercial nuclear power plants were required to provide proof to the Commission that they have private nuclear liability insurance (or some other form of what is called "financial protection") equal to the maximum amount of liability insurance available from private sources. Licensees for smaller reactors provide financial protection in lesser amounts. Colleges and universities that operate research reactors and those Federal agencies that hold reactor licenses are not required to buy insurance.

The Price-Anderson Act provides that the Commission will require financial protection, and indemnify licensees, for any production or utilization facility for which a construction permit is issued before August 1, 1987, the expiration date for new agreements under the Act. The Act also limits the liability of persons so indemnified. Included within the term "production and utilization facilities" are all nuclear reactors regardless of their size or use, as well as fuel reprocessing plants. (There are no such reprocessing plants licensed today.) Although the Commission is required to apply the provisions of the Act to all production and utilization facilities, it is also given discretionary authority to extend indemnity coverage

to activities undertaken by other types of licensees. In the one non-reactor related instance of the use of this discretionary authority, the Commission in 1977 required financial protection for, and extended indemnity to, those plutonium processing and fuel fabrication facility licensees possessing at least 5 kilograms of plutonium or using 1 kilogram or more. A few years later, NRC evaluated whether it should require financial protection for fuel cycle facilities and activities and materials licensees other than those possessing plutonium. It was decided that no apparent need existed to extend Price-Anderson to other such classes of licensees including, for example, facilities where spent fuel elements were stored.

The Price-Anderson Act as it now exists for licensees operating large commercial reactors entails a two-part insurance system for liability payments. The first consists of primary nuclear liability insurance whereby utilities pay a premium each year for a fixed amount of liability coverage. The coverage is currently \$160 million for each reactor site. (There is a possibility that this coverage may increase to \$200 million within the next few years.) This primary insurance is supplemented by the second part of the Price-Anderson insurance system that applies only to operators of large licensed power reactors. In the event of a nuclear accident causing damages exceeding \$160 million, each licensed nuclear power plant operator would be assessed a prorated share of damages in excess of the primary insurance coverage of up to \$5 million per reactor per accident. With 92 commercial reactors currently under this system as of January 1, 1985, this secondary or "deferred premiums" insurance totals \$460 million. This results in a total coverage of \$620 million at this time. Where the government is required to provide funds for a nuclear accident in excess of private insurance (or where no private insurance is required) these government funds are called "government indemnity." The Commission enters into indemnification agreements with licensees that specify the amount of financial protection required, if any, and the obligation of the government with respect to its licensees.

In effect, the Act places a ceiling on the total amount of liability in an accident.^a This "limit of liability" is currently tied to the maximum amount of insurance available through private sources. For many years, the limit of liability was \$560 million. In November 1982, when the primary and secondary insurance for large power reactors reached \$560 million, the government's

^a However, the Price-Anderson Act also states ". . . That in the event of a nuclear incident involving damages in excess of that amount of aggregate liability, the Congress will thoroughly review the particular incident and will take whatever action is deemed necessary and appropriate to protect the public from the consequences of a disaster of such magnitude . . ."

indemnity was essentially eliminated for those reactors. The present limit of \$620 million will continue to increase in increments of \$5 million for each new commercial reactor licensed to operate.

The Act contains many unique features with respect to the protection that is provided to nuclear indemnified licensees that is not found in liability systems for other types of hazards. The insurance policies held by licensees as financial protection and the indemnification agreement that the Commission enters into with its licensees are "omnibus" in nature, in that the protection extends to the reactor licensees and to any other persons who may be legally liable including designers, suppliers, states and localities. The scope of Price-Anderson coverage includes any accidents (including those that come about because of theft or sabotage) in the course of transportation of nuclear fuel to the reactor site, in the storage of nuclear fuel and other nuclear materials at the site, in the operation of the reactor, including discharge of radioactive effluents, in the storage of nuclear fuel and nuclear waste at the reactor site, and in the transportation of nuclear fuel and nuclear waste from the reactor. However, as noted earlier, the Act does not require coverage for spent fuel or nuclear waste stored at interim storage facilities or disposed of in repositories, transportation of nuclear fuel or waste that is not either to or from a production or utilization facility, or acts of theft or sabotage occurring after planned transportation has ended. However, nuclear insurance can be purchased from the nuclear insurance pools for up to \$160 million to cover some of these activities.

Principal obstacles to a claimant's recovery for injuries or damages under the Price-Anderson Act could be the traditional legal defenses against liability available to the defendant, such as the claimant's conduct, failure to prove the defendant's negligence, actions that are the fault of persons indemnified, or charitable or governmental immunity. Congress attempted to remove these obstacles in 1966 with respect to production and utilization facilities by amending Price-Anderson to introduce the concepts of extraordinary nuclear occurrence (ENO) and waiver of defenses. "Extraordinary nuclear occurrence" is defined as an offsite dispersal of nuclear materials in amounts causing radiation levels that the Commission determines for its licensees to be substantial and that it determines has resulted, or will probably result, in substantial damages to persons or to property offsite. When the Commission determines that a nuclear incident is an ENO, then the waiver-of-defenses provision of the insurance policies and indemnity agreements making up the Price-Anderson system are activated, resulting in an essentially "no fault" recovery scheme. Claimants would then need only show (1) personal injury or damage, (2) monetary amount of loss, and (3) a verifiable link between the loss and the radioactive material released. Claimants would not need to establish the fault of any party in order to pursue their claims. For the Commission to determine that there has been an ENO, it has established criteria in its regulations against which to assess a nuclear incident.

Finally, the Act contains a number of features that while rather minor in the context of the broad sweep of the legislation, make the system one that is intended to be administered with promptness and efficiency. For example, the government is directed to use the claims settlement services of the experienced insurance industry just as the insurance companies would use them. Emergency assistance payments are authorized and (in the case of extraordinary nuclear occurrences) cases can be consolidated before a single Federal court (although that court would, as would all courts under the Price-Anderson Act, apply the tort law of the state where the accident occurs). In the one significant accident where the Price-Anderson Act was utilized for claims brought about by an accident at a licensed facility, the Three Mile Island accident of March 1979, payments of over \$30 million have been made and the features of omnibus coverage, emergency payment, insurance claims services and consolidation in a single Federal court were all utilized. While the Nuclear Regulatory Commission made a formal finding that the criteria for an extraordinary nuclear occurrence had not been met--so waiver of defenses did not apply--this had no apparent effect on the settlement of the claims.

APPLICATION TO CONTRACTORS

The Atomic Energy Commission (and its successors, the Energy Research and Development Administration (ERDA) and the Department of Energy (DOE)) since its inception carried out a major portion of its operational activities by means of contractual arrangements with industrial organizations and educational institutions.

Under the Price-Anderson Act the DOE--in this respect as successor to the AEC--is authorized to execute indemnification agreements with its contractors for the construction or operation of production or utilization facilities or other contractors who are engaged in activities under contracts for the benefit of the United States under "the risk of public liability for a substantial nuclear incident." The indemnification protection authorized by the Act against claims for public liability for nuclear incidents arising out of or in connection with the contractual activity is in the amount of \$500 million.

All contractors of the DOE are not eligible to enter into Price-Anderson indemnification agreements with the Department. Those contractors who construct or operate production or utilization facilities are specifically eligible; other contractors of the Department must, in order to qualify, be engaged under their contracts with the DOE in activities with the risk of public liability for a substantial nuclear incident.

DOE has established certain administrative principles in the Department of Energy Acquisition Regulations to assist its contracting officers in determining whether such a risk is involved in proposed or existing contractual activities. If

the maximum conceivable damage to persons and property which might result from a nuclear incident arising out of or in connection with the contractual activities is in excess of \$60 million, the contracting officer is authorized to enter into a Price-Anderson indemnity agreement with the contractor. If the maximum conceivable damage appears to be less than \$1 million, the contractor is not eligible to enter into an indemnity agreement with the DOE. Since enactment of Price-Anderson, most of the contract activities analyzed under these principles fall within one or the other of these two categories. There are a few cases where the estimated maximum conceivable damage is between \$1 million and \$60 million and, under such circumstances, the contracting officer must refer the matter for decision to DOE Headquarters.

While licensee coverage under Price-Anderson extends to the indemnified location of the facility and transportation to and from that facility, coverage for DOE contractors is in terms of the phrase "arising out of or in connection with the contractual activity." Thus, the indemnity contract provides liability coverage to the contractor for any nuclear incident, no matter what the cause, that arises out of or in connection with the contractual activity and occurs at a contract location. The term "contract location" is defined in the contract to include any DOE facility, installation or site and any contractor-owned or -controlled facility, installation or site at which the contractor is engaged in the performance of activity under the contract. The agreement also covers related contract activities performed at other locations by the contractor's employees or other persons for whose activities the contractor is legally responsible.

The contractor is similarly protected if the nuclear incident arises out of or in the course of transportation of nuclear materials within the United States to or from a contract location or arises out of or results from any item produced or delivered under the contract, including equipment, materials, facilities, and designs or other data.

The indemnity protection provided by DOE to its contractors shares many of the important features that are available to indemnified licensees of the NRC. Omnibus coverage on behalf of anyone who may be liable for a nuclear accident, coverage that extends to transportation beyond the confines of the indemnified facility, authority to utilize private insurance claims services, to waive defenses in the event of an extraordinary nuclear occurrence at a production or utilization facility, to make emergency payments and to consolidate claims for large accidents in a single Federal court is common to both systems. For both systems Congress has authorized discretionary authority to extend Price-Anderson coverage beyond production and utilization facilities although the regulatory and operational programs have implemented this authority differently.

ADAPTATION OF PRICE-ANDERSON TO NEW SITUATIONS

While the national interest and defense aspects have always been important in justifying contractor coverage under Price-Anderson, even a cursory review of the Price-Anderson legislative record and literature in the last 30 years or so would disclose particular attention to the risks and need for protection for private nuclear power reactors. As a consequence, while the statutory language authorizing Price-Anderson protection for contractors has remained almost unchanged since 1957, the system for licensed power reactors has undergone considerable growth, sophistication and development. Yet the casual observer should not be misled into believing that the Price-Anderson Act is written solely to provide a system for public liability claims for large power reactors. Over the years the Act has demonstrated considerable flexibility respecting new situations in the nuclear field. Many times the Act has been modified to fill gaps, contend with new problems and provide extension of coverage where it is considered necessary. While the Act provides discretionary authority to both the NRC and DOE to extend coverage, where major new directions for Price-Anderson coverage are indicated, given Congress' continued interest in the statute and the ten-year "sunset" aspects of the Act, Congress could appropriately make legislative changes to direct the two agencies into new areas.

With this background in licensee and contractor coverage, the question of whether there is sufficient flexibility in the Price-Anderson Act to provide for its adaptation to high level waste activities and the pros and cons of using this Act rather than some alternative can now be addressed. Clearly, if today shipments of spent fuel could be started on their way from reactors to DOE high level waste repositories or Monitored Retrievable Storage (MRS) facilities, Price-Anderson coverage would automatically, or through some simple administrative actions by DOE, be put in place. In the contracts that the DOE has executed with owners and generators of spent fuel and high level waste, it has agreed to take title to the material at the reactor site, provide for its transportation and its disposal, and has specified that it will include Price-Anderson coverage in its contract for the repository operation. The indemnity agreement will provide, as DOE contracts typically do, coverage of the contractor activities at the site and in transportation to and from the site. The coverage will be for anyone who may be liable (omnibus protection) and the indemnity protection will continue beyond the term of the disposal contracts. The indemnity agreements that the NRC presently has with its indemnified licensees also provides indemnity coverage with omnibus provisions for accidents at the reactor site and transportation from the reactor site to that point where transportation ends--whether for storage or for final disposal. Thus, at least for the transportation phase, subject to detailed provisions of the contractor and licensee indemnity agreements (and insurance policies where

applicable) rather than there being a gap in coverage, there are two potential sources for coverage. Coupling the transportation coverage with DOE's specification of coverage for the repository should provide a seamless web of basic coverage from reactor, through transportation, to final disposal in the repository.

Nevertheless, there are some areas where Price-Anderson protection is not presently clearly applicable. For example, the NRC has never been requested, nor has it initiated, an effort to extend Price-Anderson coverage to interim fuel storage facilities. If it considered it appropriate, the NRC could potentially exercise discretionary authority and extend Price-Anderson coverage to such a licensed facility. Alternatively, if DOE operated an MRS facility through a contractor, it may include Price-Anderson coverage in its operating contract.

For reasons that are not clear in the legislative history, the waiver of defenses provisions that were added to Price-Anderson by Congress in 1966 apply only to production and utilization facilities (reactors and reprocessing plants) and not to storage or disposal--or indeed in any fuel cycle--facilities. DOE in its report to Congress recommended that these provisions be applied to waste facilities and this position is supported in the 1983 NRC study of the Act (although not a specific recommendation of that report).

In the negotiation of a consultation and cooperation agreement between DOE and the State of Washington pursuant to the Nuclear Waste Policy Act, the state has recommended that DOE go beyond the present Price-Anderson limitation of liability of \$500 million and provide for DOE's unlimited strict liability. This position was also reaffirmed in a resolution in July 1984 of the National Conference of State Legislators. The question of whether there should be a limitation of liability, and if so its level, is one that only Congress can answer. It is expected to be the focus of Congressional consideration of extension or modification of the Price-Anderson Act which expires with respect to new construction permits and contracts on August 1, 1987. Recommendations range from a doubling of the limitation, to a total removal, with an NRC recommendation of an annual but no ultimate limitation of liability also under consideration. The application of a limitation of liability to a repository with the extremely long period of concern involved (contrast the nominal 40-year license of a reactor with the required functioning of a repository over thousands of years and the as yet undetermined term of the repository license) adds a new dimension to the question. Further, the type of liability that might be involved in a repository, the nature of the type and duration of an "incident" that could be anticipated in a repository versus one at a reactor and the responsibility of institutions over thousands of years suggest that Price-Anderson extensions to cover all potential repository activities may require new perspectives.

Yet these new perspectives would be necessary if Price-Anderson did not exist or if it were

ignored for waste disposal and totally new legislation were considered to address liability. While it is true that Price-Anderson questions, at least with respect to licensed facilities tend to be addressed from the viewpoint of power reactors, the Act, as discussed earlier, has never been exclusively written for such facilities. The concerns of electric utilities and their suppliers for continued Price-Anderson protection will probably continue to be the focus of the current Congressional legislation. But this does not mean that concurrently with consideration of Price-Anderson for power reactors, or perhaps following such consideration, Congress cannot take the steps necessary to mold Price-Anderson to address waste disposal questions. In the 1960's, when questions of unequal application of different state tort law standards to Price-Anderson claims dominated Congressional attention to Price-Anderson renewal, Congress chose to extend the Act in 1965 with the clear understanding that it would return specifically to the tort questions in the following session. This consideration led to the waiver of defenses amendments in 1966.

Would new legislation to cover just waste disposal be advisable? Such legislation could ignore the possible "bias" introduced into the present Price-Anderson Act by the accretion of elements oriented specifically to power reactors and the electric utility industry. A new look, it could be argued, could lead to a new approach uniquely suited to waste disposal.

But would, or should, such a new approach ignore all that the most concerned people tinkering with Price-Anderson in industry, government, academia and the public sector have come up with? Shouldn't a new law be based on state tort law, include "no-fault" provisions, prompt methods of paying claims that emphasize efficiency and the use of established insurance industry structures? Would consideration of strict and unlimited liability under new legislation be any simpler than if it were considered in the context of Price-Anderson? How much extra effort with the attendant possibility of introducing "gaps" in coverage would be involved in melding the new legislation with Price-Anderson? While differences between repositories and power reactors might suggest to some observers the need for different approaches to liability, it is difficult to see that the benefits of new legislation outweigh the benefits of building on the Price-Anderson structure.

In any case, while observers may differ on the best way to provide liability coverage for high level waste activities under the Nuclear Waste Policy Act, the problems appear to be solvable and the Price-Anderson Act might well be central to any solution.