ATTACHMENT A

Legislative History
Of
Government Contractor Indemnification
Under
The Price-Anderson Act

Prepared for
The *ad hoc* Energy Contractors Price-Anderson Group

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Executive Summary

The Price-Anderson Act expressly authorizes and requires the U.S. Department of Energy (DOE) to indemnify its contractors against "public liability" in the event of a "nuclear incident." This statutory authority first was adopted in 1957; and, since then, has been amended and extended several times. Each has further expanded protection of the public. Unless again extended, DOE's authority to enter into new indemnity agreements with its contractors (Section 170d) will expire on December 31, 2025 (although the law will continue after that date for previously executed contracts).

More attention historically has focused on nuclear liability coverage for licensed facilities, particularly nuclear power plants. However, with only two new nuclear power plants currently under construction and with all existing power plants "grandfathered," the 2025 Price-Anderson expiration date is of more immediate concern with respect to DOE contractor coverage than U.S. Nuclear Regulatory Commission (NRC) licensee coverage.

In determining whether to extend DOE contractor coverage again, Congress should recall the purpose of Section 170d, which has been intended to provide the public with protection substantially the same as that for NRC-licensed nuclear activities. To determine the rationale of Congress in providing and extending contractor indemnification several times, the extensive legislative history of Price-Anderson must be examined. This detailed study can be used as a reference, since many issues that may arise already have been considered by past Congresses.

Governmental policy of contractor indemnification for damages and injuries caused by nuclear accidents has its origins in agreements negotiated by the Manhattan Engineering District (MED) of the U.S. Department of War beginning in the early 1940s. The Atomic Energy Act of 1954 ended the government monopoly over possession, use, and manufacturing of "special nuclear material," *i.e.* the 1954 Act allowed direct participation by private industry in nuclear development. Private entry, however, was slowed by the uncertainty over liability. Faced with the reality that private industry might withdraw from participation in the nuclear program as a result of unresolved liability issues, Congress in 1957 adopted the Price-Anderson Act as an amendment to the 1954 Act.

The 1957 Price-Anderson Act had two basic goals: (i) to protect the public by guaranteeing funds to compensate for injury and damages sustained in a potentially catastrophic, yet unlikely, nuclear accident, and (ii) to set a ceiling on liability for private industry to foster growth and development of peaceful uses of atomic energy.

The Energy Reorganization Act of 1974 abolished the Atomic Energy Commission and the Congressional Joint Committee on Atomic Energy. Price-Anderson responsibility was allocated

between two separate agencies and several committees of the Congress. NRC now administers Price-Anderson coverage for its licensees, while DOE administers coverage for its contractors.

Congress last began considering whether to extend the Price-Anderson Act in 2001 shortly after the NRC and DOE submitted the reports required by the 1988 extension. In 2001-2005 (as it was during the period 1983-1988), Congressional action was much more protracted and controversial, and concentrated more attention on DOE contractor coverage. Three House (Armed Services. Energy, and Science) and three Senate (Armed Services, Energy and Environment) Committees exercised jurisdiction over the last Price-Anderson extension. A number of hearings and floor actions were held between 2001 and 2005. Short-term (two-year) extensions of DOE's indemnification authority were enacted as part of the FY2003 and FY2005 Defense Authorization Acts., while a one-year extension for NRC licensees was included in the 2003 Consolidated Appropriations Act. DOE's authority for *new* contracts and extensions lapsed between August 1, 2002 and December 2, 2002. NRC's authority for *new* nuclear power plants lapsed between August 1, 2002 and February 20, 2003, and between December 31, 2003 and August 8, 2005.

Reauthorization bills were introduced and hearings held in the Senate and House of Representatives during the 107th Congress beginning in 2001. During the 108th Congress, Price-Anderson reauthorizations were included in energy bills that were reported by the Senate Energy and Environment Committees and the House Energy Committee. However, these were not passed by both Houses during 2003 or 2004. (Meanwhile, as noted *supra,* short-term extensions were included in the Defense Authorization Acts in 2002 and 2004.) Final passage by both Houses of the energy bill containing the Price-Anderson Amendments Act of 2005 did not come until August of that year. The President signed the final bill on August 8, 2005.

For DOE contractors, the principal changes brought about by the 2005 amendments were to set the indemnification amount and limit of liability at $10 billion (subject to inflation indexing every five years) and to increase DOE's indemnification for nuclear incidents outside the United States to $500 million from the $100 million added to the Act in 1962. The 1988 amendments had significantly increased the limitation on liability from about $715 million per incident at a power plant and $500 million at a DOE facility to about $7.313 billion at both power plants and DOE facilities.

The 2005 amendments provided that both DOE and NRC should submit to Congress by December 31, 2021 reports on the need to continue or modify the Price-Anderson Act again. DOE on July 26, 2021 published a Federal Register "Notice of Inquiry on Preparation of Report to Congress on the Price-Anderson Act." NRC is not planning to seek public comments on its Report to Congress.

It is important to recognize that general government authority to indemnify contractors preceded the Price-Anderson Act, and presumably would continue to exist in the absence of Price-Anderson. Specific inclusion of contractors in the 1957 Act was an attempt to correct the deficiencies of contractor indemnification as it began under the MED, while furthering the broader

goals and purposes of Price-Anderson, especially protection of the public. Statutory contractor indemnification was seen at the time as desirable for several reasons that are equally valid today.

Protection of the public has been the principal purpose of the Price-Anderson Act. The statutory scheme of indemnification and/or insurance has been intended to ensure the availability to the public of adequate funds in the event of a catastrophic, yet unlikely, nuclear accident. Other benefits to the public include such features as emergency assistance payments, consolidation and prioritization of claims in one court, channeling of liability through the "omnibus" feature (permitting a more unified and efficient approach to processing and settlement of claims), and waivers of certain defenses in the event of a large accident ("extraordinary nuclear occurrence") (providing a type of "no-fault" coverage).

If a very large accident were to happen, Congress recognized in 1957 (and again at the time of the 1988 Amendments) that a private company (such as the DOE prime contractor or subcontractor) probably could not bear the costs alone. The company would be forced into bankruptcy, leaving injured claimants without compensation. Price-Anderson was seen as a means of preventing this from happening by providing a comprehensive, compensation-oriented system of liability coverage for DOE contractors and NRC licensees.

At the same time, if the accident were so large as to exceed the statutory indemnity ceiling, Congress first recognized in 1957 it would be capable of legislating additional funds. Indeed, the Price-Anderson Act specifically has provided since 1975 that, in the event of a nuclear incident involving damages in excess of the statutory limitation on liability, Congress will thoroughly review the particular incident and take whatever action is deemed necessary and appropriate to protect the public.

In 2005, the Senate Energy and Natural Recourses Committee reported:

> Reauthorization of the liability and indemnification provisions of the Price-Anderson Act is critical for protection of consumers as well as stability in the industry.

In 1987, the Senate Energy Committee Report summarized the importance of Price-Anderson as follows:

> In general, failure to extend the Price-Anderson Act would result in substantially less protection for the public in the event of a nuclear incident. In the absence of the Act, compensation for victims of a nuclear incident would be less predictable, less timely, and potentially inadequate compared to the compensation that would be available under the current Price-Anderson system.

During final consideration of the last extension during the 109th Congress in 2005, four Congressional Committees with oversight of DOE's nuclear activities (Senate Energy and Environment, and House Energy and Science) supported renewal of the Department's Price-Anderson indemnification authority. The Senate and House Armed Services Committee also

included short-term extensions in their Defense Authorization Acts in 2002 and 2004. Before the 1988 amendments, five Congressional Committees with oversight of DOE's nuclear activities (Senate Energy and Environment, and House Energy, Interior and Science) supported renewal of the Department's Price-Anderson indemnification authority, as did the then General Accounting Office.

Although government contractors may have received indemnification before Price-Anderson, the types of coverage varied with unpredictable results. Consequently, potential contractors generally were deterred from associating with nuclear development, thereby deviating from the goals of the 1954 Atomic Energy Act to encourage such activities. DOE contractors strenuously reiterated the same point prior to the 1988 and 2005 extensions, saying they would decline to work for DOE without nuclear liability protection of the type afforded by the Price-Anderson Act. Alternatives would be using Federal employees or possibly less responsible, less competent, "judgment-proof" contractors.

Price-Anderson rendered nuclear liability coverage more uniform, and, since the 1988 Amendments, has been mandatory for DOE contractors (as it has been for power plants since 1957). For example, the Act currently provides coverage for any nuclear accident if it occurs at the contract location or takes place at other locations and arises in the course of contract performance by any person for whom the contractor must assume responsibility. Also, protection is extended to incidents that arise out of or in the course of transportation or that involve items produced or delivered under the contract. Before the passage of Price-Anderson, indemnity agreements had to be negotiated at each tier of contractors. Moreover, the different scopes of coverage caused by contract negotiations at each tier could result in haphazard protection of the public. Price-Anderson corrected this deficiency.

After a thorough examination of the issue before the 1988 extension, Congress, as it had in 1957, declined to make an exclusion for damages in case of "gross negligence," "willful misconduct" or "bad faith" of any contractor representatives. Enhanced criminal and civil penalty provisions were added in 1988 to further encourage "contractor accountability" after Congress rejected any subrogation provision. A further attempt to add a “contractor accountability” provision by the House during the last reauthorization cycle again was rejected when the final 2005 Amendments Act was adopted by the House and Senate.

After over sixty years of indemnification, private industry has maintained a large role in assisting the Government in its own nuclear activities without significant damage or injury to the public and with only two substantial settlements. In other words, Price-Anderson contractor indemnification is a system that has worked well.

Legislative History of Government Contractor Indemnification Under the Price-Anderson Act

I. Introduction

The Price-Anderson Act[1] expressly authorizes and requires the U.S. Department of Energy (DOE) to indemnify its contractors against public liability in the event of a nuclear incident. Specifically, Section 170d provides:

> In addition to any other authority the Secretary of Energy (in this section referred to as the "Secretary") may have, the Secretary shall, until December 31, 2025, enter into agreements of indemnification under this subsection with any person who may conduct activities under a contract with the Department of Energy that involve the risk of public liability....[2]

This statutory authority first was adopted in 1957; and, since then, has been amended several times and extended five times for ten-, fifteen- or twenty-year periods. Unless again extended, DOE's authority to enter into new indemnity agreements with its contractors will expire on December 31, 2025 (although the law will continue after that date for previously executed contracts).

At least before the 1988 and 2005 Amendments Acts, more attention historically had been focused on nuclear liability coverage for licensed facilities, particularly nuclear power plants. However, with only two new nuclear power plants currently under construction and with all existing power plants "grandfathered," the 2025 Price-Anderson expiration date again is of more immediate concern with respect to DOE contractor coverage than U.S. Nuclear Regulatory Commission (NRC) licensee coverage.[3]

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[1] Act of September 2, 1957, Pub. L. No. 85-256, 71 Stat. 576. The Price-Anderson Act, as amended, is codified as Sections 11 (definitions) and 170 (substantive provisions) of the Atomic Energy Act of 1954, as amended; 42 U.S.C. §§2014, 2210.

[2] 42 U.S.C. §2210d(1)(A).

[3] This fact was recognized at the time of the 1988 extension of the Price-Anderson Act as well. *See* H. Rept. 100-104, Part 1, 100th Cong., 1st Sess. 6 (May 21, 1987) [hereinafter cited as *1987 House Interior Committee Report*]; H. Rept. 100-104, Part 2, 100th Cong., 1st Sess. 6 (July 22, 1987) [hereinafter cited as *1987 House Science Committee Report*]; H. Rept. 100-104, Part 3, 100th Cong., 1st Sess. 17 (July 22, 1987) [hereinafter cited as *1987 House Energy Committee Report*] (noting the House Energy Committee viewed the need to extend the Act as "urgent" and that the impact of expiration "would be most severe" with respect to DOE). Nuclear power plants are covered for the life of the NRC license at the time the licensee receives a construction permit, while DOE contracts typically are entered into for up to only five years. *See* S. Rept. No. 100-70, Calendar No. 166, 100th Cong., 1st Sess. (June 12, 1987) at 16-18, 35-36, 49-58; *reprinted in* [1988] U.S. Code Cong. & Ad. News 1424, 1428-1430, 1446-1447, 1457-1466 [hereinafter cited as *1987 Senate Energy Committee Report*] (describing, *inter alia,* why other alternatives available to DOE would not provide as much protection to the public).

In determining whether to extend DOE contractor coverage again, Congress should recall the purpose of Section 170d, which has been intended to provide the public with protection substantially the same as that for NRC-licensed nuclear activities.[4] The scope of present contractor indemnification authority basically can be determined by reference to the Atomic Energy Act language in Section 170d, the definitions in Section 11 of key concepts[5] (such as "public liability," "extraordinary nuclear occurrence," "nuclear incident," "person indemnified," "public liability," and "precautionary evacuation"), and the DOE Acquisition Regulations (DEAR).[6] None of these sources, however, fully illustrates or explains the Congressional intent behind contractor indemnification beginning with the 1957 Act and continuing through the more recent Amendments. Furthermore, there is little case law interpreting the Congressional goals and policies of contractor coverage.[7] Thus, to determine the rationale of Congress in providing and extending contractor

[4]*See* S. Rept. No. 296, 85th Cong., 1st Sess. 21-22 (1957) [hereinafter cited as *S. Rept. No. 296*], *reprinted in* [1957] U.S. Code Cong. & Ad. News 1803, 1823; H. Rept. No. 435, 85th Cong., 1st Sess. 21-22 (1957) [hereinafter cited as *H. Rept. No. 435*]; *Government Indemnity and Reactor Safety*: Hearings Before the Joint Comm. on Atomic Energy (JCAE), 85th Cong., 1st Sess. 107, 149, 158, 162-63, 176 (1957) [hereinafter cited as *1957 Hearings*]; L.R. Rockett, Financial Protection Against Nuclear Hazards: Thirty Years' Experience Under the Price-Anderson Act, Legislative Drafting Research Fund of Columbia University 1 (January 19, 1984) [hereinafter cited as *1984 Columbia Study*]. While it concentrated on NRC licensee coverage, the *1984 Columbia Study* contained much background information applicable to DOE contractor coverage as well.

[5] One court has said the PAA's "…definitions are complicated, interlocking, and use words in unintuitive ways…." *Estate of Ware ex rel. Beneficiaries v. Hosp. of the Univ. of Pa.,* 871 F.3d 273, 280 (3d Cir. 2017). An example is the treatment of nuclear damage to on-site property in the definition of "pubic liability" in Section 11(w): It provides claims for loss of, or damage to, or loss of use of property which is located at the site of and used in connection with an NRC licensed activity where the nuclear incident occurs are not included. At the same time, claims for on-site property are covered by the DOE indemnification under Section 170d, as the definition of "public liability" includes an exception to this exclusion. Thus, property on a DOE site is covered by the PAA under the statutory construction principle that an exception to an exclusion is an inclusion.

[6]DOE's standard nuclear hazards indemnity agreement is part of the DEAR, and is codified as DEAR §952.250-70. *See also* DEAR Subpart 950.70 and §970.2870.

[7]*See In re Hanford Nuclear Reservation Litigation*, 534 F.3d 986, 1002 (9th Cir. 2007) (ruling the PAA's provision of Federal Government indemnification to victims of nuclear incidents made the government contractor defense inapplicable). *See also* J.F. McNett, Nuclear Indemnity for Government Contractors Under the Price-Anderson Act, 14 Pub. Contract L.J. 40, 46 (1983) [hereinafter cited as *McNett*] (there then was no case law); DOE, The Price-Anderson Act - Report to Congress as Required by Section 170p of the Atomic Energy Act of 1954, as Amended 3 (August 1, 1983) [hereinafter cited as *1983 DOE Report*] (only one significant incident (the 1961 SL-1 reactor incident in Idaho) then had been recorded). At the time of the 1988 extension, the only payments that had been made totaled about $1.5 million (including the settlements of $266 thousand following the 1961 Idaho incident). *See* S. Rept. 100-218, Calendar No. 435, 100th Cong., 1st Sess. 62, App. IV (Nov. 12, 1987), *reprinted in part in* [1988] U.S. Code Cong. & Ad. News 1476 [hereinafter cited as *1987 Senate Environment Committee Report*]; *1987 Senate Energy Committee Report, supra* note 3, at 16, *reprinted in* [1988] U.S. Code Cong. & Ad. News 1428; *1987 House Interior Committee Report, supra* note 3, at 5; *1987 House Energy Committee Report, supra* note 3, at 17. The House Science Committee concluded in its 1987 Report that this "federal insurance program" saves the government money by self-insuring. *1987 House Energy Committee Report, supra* note 3, at 4-5. It noted that, over the previous thirty years, expenditures under DOE contracts amounted to $124 billion, so claims then corresponded to only 1/1000 of one percent of the expenditures. *Id.* at 5. Before the *1999 DOE Report to Congress,* there was a settlement by DOE of about $78 million of the *In Re Fernald Litigation,* No. C-1-85-149 (S.D. Ohio). Since then, there has been a settlement of about $325 million involving the Rocky Flats Plant. *Cook et al. v. Rockwell International Corp. et al.*, No.90-cv-00181-JLK (D. Colo.). *See Cook v. Rockwell Int'l Corp*., 790 F.3d 1088 (10th Cir. 2015) (Gorsuch, C.J.) (unusually finding the Price-Anderson Act does not preempt "a state law nuisance claim when a nuclear incident is asserted but unproven"). *Cf. Matthews v. Centrus Energy Corp*., No. 20-3885, slip op. at 12-13 (6th Cir,.Oct. 6, 2021) (finding *Cook* to be "a unique (and inapposite) case" and that the Price-Anderson Act preempts state-law claims for liability arising from a nuclear incident).

indemnification multiple times, the legislative history of Price-Anderson must be examined. This legislative history is extensive, and stretches over more than six decades during which Congress repeatedly has reaffirmed the Act's original purposes.

II. Historical Background

A. Indemnification by Manhattan Engineering District

Governmental policy of contractor indemnification for damages and injuries caused by nuclear accidents has its origins in the contractor agreements negotiated by the Manhattan Engineering District (MED) of the U.S. Department of War beginning in the early 1940s.[8] The MED recruited various industrial organizations to construct and operate government nuclear production facilities during World War II. This was done to gain the full advantage of the skills of American industry.[9] Private contractors, who entered into agreements with the government, often sought and were given indemnities "against extraordinary hazards associated with the production and use of nuclear materials."[10] This was because insurance of the type normally available to industrial enterprises was not obtainable against the risks involved. The actual contracts often "contained broad indemnity provisions which held the contractor harmless against any loss, expense, claim, or damage arising out of or in connection with the performance of a contract."[11] The provision was generally limited to the risks associated with the "radioactive, toxic, explosive, or other hazardous properties of nuclear materials."[12] In addition, indemnity could be extended by MED to include the contractor who "manufactures, transports, possesses, uses, disposes of, or

(..continued)

[8]Operations Under Indemnity Provisions of the Atomic Energy Act of 1954: Hearings Before the Subcomm. on Research, Development, and Radiation of the JCAE, 87th Cong., 1st Sess. 11-13 (1961) [hereinafter cited as *1961 Hearings*]; Government Indemnity for Private Licensees and AEC Contractors Against Reactor Hazards: Hearings Before the JCAE, 84th Cong., 2d Sess. 76-84 (1956) [hereinafter cited as *1956 Hearings*] (Statement by William Mitchell, General Counsel, Atomic Energy Commission, with several typical indemnities attached); Atomic Energy Commission Staff Study of the Price-Anderson Act (January 1974) [hereinafter cited as *1974 AEC Staff Study*] *reprinted in* Selected Materials on Atomic Energy Indemnity and Insurance Legislation, JCAE, 93d Cong., 2d Sess. (March 1974) at 30-35 [hereinafter cited as *1974 JCAE Selected Materials*]; *McNett, supra* note 7, at 41-42.

[9]*1957 Hearings, supra* note 4, at 12; S. Rept. No. 1211, 79th Cong., 2d Sess. 15 (1946), *reprinted in* [1946] U.S. Code Cong. & Ad. News 1327, 1333. *See* Heistand and Florsheim, The AEC Management Contract Concept, 29 Fed.B.J. 67 (1969); O.F. Brown, Energy Department Contractors and the Environment: A More "Special Relationship," 37 Fed.B.N.&J. 86 (1990).

[10]*1956 Hearings, supra* note 7, at 76-77; *1957 Hearings, supra* note 4, at 34.

[11]*1956 Hearings, supra* note 7, at 76.

[12]*Id.*

otherwise handles nuclear matter" in connection with the contract.[13] The indemnity arrangements, for the most part, were of necessity made subject to the availability of funds.[14]

B. Atomic Energy Act of 1946

The Atomic Energy Act of 1946,[15] which established the Atomic Energy Commission (AEC), vested contractor indemnity authority of the MED in the AEC. The AEC indemnity coverage continued under the scheme instituted by the MED, and on a few occasions covered research and development work in private or mixed facilities as well as the operation of the AEC's own production facilities.[16]

C. Atomic Energy Act of 1954

The Atomic Energy Act of 1954[17] marked a significant change in the development of nuclear energy in the United States.[18] The 1954 Act ended the government monopoly over possession, use, and manufacturing of special nuclear material, *i.e.* the 1954 Act allowed direct participation by private industry in nuclear development for the first time. This included private use and possession of nuclear material and construction and operation of nuclear facilities, all subject to AEC licenses.

D. Price-Anderson Act of 1957

The 1954 Act was clearly designed to usher private industry into nuclear energy. Private entry, however, was slowed by the uncertainty over assignment of liability. Private industrial organizations were concerned about whether they would be required to bear all the risks associated with nuclear development.[19] This uncertainty was a significant obstacle to commercial nuclear development. Faced with the reality that private industry might withdraw from participation in the nuclear program completely as a result of unresolved liability issues as well as other factors, Congress in 1957 adopted the Price-Anderson Act as an amendment to the 1954 Act. Price-

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[13] *Id.*

[14] *1974 AEC Staff Study, supra* note 8, at 31.

[15] Act of August 1, 1946, ch. 724, 60 Stat. 755. *See* Newman, *The Atomic Energy Industry: An Experiment in Hybridization*, 60 Yale L.J. 1263 (1951) (general background of operations under the 1946 Act).

[16] *1956 Hearings, supra* note 7, at 77.

[17] Act of August 30, 1954, Pub. L. No. 83-703, 68 Stat. 919.

[18] *See, e.g., 1984 Columbia Study, supra* note 4, at 1; *1974 AEC Staff Study, supra* note 8, at 1-2.

[19] *1956 Hearings, supra* note 7, at 5, 113, 276, 281, 286.

Anderson had two basic goals:[20] (i) to protect the public by guaranteeing funds to compensate for injury and damages sustained in a potentially catastrophic, yet unlikely, nuclear accident, and (ii) to set a ceiling on liability for private industry to foster growth and development of peaceful uses of atomic energy.

E. Subsequent Price-Anderson Amendments and Extensions

Since its passage in 1957, the Price-Anderson Act has been amended on at least fifteen separate occasions. Most of these amendments have affected contractor as well as licensee coverage. Each has further expanded protection of the public. The first amendment occurred in 1958 when coverage was extended to the nuclear ship *Savannah*.[21] During the same session of the 85th Congress, a new subsection was added to exempt non-profit educational institution licensees from previously mandatory financial protection.[22] In 1961, the contractor provisions were amended to encompass underground testing of nuclear explosive devices.[23]

The 88th Congress further amended the Act to clarify licensee coverage to expressly indemnify facilities that had received construction licenses before the expiration of Price-Anderson.[24] In 1965, Price-Anderson was extended for ten years (until 1977), and the Act was amended to provide that the indemnity afforded under Subsections 170c and 170d shall be reduced by the amount that any financial protection required shall exceed $60 million.[25]

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[20]H. Rept. No. 648, 94th Cong., 1st Sess. (1975) [hereinafter cited as *H. Rept. No. 648*]; S. Rept. No. 454, 94th Cong., 1st Sess. (1975) [hereinafter cited as *S. Rept. No. 454*], *reprinted in* [1975] U.S. Code Cong. & Ad. News 2251-80; S. Rept. No. 1027, 93d Cong., 2d Sess. 1-3 (1974); S. Rept. No. 1605, 89th Cong., 2d Sess. 6 (1966) [hereinafter cited as *H. Rept. No. 1605], reprinted in* [1966] U.S. Code Cong. & Ad. News 3201, 3206; H. Rept. No. 2043, 89th Cong., 2d Sess. 6 (1966) [hereinafter cited as *H. Rept. No. 2043]; 1957 Hearings, supra* note 4, at 7, 8, 169; Proposed Amendments to Price-Anderson Act Relating to Waiver of Defenses: Hearings Before the Joint Comm. on Atomic Energy, 89th Cong., 2d Sess. 3 (1966) [hereinafter cited as *1966 Hearings*]; 112 Cong. Rec. S22691 (daily ed. September 22, 1966) (statement by Sen. Pastore); *S. Rept. No. 296, supra* note 4, at 1, *reprinted in* [1957] U.S. Code Cong. & Ad. News 1803; *H. Rept. No. 435, supra* note 4, at 1; 103 Cong. Rec. H9551 (daily ed. July 1, 1957) (statement of Rep. Price).

[21]Act of August 8, 1958, Pub. L. No. 85-602, 72 Stat. 525.

[22]Act of August 23, 1958, Pub. L. No. 85-744, 72 Stat. 837.

[23]Act of September 6, 1961, Pub. L. No. 87-206, 75 Stat. 475. This amendment added a provision for liability of contractors (to the extent of indemnification) free of the defense of sovereign immunity. Previously, a contractor might have argued it was immune from suit as an "instrumentality" of the Government.

[24]Act of August 1, 1964, Pub. L. No. 88-394, 78 Stat. 376.

[25]Act of September 29, 1965, Pub. L. No. 89-210, 79 Stat. 855. *See* S. Rept. No. 650, 89th Cong., 1st Sess. (1965) 1, 9, 15, *reprinted in* [1965] U.S. Code Cong. & Ad. News 3216-17; H. Rept. No. 883, 89th Cong., 1st Sess. (1965) 1, 9, 15. This amendment has had no effect on contractor indemnity, because contractors have not been required by the AEC or DOE to purchase any underlying insurance. *See 1983 DOE Report, supra* note 7, at 5; and, *1974 AEC Staff Study, supra* note 8, at 33.

F. Foreign Coverage

During the 1956-1957 hearings, several issues had been raised in regard to contractor indemnification outside the borders of the United States,[26] specifically as a result of contractors using nuclear devices and operating military reactors overseas. The scope and limitation of liability of a foreign nuclear accident, however, remained vague until Congress in 1962 amended Price-Anderson to allow foreign coverage under AEC's Section 170d indemnity authority.[27] The 1962 amendment extended coverage (then up to $100 million) to apply to nuclear incidents involving "a facility or device owned by and used by or under contract with, the United States.[28] Prior to that time, AEC had used its general authority to indemnify some of its contractors for foreign incidents.[29] In 1975, Congress again clarified foreign coverage. Contractors were covered by any occurrence involving "source, special nuclear, or by product material owned by, and used by or under contract with the United States." Foreign coverage was not an issue during the 1988 Price-Anderson Act extension, but later was raised in the context of U.S. Government-funded nuclear safety and nonproliferation work in the former Soviet bloc.[30] The $100 million amount was raised to $500 million by the 2005 Amendments Act.

The 1962 Congressional Joint Committee on Atomic Energy report recognized the potential problems inherent in that year's amendment's $100 million (now $500 million)

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[26] *1957 Hearings, supra* note 4, at 151-52, 181-82, 192-93, 197, 287.

[27] Act of August 29, 1962, Pub. L. No. 87-615, 76 Stat. 409. Since 2005, the Price-Anderson System has provided up to $500 million of protection for some "nuclear incidents" outside the United States. 42 U.S.C. §2210d(5). However, the statutory definition of "nuclear incident" limits coverage outside the United States to situations where the nuclear material is "owned by, and used by or under contract with, the United States...." *See* 42 U.S.C. §2014q. Foreign coverage, when compared to domestic coverage, varies in several respects under Section 170d: The class of persons eligible for indemnity coverage is smaller. Coverage extends only to the prime contractor with the indemnity agreement, subcontractor, suppliers of any tier, and others whose liability arises by reasons of activities connected with such contracts or subcontracts (rather than "anyone liable"). Further, the wide latitude given when defining the person indemnified does not apply to foreign coverage. Finally, the §170n waiver of defenses ("extraordinary nuclear occurrence" provision) does not apply. *See McNett, supra* note 7, at 55-56.

[28] S. Rept. No. 1677, 87th Cong., 2d Sess. (1962) [hereinafter cited as *S. Rept. No. 1677], reprinted in* [1962] U.S. Code Cong. & Ad. News 2207-22.

[29] *1961 Hearings, supra* note 7, at 16-18. *See 1974 AEC Staff Study, supra* note 8, at 36-37.

[30] S. Rept. No. 454, *supra* note 19, *reprinted in* [1975] U.S. Code Cong. & Ad. News 2251-80; 42 U.S.C. §2014g. Generally because of the "owned by... the United States" requirement, Price-Anderson did not protect contractors funded by DOE to do nuclear safety work on Soviet-designed reactors. DOE provided a few contractors indemnification under Public Law 85-804 (discussed, *infra* notes 33 and 40 and accompanying text) for limited nuclear nonproliferation work in the former Soviet Union, but declined to provide such coverage for work on former Soviet bloc nuclear power reactors. The latter led a number of contractors to decline to do such work. DOE also has used Public Law 85-804 indemnification in only a very few cases for certain "high priority national security work" outside the United States. These situations generally have been limited to "emergency work abroad involving nuclear weapons, real or suspected, and nuclear materials which can be readily utilized in the production of nuclear weapons without substantial further effort," as well as "nonproliferation activities abroad involving weapons-usable material…." *See, e.g.,* Memorandum for the Vice President from Secretary of Energy O'Leary, Indemnification of Department of Energy Contractors Under Public Law 85-804 (Dec. 12, 1994); and Letter to Rep. Dingell from Secretary of Energy Abraham (Sept. 5, 2001).

"limitation-on-liability" in situations when it applies to nuclear incidents outside the United States:

> The [then $100 million] liability limitation is generally comparable to the highest limits imposed by domestic legislation may not be entirely effective upon assertion by a defendant in the courts of a foreign jurisdiction. It is the *hope* [emphasis added] of the committee that foreign courts will apply this limitation. In any event, it is the intent of the committee that the limit imposed by section 6 of the bill shall be applied by courts of the United States in any litigation involving the application of the indemnity provisions of the Atomic Energy Act for incidents occurring outside the United States in the contractor program.[31]

Today, even the $500 million is not "comparable" to the limits imposed by many other countries. When the 2004 Paris Convention on Third Party Liability in the Field of Nuclear Energy and the 2004 Brussels Convention Supplementary to the Paris Convention enter into force on January 1, 2022, they will require coverage of at least €1.5 billion (about $1.75 billion). Other countries, such as Finland, Germany, Japan, and Switzerland, provide for unlimited nuclear liability.

G. Department of Defense Contractor Coverage

Price-Anderson coverage of contractors was intended to apply to situations where government and private industry assumed varying degrees of commitment towards one another.[32] Thus, Price-Anderson was intended to cover: privately financed work subject to 1954 Act licenses, contract work financed exclusively by AEC (now DOE), contract work partially financed by AEC (now DOE), and work for another agency of government required to obtain a license under the 1954 Act. In this regard, there existed some controversy as to whether Price-Anderson also should be extended to contracts entered into by the U.S. Department of Defense (DOD).[33] Nevertheless, the JCAE in 1957, recommended that it was not "appropriate" at the time to include protection for the prime contractors of DOD. The JCAE felt the DOD situation differed from the others, and should be resolved only after further and full investigation of the scope of DOD's operations.[34] All other agencies of the Government as licensees of NRC can have their operations covered by the Act.

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[31] S. Rept. No. 1677, 87th Cong., 2d Sess. *reprinted in* [1962] U.S. Code Cong. & Ad. News 2207, 2217.

[32] *1957 Hearings, supra* note 4, at 149-50.

[33] *S. Rept. 296, supra* note 3, at 22, *reprinted in* [1957] U.S. Code Cong. & Ad. News 1803, 1823; *H. Rept. No. 435, supra* note 4, at 22; S. Rept. No. 2298, 84th Cong., 2d Sess. 12 (1956); *1956 Hearings, supra* note 7, at 379-80; *1957 Hearings, supra* note 4, at 22, 186, 286; *1966 Hearings, supra* note 20, at 86.

[34] S. Rept. No. 296, *supra* note 4, at 19,22, *reprinted in* [1957] U.S. Code Cong. & Ad. News 1803, 1823; H. Rept. No. 435, *supra* note 4, at 19, 22. *See 1974 AEC Staff Study, supra* note 8, at 34. In 1958, Congress did pass a separate statute (generally known as Public Law 85-804) that enables agencies, such as DOD and DOE, which exercise "functions in connection with national defense" to enter into indemnity agreements for damages arising from contractors' handling of unusually hazardous or nuclear risks. *See* Act of August

H. "Extraordinary Nuclear Occurrence" Feature

Congress amended Price-Anderson in 1966 to require those who were indemnified, including contractors, to waive certain legal defenses to actions in the event of an "extraordinary nuclear occurrence" (ENO).[35] The waiver was designed to maximize protection of the public by eliminating legal barriers to claims that varied among the States, but remains an often misunderstood feature of the Price-Anderson Act. At the time of the ENO amendment, it was felt that, if recovery of Price-Anderson funds were left entirely to the provisions and principles of State tort law in the event of a major nuclear accident, many valid claims might be tied up in the courts for years. Particular problems that were anticipated were varying statutes of limitations and the possibility that some States might not apply "strict liability" to a serious nuclear accident. On the other hand, there was considerable resistance to the total displacement of State law by creation of a "Federal tort" for nuclear accidents. The result of this balance of competing factors was the "waiver" system in which entities covered by Price-Anderson are required to waive certain State law defenses (*i.e.,* contributory negligence, assumption of risk, charitable or governmental immunity, unforeseeable intervening causes, and "short" statutes of limitations). As a result of the defenses that would be waived in the event of an ENO, a person suffering nuclear injury would need show only a causal connection between his or her injury or damage. In other words, when there is an ENO, there essentially is a "no-fault" recovery system.

I. 1975 Extension

Congress, in 1975, extended Price-Anderson for another ten years.[36] Also, a system was added to implement retrospective premiums that would be assessed, subsequent to a nuclear incident causing damages in excess of the available amount of private insurance, against each nuclear power plant licensed to operate by NRC. This was intended to increase the aggregate liability limit (and phase-out Government indemnity) for nuclear power plants, but the limit for DOE contractors was left at $500 million. Indemnity coverage outside the United States was

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28, 1958, Pub. L. No. 85-804, 72 Stat. 972, 50 U.S.C. §§1431-1435. Like the Price-Anderson Act, 42 U.S.C. §2210j, Public Law 85-804 is an exception to the Anti-Deficiency Act, which otherwise prohibits Federal agencies from making obligations in advance of appropriations. 31 U.S.C. §§1341 *et seq.*

[35]Act of October 13, 1966, Pub. L. No. 89-645, 80 Stat. 891. *See generally 1966 Hearings, supra* note 20; *S. Rept. No. 1605, supra* note 19, *reprinted in* [1966] U.S. Code Cong. & Ad. News 3201-06; *H. Rept. No. 2042, supra* note 19; *1974 JCAE Selected Materials, supra* note 7, at 299-332. The ENO provision now is mainly in §170n(1). Determination as to whether an incident was an ENO is made by the NRC or DOE on the basis of predetermined criteria. 10 C.F.R. Parts 140 (NRC) and 840 (DOE). It is not necessary that an ENO determination be made for coverage under the Price-Anderson system to apply. The only case in which an ENO determination previously has been made was the 1979 Three Mile Island (TMI) accident. NRC determined that, while that event was "extraordinary" in ordinary parlance, it was not an ENO. 45 Fed. Reg. 27590 (1980). Price-Anderson, nonetheless, was applied in the TMI case (*e.g.,* resulting in one law firm representing all the defendants).

[36]Act of December 31, 1975, Pub. L. No. 94-197, 89 Stat. 1111. *See H. Rept. No. 648, supra* note 19, at 8-16, *reprinted in* [1975] U.S. Code Cong. & Ad. News 2257-66. A similar bill (H.R. 15323) had passed the Congress in 1974, but was vetoed by President Ford on October 12, 1974. The President cited his approval of the substantive portions of the bill, but based his veto on the "clear constitutional infirmity" of the bill's provision that allowed Congress to prevent it from becoming effective by passing a concurrent resolution within a specified time. *Id.* at 3, 33, *reprinted in* [1975] U.S. Code Cong. & Ad. News 2252-53, 2276.

extended, and the ENO waiver of short statutes of limitations was lengthened from ten to twenty years. Furthermore, mechanisms were established to afford certain claims (under Section 170c or 170d) priority over others. The cost of investigating and settling these claims incurred by the Government was excluded from the liability limit under Section 170d.[37]

J. Abolition of AEC and JCAE

The Energy Reorganization Act of 1974[38] abolished the AEC and the JCAE. Price-Anderson responsibility was allocated between two separate agencies - the NRC and the Energy Research and Development Administration (ERDA), and several committees of the Congress. ERDA was subsequently eliminated under the Energy Reorganization Act of 1977.[39] All ERDA authority was transferred to the DOE. NRC now administers Price-Anderson coverage for its licensees, while DOE administers coverage for its contractors.

K. 1988 Extension

Congress, in 1983, began considering whether to extend the Price-Anderson Act for the third time shortly after DOE and NRC submitted reports required by the 1975 amendments. A number of hearings were held by five separate Committees between 1984 and 1987. Each of the five Committees reported bills before the 1986 Labor Day recess, but the 99th Congress adjourned before a bill could reach the floor of either house. Following re-introduction of bills early in the 100th Congress, the House passed an extension bill at the end of July 1987 (just before DOE's authority to enter into new nuclear hazards indemnity agreements expired on August 1, 1987). It, however, was not until March 1988 that a Price-Anderson bill reached the Senate floor. On August 20, 1988, President Reagan signed the Price-Anderson Amendments Act of 1988, extending the system for another fifteen years (to August 1, 2002).[40] The liability limit was increased substantially; and (as described, *infra* notes 102-122 and accompanying text) there were a number of significant changes to the DOE contractor provisions.

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[37]Amendment of the "costs" provisions of the Act was proposed by Senator Hathaway during Senate consideration of the bill. 121 Cong. Rec. S22336 (daily ed. Dec. 16, 1975). The amendment is somewhat obscure, and led to questions about whether it was intended to apply to coverage for both licensees under Section 170c and contractors under Section 170d. *See* NRC, The Price-Anderson Act - The Third Decade - Report to Congress, NUREG-0957 (December 1983) at I-5 [hereinafter cited as *1983 NRC Report*].

[38]Act of October 11, 1974, Pub. L. No. 93-438, 88 Stat. 1233, 42 U.S.C. §§5801-5891.

[39]Act of August 4, 1977, Pub. L. No. 95-91, 91 Stat. 565, 42 U.S.C. §7151.

[40]Act of August 20, 1988, Pub. L. No. 100-408; 102 Stat. 1066. For an overview of the 1988 Act, *see* D.M. Berkovitz, "Price-Anderson Act: Model Compensation Legislation? - The Sixty-Four Million Dollar Question," 13 *Harvard Environmental Law Review* 1, 16-41 (1989) [hereinafter cited as *Berkovitz*].

L. Lapses Between 1987 and 1988, and 2002 and 2006

The first lapse in Price-Anderson authority for new or extended nuclear hazards liability coverage lasted for just over a year from August 1, 1987 to August 20, 1988. Meanwhile, on September 18, 1987, DOE and the University of California signed new contracts for the operation of Los Alamos, Lawrence Livermore and Lawrence Berkeley National Laboratories. Because these contracts were due to expire on September 30, 1987, DOE and the University were faced with the unfortunate choice of signing without Price-Anderson coverage or closing the three laboratories. The new contracts contained Public Law 85-804 indemnity coverage.[41] The signing of these contracts eliminated a significant deadline for Congressional action, and resulted in some Congressional staff members pointing out that one significant DOE contractor was willing to work without the more comprehensive Price-Anderson coverage. Before their expiration on December 31, 1987, EG&G, Inc. (for the Nevada Test Site) and Associated Universities, Inc. (for Brookhaven National Laboratory) also renewed contracts without Price-Anderson coverage. At least one major DOE contractor refused to do nuclear work for DOE with only Public Law 85-804 indemnification.[42] Another lapse in DOE's authority for *new* contracts and extensions occurred between August 1, 2002 and December 2, 2002. NRC's authority for *new* nuclear power plants lapsed between August 1, 2002 and February 20, 2003, and between December 31, 2003 and August 8, 2005.

M. DOE Civil and Criminal Penalty Provisions

New DOE civil and enhanced criminal penalty provisions were added to the 1988 Price-Anderson extension legislation by the Senate essentially as a compromise substitute for subrogation rights[43] against DOE contractors.[44] Addition of a subrogation provision to Price-Anderson had

[41]As discussed, *supra* note 33 and accompanying text, Public Law 85-804 authorizes certain agencies to provide indemnification for unusually hazardous or nuclear risks associated with national defense activities. The Senate Energy Committee and House Energy Committee in 1987 pointed out it does not provide the same public protection features of the Price-Anderson Act. *1987 Senate Energy Committee Report, supra* note 3, at 17, *reprinted in* [1988] U.S. Code Cong. & Ad. News 1429; *1987 House Energy Committee Report, supra* note 3, at 17. Under Public Law 85-804, victims could sue for damages under State tort law, but contractors would not have to waive their defenses. Victims also would not be able to benefit from the other important features of the Price-Anderson Act, such as emergency assistance payments, consolidation and prioritization of claims, a minimum statute of limitations, or the "omnibus" feature that includes subcontractors and suppliers. *Id.*

[42]On October 22, 1987, General Electric Company informed DOE it would not accept a contract for the Dynamic Isotope Power Systems project relying solely on Public Law 85-804 for nuclear indemnification coverage. Chairman Johnston later referred to this fact during the Senate floor debate on Price-Anderson on March 16, 1988. *See* 134 Cong. Rec. S2302 (daily ed. Mar. 16, 1988).

[43]An entity having a right of subrogation can recover monies in relation to a claim or debt paid on behalf of another. The subrogation provisions proposed during the 1988 extension of the Price-Anderson Act expressly would have allowed DOE to recover from its own indemnified contractors and subcontractors monies paid to injured third parties, in effect making the contractors and subcontractors self-insureds. Insurance policies, for example, often allow a policyholder's primary insurer to recover from a third party's insurer (but not its own insured) monies paid on behalf of its insured.

[44]DOE implementation of the civil and criminal penalty provisions of the 1988 Amendments has been continuing. DOE promulgated updated nuclear safety rules just last October. 85 Fed. Reg. 66201 (Oct. 19, 2020). Procedural rules and an enforcement policy (10

began being advocated in mid-1985. This came at a time when DOE and its contractors were beginning to be severely criticized for a number of environmental and safety problems at the Department's aging nuclear installations. A renewed attempt to add a DOE "contractor accountability" provision by the House was rejected when the final 2005 Amendments Act was adopted by the House and Senate. Prior to final passage in 2005, the bill reported by the House Energy and Commerce Committee (H.R.1640) included a provision that would have authorized the Attorney General to bring an action to recover from a DOE contractor, subcontractor, or supplier amounts paid by the Federal Government under an indemnity agreement for public liability resulting from conduct which constitutes "intentional misconduct."[45]

N. Last Extension in 2005

Congress last began considering whether to again extend the Price-Anderson Act in 2001 after the NRC and DOE had submitted the reports required by the 1988 extension.[46] In 2001-2005 (as it was during the period 1983-1988), Congressional action again was much more protracted and controversial, and concentrated more attention on DOE contractor coverage. Three House (Armed Services. Energy, and Science) and three Senate (Armed Services, Energy and Environment) Committees exercised jurisdiction over the last Price-Anderson extension. A number of hearings and floor actions were held between 2001 and 2005. Short-term (two-year) extensions of DOE's indemnification authority were enacted as part of the FY2003[47] and FY2005[48] Defense Authorization Acts,[49] while a one-year extension for NRC licensees was included in the 2003 Consolidated Appropriations Act.[50] The 2005 Price-Anderson Amendments Act was signed by

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C.F.R. Part 820) initially were published in 1993 and amended in 2006. 58 Fed. Reg. 43680 (Aug. 17, 1993); 71 Fed. Reg. 68732 (Nov. 28, 2006). Subsequently, a number of substantive "nuclear-safety related" rules for DOE to enforce under the 1988 Amendments were promulgated in final form. They were: DOE's final workplace substance abuse rule for contractor employees (10 C.F.R. Part 707), which became effective August 21, 1992, 57 Fed. Reg. 32652 (Jul. 22, 1992); DOE's final "whistleblower" rules (10 C.F.R. Part 708), which became effective on April 2, 1992, 57 Fed. Reg. 7533 (Mar. 3, 1992), and were updated in 2019, 84 Fed. Reg. 37752 (Aug. 2, 2019); DOE's final occupational radiation protection standards (10 C.F.R. Part 835), which became effective on January 13, 1994, 58 Fed. Reg. 65458 (Dec. 14, 1993), and were last amended in 2015, 80 Fed. Reg. 5008 (Jan. 30, 2015); and, the quality assurance portions of 10 C.F.R. Part 830, which required contractors to submit to DOE a current quality assurance program and an implementation plan. 59 Fed. Reg. 15843, 15852 (Apr. 5, 1994); 66 Fed. Reg. 1818 (Jan. 10, 2001).

[45] *See* Energy and Commerce Report to accompany H.R.1640, §612 on financial accountability. H. Rept. 109-215, 109th Cong., 1st Sess. at 56-57.

[46] DOE, *Report to Congress on the Price-Anderson Act* (1999); NRC, *The Price-Anderson Act – Crossing the Bridge to the Next Century: A Report to Congress* (Aug. 1998).

[47] Act of December 2, 2002, Pub. L. No. 107-314, §3171.

[48] Act of October 28,2004, Pub. L. No. 108-375, §3141.

[49] The Nuclear Energy Institute (NEI), which predominantly represents nuclear power plant operators and owners, lobbied against the short-term extensions of Section 170d authority for DOE contractors included in both the FY2003 and FY2005 Defense Authorization Acts, because NEI feared such would further delay reauthorization for new power plant coverage, which lapsed in 2002.

[50] Act of February 20, 2003, Pub. L. No. 108-7, Division O, §101.

President George W. Bush on August 8, 2005.[51] Unlike the earlier ten- or fifteen-year extensions, the 2005 extension was for twenty years (to December 31, 2025).[52]

III. Original Congressional Rationale for Contractor Indemnification

A. 1956

The legislative history reveals that indemnification for the AEC's own contractors was not a major concern in the early drafts of what became the Price-Anderson Act. It was simply assumed.[53] Many believed the AEC authority to cover contractors to be adequate and that legislation was not necessary. After indemnification in general began to be examined, Congress soon appreciated the need to expressly include AEC contractors under the proposed legislation.

The early drafts of the Price-Anderson legislation, specifically the House bills (H.R. 9701,[54] H.R. 9802,[55] and H.R. 11242[56]), did not provide for AEC contractor indemnification. H.R. 9701, which was introduced by Representative Price on March 1, 1956, was intended to authorize the AEC, upon request, to indemnify each owner, operator, manufacturer, designer, and builder of a licensed facility against uninsured liability to members of the public for bodily injury, death and property damage arising from nuclear hazards. The bill also allowed for indemnification of each supplier of equipment, material or services for such facilities, "as interests appear," but placed no ceiling on liability.

Representative Cole, on March 7, 1956, introduced H.R. 9802 as an alternative to H.R. 9701. H.R. 9802 provided that a licensee would not be liable in damages for an aggregate amount more than twice the original capital cost of the facility. This limitation would have extended to and included all contractors and subcontractors of the licensee. On May 16, 1956, Representative Cole, upon his introduction of H.R. 11242, abandoned the liability formula of H.R. 9802 in favor of a broad provision authorizing the AEC to indemnify licensees. H.R. 11242, which was drafted by the AEC, also did not provide for statutory indemnification of the Commission's contractors. Coverage referred only to licensees, apparently because the AEC

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[51] Act of August 8, 2005, Pub. L. 109-58, §§601 to 610; 119 Stat.594.

[52] The bills reported by the Senate Energy Committee on June 12, 1987 and the Senate Environment Committee on November 12, 1987 would have extended authority for the Price-Anderson indemnification system for DOE contractors for thirty years in connection with the new inflation indexing provision. *1987 Senate Energy Committee Report, supra* note 3, at 12, 19, *reprinted in* [1988] U.S. Code Cong. & Ad. News 1425, 1432; *1987 Senate Environment Committee Report, supra* note 6, at 1, 4, 12.

[53] *McNett, supra* note 7, at 43-44.

[54] 84th Cong., 2d Sess. (1956).

[55] 84th Cong., 2d Sess. (1956).

[56] 84th Cong., 2d Sess. (1956). *See also 1956 Hearings, supra* note 7, at 43-46 (reprinting the bill and explanatory material).

presupposed that the indemnity authority, which initially had been used by the MED, would be sufficient to protect its own contractors against any financial risks.[57]

Hearings before the JCAE occurred on May 15, 16, 17, 18, 21, and June 14, 1956. The majority of the testimony related to the mechanics of the proposed insurance and indemnification of licensees. Nevertheless, several witnesses addressed the issue of contractor coverage, indicating that the bills should be altered to cover AEC contractors as well as licensees. This followed informative testimony relating to previous coverage of contractors by William Mitchell, General Counsel of the AEC, on the first day of the hearings.[58] Mr. Mitchell noted that contractor indemnification began under the MED as a result of the fact that various contractors sought protection against extraordinary hazards associated with the production and use of nuclear materials, and described the scope of indemnities given to contractors up to that time.

Following Mr. Mitchell's testimony, several witnesses expressed the view that contractor coverage should be written into the proposed legislation. The first witness to do so was Charles H. Weaver, Vice President of Westinghouse Electric Corp., who testified on May 16th, the second day of the hearings.[59] Mr. Weaver specifically noted that the indemnities Westinghouse then had in its contracts involving naval nuclear activities were subject to the availability of funds, would not extend to liabilities arising after performance, and did not apply to Westinghouse's suppliers.[60] In acknowledging Mr. Weaver's concerns, JCAE Chairman Anderson said the Committee staff was at work on something to add to the bill to solve this problem.[61]

Later the same day, Ambrose Kelly, then General Counsel of the Associated Factory Mutual Fire Insurance Cos., said government indemnity should be applicable equally to both Government and private atomic installations ("with privately owned installations obliged to provide liability insurance in an amount established by the AEC as adequate for all normal losses within the capacity available from private sources").[62] He said he had learned in the hearings that the public was "inadequately protected" against the possibility of loss at an AEC installation, especially in light of Mr. Mitchell's earlier testimony that the Government itself would be liable, if at all, only under the

[57] *See 1956 Hearings, supra* note 7, at 285-86.

[58] *Id.,* at 76-94.

[59] *Id.,* at 113-116.

[60] Similar concerns about coverage for suppliers and subcontractors under prior AEC indemnity agreements were expressed in a letter dated May 11, 1956 to the JCAE from W.E. Kingston, General Manager, Atomic Energy Division, Sylvania Electric Products, Inc. *Id.,* at 285-86. He also noted the form and coverage of the indemnification Sylvania had received varied according to the cognizant AEC Operations Office.

[61] *Id.,* at 124.

[62] *Id.,* at 173.

Federal Tort Claims Act (FTCA),[63] which contains a number of defenses (such as discretionary function).

The next day, May 17th, Francis H. McCune, Vice President of General Electric Company, also indicated that he would like to see the legislation include Government facilities, whereupon Chairman Anderson indicated again that a new draft bill the Committee staff was working on did contain such coverage.[64] Such a bill was introduced by Senator Anderson on May 25th.[65]

S. 3929, departed from the earlier bills by expressly providing for contractor indemnity. Senator Anderson, upon presentation of the proposal, stated that, pursuant to section 170d, the:

> AEC is authorized to enter into the same [licensee] type of indemnity agreement with its prime contractors and subcontractors, including lump sum as well as cost type contracts, and including arrangements where AEC finances only part of the project. This authority is in addition to AEC's existing authority to enter into indemnity agreements. Normally AEC has made its contractual indemnities subject to the availability of funds. It has used the indemnity sparingly in subcontracts and in jointly financed projects with other federal agencies or private organizations. This bill would authorize AEC to treat its contractors and licensees on a more consistent basis.[66]

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[63] 28 U.S.C. §§2671 *et seq.* *See Dalehite v. United States,* 346 U.S. 15 (1953) (describing the legislative history of the FTCA, and the Federal Government's lack of liability for the Texas City disaster thereunder). *See also 1987 Senate Energy Committee Report, supra* note 3, at 17-18, *reprinted in* [1988] U.S. Code Cong. & Ad. News 1429-1430 (describing the legal obstacles to recovery of damages under the FTCA). In 1987, the U.S. Department of Justice objected to a provision that would have treated the Secretary of Energy as a government contractor for purposes of determining the Federal Government's potential tort liability for certain activities relating to storage or disposal of radioactive waste. *Id.* at 59-64; *1987 House Energy Committee Report, supra* note 3, at 33-36.

[64] *1956 Hearings, supra* note 7, at 199.

[65] S. 3929, 84th Cong., 2d Sess. (1956). A companion identical bill, H.R. 11523, was introduced in the House by Rep. Price on May 29, 1956. Section 3 of these bills contained a proposed §170d, which read as follows:

> In addition to any other authority the Commission may have, the Commission is authorized until August 1, 1966, to enter into agreements of indemnification with its contractors for the construction or operation of production or utilization facilities for the benefit of the United States, in which the Commission may require its contractor to provide financial protection of such a type and in such amounts as the Commission shall determine to be reasonably adequate to cover public liability claims arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of source, special nuclear, or byproduct materials used in or resulting from the construction or operation of the facility because of activities of the indemnitee during the period of the contract and to indemnify the contractor against such claims for such sums above the amount of the financial protection required, but not in excess of $500,000,000. Such agreements shall be for activities performed within the terms of the contract and shall include the liability of subcontractors and suppliers and be applicable to lump sum as well as cost type contracts and to contracts financed in whole or in part by the Commission.

[66] 102 Cong. Rec. S8095 (daily ed. May 25, 1956) (statement by Sen. Anderson); Statement of Senator Clinton P. Anderson on Introduction of Indemnity Bill S.3929 in the Senate, JCAE Press Release No. 56 (May 25, 1956).

When the hearings were resumed on June 14, 1956, a provision for AEC contractors thus was in the legislation before the JCAE.[67] Mr. Mitchell of the AEC testified that day that the Commission believed that the inclusion of AEC contractors in the new version of the legislation was a "desirable feature."[68] A revision of S. 3929, S. 4112,[69] was introduced by Senator Anderson on June 22, 1956. On June 25, 1956,[70] the JCAE favorably reported out S. 4112 and H.R. 12050.[71] They were not debated on the floor of either House in 1956, and no legislation was passed before the 84th Congress adjourned.

B. 1957

On January 3, 1957, Representative Price reintroduced the earlier indemnity legislation. This legislation, H.R. 888,[72] contained the same provision as H.R. 12050, which had died in the previous Congress. Specifically, Section 170d authorized the AEC to indemnify its contractors. H.R. 888 was redrafted and introduced again as H.R. 1981,[73] which again was revised and reintroduced by Representative Baring on January 28, 1957 as H.R. 3798.[74] Senator Anderson introduced S. 52[75] on January 7, 1957. S. 52 was essentially the same as S. 4112 of the Eighty-Fourth Congress. S. 52 also was redrafted, resulting in S. 715.[76] Again, Section 170d remained unchanged.

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[67] *1956 Hearings, supra* note 7, at 313-314.

[68] *Id.,* at 320. *See id.,* at 330, 336-7 and 342 (containing changes in §170d of S. 3929 proposed by Oscar M. Ruebhausen of the New York City Bar Association); 336-37 (containing changes in §170d of S. 3929 proposed by Stoddard Stevens of Sullivan & Cromwell); 379-80 (containing changes in §170d of S. 3929 proposed by Mr. Weaver of Westinghouse); and 382-83 (containing changes in §170d proposed by Mr. McCune of General Electric). *See also id.,* at 351 (containing a statement of H.W. Yount, Vice President, American Mutual Alliance in support of placing AEC contractor and licensee coverage on a common basis); and 407 (containing an AEC statement of June 21, 1956 that persons having an interest in this legislation should understand that §170d of S. 3929 would "give the Commission additional authority to that which is now available to the Commission to enter into agreements of indemnification with its contractors").

[69] 84th Cong., 2d Sess. (1956). An identical bill, H.R. 12050, 84th Cong., 2d Sess. (1956), was introduced in the House by Rep. Price on June 29, 1956. These bills added authority to cover "research and development plants" to §170d.

[70] JCAE, Press Release No. 60 (June 25, 1956).

[71] *See* S. Rept. No. 2298, 84th Cong., 2d Sess. (1956) at 12; H. Rept. No. 2531, 84th Cong., 2d Sess. (1956) at 12. Note that, in these reports, the JCAE also indicated that it did not believe that §170d authority should be extended to prime contractors of DOD.

[72] 85th Cong., 1st Sess. (1957).

[73] 85th Cong., 1st Sess. (1957).

[74] 85th Cong., 1st Sess. (1957).

[75] 85th Cong., 1st Sess. (1957).

[76] 85th Cong., 1st Sess. (1957). S. 715 was introduced on January 17, 1957.

On March 25, 26 and 27, 1957, hearings were held before the JCAE. They were to focus upon H.R. 1981 and S. 715.[77] Since hearings had been held in 1956, the JCAE limited the scope of the 1957 hearings to matters that previously were either inadequately covered or not covered at all. In the 1957 hearings, consideration was given to the terms of the proposed authority for the AEC to indemnify its own contractors, rather than to whether the legislation should contain such a provision at all. The AEC, early in the hearings, proposed a redrafted version of S. 715 and H.R. 1981. The recommended changes were to confine indemnification of AEC contractors to nuclear incidents arising from construction or operation of production and utilization facilities and other activities involving "seriously hazardous quantities" of special nuclear materials "in order to be consistent with the licensed activities indemnified."[78]

Other witnesses also discussed various provisions of Section 170d. For example, Mr. McCune of General Electric said he believed that the indemnity authority in the contract program should be "coextensive" with that in the licensing program.[79] He added that an amendment along the lines of that suggested by the New York City Bar Association, which would give protection to the public and industry in all cases where there was "a risk of a substantial nuclear incident," would seem "desirable."[80] Appearing on behalf of the New York City Bar Association, Arthur W. Murphy said he thought the legislation should contain a direction to the Commission to indemnify Government contractors in any case in which financial responsibility would be required if the activity involved were licensed.[81] He further said he thought that indemnity should be available for any activity carried on by contractors which were not of a type that might be carried on by a licensee, if the Commission thought there was a danger of a "substantial" accident. He added the AEC contractor provision should be mandatory, rather than permissive.[82]

On May 2, 1957, the JCAE reported out H.R. 1981 and S. 715, with amendments.[83] These were reintroduced as H.R. 7383 and S. 2051, respectively, on May 9, 1957. On July 1, 1957,

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[77] *1957 Hearings, supra* note 4, at 3-6.

[78] *Id.* at 16, 20. The AEC also believed that §170d should be clarified to indemnify contractors and their suppliers above the amounts of financial protection required, and others who may be liable without regard to financial protection. S. 715 then provided only for indemnification of contractors above the amount of financial protection required. *Id.*

[79] *1957 Hearings, supra* note 4, at 158. *See also id.,* at 149-51.

[80] *See also id.* at 185 (statement of Victor A. Hahn, on behalf of National Association of Manufacturers).

[81] *Id.,* at 162-63.

[82] *Id.* at 176. A similar statement was made by Dr. Lee L. Davenport, President, Sylvania-Corning Nuclear Corp. *Id.* at 250.

[83] JCAE, Press Release No. 81 (May 2, 1957). *See H. Rept. No. 435, supra* note 4, at 21-22; and, *S. Rept. No. 296, supra* note 4, at 21-22, *reprinted in* [1957] U.S. Code Cong. & Ad. News 1823. As reported out that May, the bills authorized contractor indemnity coverage under §170d for "...the construction or operation of production or utilization facilities or other activities involving possession of sufficient quantities of special nuclear, source or byproduct materials to constitute a hazard involving potential widespread injury to persons or property other than those employed or used at the site of the contract activity, for the benefit of the United States." The JCAE also decided to observe the operations of the AEC "for a year" before considering any further steps to make the §170d authority

consideration of H.R. 7383 began on the House floor. These was little discussion relating directly to coverage for AEC contractors; however, Representative Price offered a JCAE amendment to make Section 170d apply to, inter alia, "activities under risk of public liability for a substantial nuclear incident."[84] He said the amendment redefined the area in which the bill would be applied by the Commission in its own contract operations "so as to be as closely similar to those areas covered by licensed operations as is possible."[85] H.R. 7383, as amended, was passed by the House on July 1, 1957 and by the Senate (without any specific consideration of coverage for AEC contractors) on August 16, 1957. The Price-Anderson Act was signed by President Eisenhower on September 2, 1957.

IV. Congressional Activities Between 1975 and 1984

A. 1979-1980 House Activities

On July 9, 1979, the Subcommittee on Energy and the Environment of the House Interior and Insular Affairs Committee held an oversight hearing on the Price-Anderson Act. The hearing closely followed the March 1979 accident at the Three Mile Island nuclear power plant, and concentrated on H.R. 789[86] and coverage for commercial licensees. H.R. 789, which was introduced by Representative Weiss on January 15, 1979, *inter alia*, would have eliminated the limitation on liability provision and the then $500 million ceiling on DOE's Section 170d indemnity authority. Chairman Hendrie of the NRC testified he did not see a need to change the Price-Anderson Act at that time. DOE did not testify at this hearing. No further action was taken by this Subcommittee in 1979.

The next year, its Chairman, Representative Udall, introduced another bill, H.R. 8179,[87] on September 22, 1980. H.R. 8179 would have increased the retrospective premium applicable to power plant licensees, and increased the ceiling of government indemnity for both NRC licensees and DOE contractors to $5 billion. Markup on H.R. 8179 was initiated, but there was no further Congressional action.

(..continued)
mandatory, and that it still was not appropriate to include protection for prime contractors of the Defense Department alone in this legislation. *Id.* As discussed, *infra* notes 110-112 and accompanying text, the 1988 Amendments finally made coverage for DOE contractors mandatory. Pub. L. No. 100-408, §4(a)(d)(1)(A); 102 Stat. 1068.

[84]103 Cong. Rec. H9562 (daily ed. July 1, 1957). A revised version of H.R. 7383, Calendar No. 579, containing this new language was introduced the next day.

[85]*Id.* He added that the original language of §170d in covering only those activities involving possession of hazardous amounts of special nuclear materials did not cover such activities as the design or construction of a reactor which precede the insertion of special nuclear materials into the pile as fuel. *Id.*

[86]96th Cong., 1st Sess. (1979). H.R. 421, 98th Cong., 1st Sess. (1983), which was introduced by Representative Weiss on January 3, 1983 and was very similar to the bills he introduced in 1979 and 1981.

[87]96th Cong., 2d Sess. (1980).

B. 1981 GAO Report

In 1981, the House Committee on Science and Technology asked the then General Accounting Office (GAO) to examine the Price-Anderson Act as it governs nuclear liability of DOE contractors. The GAO issued its report on September 14, 1981,[88] and the Subcommittee on Energy Research and Production held a hearing the next day focusing on the Act's impact on nuclear research and development at the Department's facilities.[89] Also, Representative Weiss testified on H.R. 3915[90], a bill he introduced on June 11, 1981 to eliminate the limitation on liability for both NRC licensees and DOE contractors.

GAO said in its 1981 report that it believed the protection provided DOE contractors by the Price-Anderson Act was needed, "especially since alternative methods for insuring the public against the potential hazards of a catastrophic nuclear accident do not provide as much protection as does the Price-Anderson Act." At the same time, GAO said that public protection under the Act should be increased for DOE contractor operations and that certain provisions should be changed and/or clarified to "provide better public protection" from catastrophic nuclear accidents. GAO recommended that the Act be amended to increase protection for DOE contractor activities and make it equal to that for licensed commercial activities, and to cover precautionary evacuations. At the House hearing, Deputy Secretary of Energy Davis testified that DOE then believed that the $500 million limit for its contractors was reasonable and that the Department recommended no change at that time. In saying this, DOE cited the provisions of the Act and the prior legislative history that indicate that the limitation on liability "serves primarily as a device for facilitating further congressional review of such a situation as an incident rather than an ultimate bar to further relief of the public."[91]

C. 1983 DOE and NRC Reports to Congress

In 1975, when Congress extended the Price-Anderson Act to 1987, it added a new Section 170p that directed the "Commission" to submit to the Congress by August 1, 1983, a detailed report concerning the need for continuation or modification of the Act beyond 1987. Both DOE and NRC[92] submitted such reports. DOE stated in its Report to Congress that the Price-Anderson

[88]GAO, Congress Should Increase Financial Protection to the Public from Accidents at DOE Nuclear Operations, EMD-81-111 (September 14, 1981). In June 1987, GAO issued another report recommending extension of DOE's Price-Anderson indemnity authority. GAO, Nuclear Regulation - A Perspective on Liability Protection for a Nuclear Plant Accident, GAO/RCED-87-124 (June 1987) at 5-6, 28-30 [hereinafter cited as *1987 GAO Report*].

[89]Price-Anderson Act: Hearing Before the House Subcomm. on Energy Research and Production, Committee on Science and Technology, 97th Cong., 1st Sess., No. 47 (September 15, 1981) [hereinafter cited as *1981 House Science Hearing*].

[90]97th Cong., 1st Sess. (1981).

[91]*See 1981 House Science Hearing, supra* note 78, at 17, 23, 25, 77.

[92]*1983 DOE Report, supra* note 7, and *1983 NRC Report, supra* note 37. The NRC Report specifically noted that it did not include any discussion of issues relating to DOE contractor activities indemnified under §170d.

indemnity system should be continued "to ensure furtherance of DOE's statutory missions in research and development, production, defense and other nuclear fields, and protection of the public." DOE also stated the contractor indemnity system should remain unchanged, except for the following modifications: (i) the DOE contractual indemnification limit should be made "equivalent" to that provided for NRC licensed facilities, and (ii) the "extraordinary nuclear occurrence" feature should be extended to include incidents at nuclear waste management facilities.

D. 1984 House Hearing

On June 11, 1984, the House Subcommittee on Energy and the Environment held another hearing on the Price-Anderson Act. There was discussion of the DOE and NRC reports, and H.R. 421 and H.R. 3277[93], which was introduced by Representative Sieberling on June 9, 1983. H.R. 3277 would have removed the limitation on liability and imposed strict liability regardless of the severity of an incident, i.e., the "extraordinary nuclear occurrence" feature would have applied to all nuclear incidents.

V. Price-Anderson Amendments Act of 1988

A. Overview; Review By Five Congressional Committees and GAO

Congress began considering whether to again extend the Price-Anderson Act in 1983 shortly after the NRC and DOE submitted the reports required by the 1975 extension (when only the JCAE had reviewed the legislation). This time, Congressional action was much more protracted and controversial, and concentrated more attention on DOE contractor coverage. Three House and two Senate Committees[94] asserted jurisdiction over the 1988 Price-Anderson extension. A number of hearings were held[95] and reports issued[96] by each between 1984 and 1987. The five Committees all

[93]98th Cong., 1st Sess. (1983).

[94]The Senate Committees that held hearings and reported bills were the Energy and Natural Resources Committee, and the Environment and Public Works Committee. The House Committees that held hearings and reported bills were the then Interior and Insular Affairs Committee (renamed the Natural Resources Committee in 1991, shortened to Resources Committee in 1995, and back to Natural Resources Committee between 1991 and 1995), the Energy and Commerce Committee, and the Science and Technology Committee (renamed the Science, Space and Technology Committee in the 100th Congress, the Science Committee in 1994, the Committee on Science and Technology in 2007, and now again the Committee on Science, Space and Technology). Additionally, the House Rules Committee three times considered whether to send a bill to the floor. While they might have asserted jurisdiction over Price-Anderson legislation, the House and Senate Armed Services Committees did not do so. When the Price-Anderson Act previously was extended in 1975, only one committee, the JCAE, had jurisdiction over the legislation. It was abolished that year.

[95]*See, e.g., Amendments to the Price-Anderson Act,* Hearing Before the Subcommittee on Energy and the Environment of the House Committee on Interior and Insular Affairs, Serial 98-32, 98th Cong., 2d Sess. (1984); *Amendments to the Price-Anderson Act,* Hearing Before the Subcommittee on Energy and the Environment of the House Committee on Interior and Insular Affairs, 99th Cong., 1st Sess. (1985); *Price-Anderson Amendments Act of 1985,* Hearing Before the Subcommittee on Energy Research and Development of the Senate Committee on Energy and Natural Resources, S. Hrg. 99-439, 99th Cong., 1st Sess. (1985); *Reauthorization of the Price-Anderson Act, 1985,* Hearing Before the Subcommittee on Nuclear Regulation of the Senate Committee on Environment and Public Works, 99th Cong., 1st Sess. (1985); *Price-Anderson Legislation,* Hearing Before the Subcommittee on Energy Conservation and Power of the House Committee on Energy and Commerce, Serial 99-154, 99th Cong., 2d Sess. (1986); *Legislative Inquiry on the*

reported bills before the 1986 Labor Day recess,[97] but the 99th Congress adjourned before a bill could reach the floor of either house.[98] Following reintroduction of bills early in the 100th Congress, additional hearings and another GAO Report in June 1987 recommending renewal,[99] the House passed H.R. 1414[100] at the end of July 1987. However, it was not until March 1988 that a Price-Anderson bill reached the Senate floor. Final passage of the 1988 amendments did not come until August of that year, when the Senate accepted a "compromise" version of H.R.1414 that had modified some of the Senate floor amendments. President Reagan signed the final bill on August 20, 1988.[101] Unlike the earlier two ten-year extensions, the 1988 extension was for fifteen years (to August 1, 2002).[102]

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Price-Anderson Act, By Subcommittee on Energy Research and Production of the House Committee on Science and Technology, 99th Cong., 2d Sess. (Feb. 1986) [hereinafter cited as *1986 House Science Inquiry*]; *Reauthorization and Extension of the Price-Anderson Act,* Hearing Before the Senate Committee on Energy and Natural Resources, S. Hrg. 100-236, 100th Cong., 1st Sess. (1987); *Price-Anderson Amendments Act of 1987,* Hearing on S. 44 and S. 843 Before the Subcommittee on Nuclear Regulation of the Senate Committee on Environment and Public Works, 100th Cong., 1st Sess. (1987); *H.R. 1414, the Price-Anderson Amendments Act of 1987,* Hearing Before Subcommittee on Energy Research and Development of the House Committee on Science, Space and Technology, Committee Serial 30, 100th Cong., 1st Sess. (June 1987); *Price Anderson Amendments Act of 1987,* Hearings Before the Subcommittee on Energy and the Environment of the House Committee on Interior and Insular Affairs, and Subcommittee on Energy and Power of the House Committee on Energy and Commerce, Committee Serial 100-JH1, 100th Cong., 1st Sess. (March 1987).

[96]*See, e.g., 1987 Senate Energy Committee Report, supra* note 3; *1987 Senate Environment Committee Report, supra* note 6; *1987 House Interior Committee Report, supra* note 3; *1987 House Science Committee Report, supra* note 3; *1987 House Energy Committee Report, supra* note 3; H. Rept. 99-636, Part 1, 99th Cong., 2d Sess. (June 12, 1986) (House Interior Committee); H. Rept. 99-636, Part 2, 99th Cong., 2d Sess. (Aug. 5, 1986) (House Science Committee); and H. Rept. 99-636, Part 3, 99th Cong., 2d Sess. (Sept. 9, 1986) (House Energy Committee).

[97]*Id.*

[98]Efforts to take "compromise" versions to the House and Senate floors before the 99th Congress adjourned *sine die* in mid-October 1986 were unsuccessful, largely because of threatened floor amendments, as well as strong power plant operator opposition to a number of proposed changes in Price-Anderson. A "floor vehicle" drafted by the staff of the House Interior Committee attempted to reconcile provisions of the bill reported from three House Committees. This was introduced by Chairman Udall (as H.R. 5650, 99th Cong., 2d Sess. (1986)) on October 6, 1986. It contained a requirement that DOE submit a report to Congress on criminal and civil penalties, which had been added by the Science Committee in July 1986. Some bill might have been enacted that month. There had been serious and apparently fruitful discussions among the House and Senate principals on an acceptable bill (with a limit of about $6.5 billion and no inflation indexing). However, nuclear power plant operators until very near the end of the Session had been strongly opposing any new Price-Anderson limit much above $2 billion. On October 7, 1986, the House Rules Committee decided not send a bill to the floor, largely because of perceptions about the time that would be taken by threatened floor amendments (including a subrogation provision applicable to DOE contractors).

[99]*1987 GAO Report, supra* note 77.

[100]100th Cong., 1st Sess. (1987).

[101]Most of the changes contained in the 1988 Amendments Act are applicable to all nuclear incidents occurring on or after the date of the bill's enactment (*i.e.*, August 20, 1988). Pub. L. No. 100-408, §20; 102 Stat. 1084. *Cf. Crawford v. National Lead Co.,* 784 F.Supp. 439 (S.D. Ohio 1989) (finding the new punitive damages provision did not apply with respect to claims arising between 1951 to 1985).

[102]The bills reported by the Senate Energy Committee on June 12, 1987 and the Senate Environment Committee on November 12, 1987 would have extended authority for the Price-Anderson indemnification system for DOE contractors for thirty years in connection

For nuclear power plant licensees, the principal changes brought about by the 1988 amendments related to increased retrospective premiums (and the resulting increase in the overall limitation on liability), coverage for "precautionary evacuations," and clarification of coverage of costs for investigating, settling and defending claims. DOE contractor coverage was subject to similar changes, in addition to the fact the such coverage became mandatory. Certain DOE "contractor accountability" provisions (new civil and enhanced criminal penalties for nuclear safety violations) were added.[103] The 1988 Amendments also specifically provided that Price-Anderson coverage applies to DOE's nuclear waste activities.[104]

B. Liability Amounts Substantially Increased

The 1988 Amendments substantially increased the liability limit for NRC-licensed nuclear power plants; and, for the first time, provided the indemnity and liability limit for DOE contractors would be equal to the highest amount applicable to power plants.[105] For power plants, the retrospective premium was increased to $63 million per incident per plant (from $5 million), with no more than $10 million payable in any year. Additionally, the retrospective premium was made subject to inflation indexing; and, became subject to an additional five percent surcharge for legal costs. The effect of these changes was to increase the limitation on liability (from about $715 million per incident at a power plant and $500 million at a DOE facility before the 1988 Amendments, to about $7.313 billion at both power plants and DOE facilities after the 1988 Amendments, and to about $9.4 billion at DOE contractor facilities as of January 1998).[106] The

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with the new inflation indexing provision. *1987 Senate Energy Committee Report, supra* note 3, at 12, 19, *reprinted in* [1988] U.S. Code Cong. & Ad. News 1425, 1432; *1987 Senate Environment Committee Report, supra* note 6, at 1, 4, 12.

[103]*Id.*, §§17 and 18; 102 Stat. 1081 (codified at 42 U.S.C. §§2282a and 2273(c)).

[104]*See, e.g., id.,* §4(a)d(1)(B)(ii); 102 Stat. 1068. A new definition of "nuclear waste activities" was added by the 1988 Amendments. *Id.,* §4(b)ff; 102 Stat. 1070; 42 U.S.C. §2014ff.

[105]DOE supported increasing the amount to that applicable to power plants. *1983 DOE Report, supra* note 7, at 6. At one point, the House Interior Committee had considered requiring DOE to indemnify contractors to "the full extent of potential aggregate liability of the contractor." *1987 House Interior Committee Report, supra* note 3, at 13, 23. *See 1987 House Science Committee Report, supra* note 3, at 12-13, 15-16 (noting "there is no such thing as unlimited compensation," since a decision on the total assets available for such compensation must eventually occur and it would be "unwise and irresponsible to purport to enable all damage victims to reach into the federal Treasury (through contractor indemnification) for compensation."). Testifying on behalf of the Coordinating Committee of the Price-Anderson Contractors Policy Issue Study, Omer F. Brown, II, its legal counsel, said at the July 17, 1986 House Energy Conservation and Power Subcommittee hearing that adoption of the provisions of H.R. 3653 as reported from the House Interior Committee providing so-called unlimited liability would amount to Congress writing a blank check for plaintiffs; lawyers and state juries. Serial No. 99-154, *supra,* note 84 at 243

[106]In the case of liability associated with NRC-licensed power plants, if the primary level of financial protection afforded by the plant's Facility Form insurance policy were insufficient to pay all claims, power plant operators would be assessed a "standard deferred premium" per incident. This amount was raised to $63 million per power plant by the 1988 Amendments and to $137,608,800 (including the additional five percent added to the standard deferred premium to cover legal defense costs added by the 1988 Amendments) by the NRC's 2018 quinquennial inflation adjustment. 83 Fed. Reg. 48202 (Sept. 24, 2018). *See* 42 U.S.C. §2210(o)(1)(E). *See also 1987 House Energy Committee Report, supra* note 3, at 18. As of August 2021, the amount of power plant

current DOE amount is $13,703,464,000, as of October 1, 2018. The current amount for nuclear power plants is slightly lower, *i.e.* $13,522,836,000, plus the amount from foreign Contracting States to the 1997 Convention on Supplementary Compensation for Nuclear Damage (CSC); and, is reduced by $137,608,800 each time an NPP ceases operation and is exempt from the Act's secondary financial protection (SFP) system by the NRC.[107]

C. Compensation Above the Liability Limit

Also added to the limitation-on-liability subsection (§170e) in 1988 was a provision whereby Congress specifically reserved the right to enact a "revenue measure" applicable to NRC licensees to reimburse the Federal Government if it provides compensation above the limitation.[108]

The 1988 Amendments further clarified how Congress would consider "compensation plans" if the limitation on liability were exceeded. Section 7 required the President to submit a comprehensive compensation plan to Congress within ninety days of a court determination that public liability for any nuclear incident may exceed the aggregate limitation.[109] Expedited procedures for Congressional consideration were provided.[110]

D. DOE Coverage Made Mandatory

The 1988 Amendments made coverage for DOE contractors mandatory for the first time.[111] This provision (first suggested in the 1957 hearings[112]) was added in order to make coverage apply

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coverage and the limitation on liability for power plants is $450 million under the Facility Form plus $13,072,836,000 under the Retrospective Plan (based upon 95 nuclear power plants "operating" as of August 2021 times $137,608,800 each) for a total of $13,522,836,000 (not including funds from foreign CSC Member States). At the high point of 116 nuclear power plants "operating," the figure previously had reached US$9.3959 billion. That amount at the time still was applicable under DOE indemnification agreements, since the 1988 Amendments provided the DOE amount could be reduced from the maximum previous NRC amount. 42 U.S.C. §2210(d)(3)(B). *See 1987 House Science Committee Report, supra* note 3 at 12. The 1988 Amendments did not raise the $500 million limit applicable to NRC-licensed non-profit educational institution reactors or reactors operated by other federal agencies.

[107]*See, e.g.,* 86 Fed. Reg. 26961 (May 18, 2021) (removing Duane Arnold-1, which permanently shutdown on September 20, 2019, from the SFP assessment requirement). That brought the number of "operating" U.S. power reactors down to 95.

[108]Pub. L. No. 101-408, §6e(3); 102 Stat. 1071 (codified at 42 U.S.C. §2210(e)(3)).

[109]This provision is codified at 42 U.S.C. §2210(i).

[110]*Id.*

[111]Pub. L. No. 100-408, §4(a)d(1)(A); 102 Stat. 1068.

[112]*1957 Hearings, supra* note 4, at 176 (statement of Professor Murphy) and 250 (statement of Dr. Davenport).

in more situations, and to avoid requiring DOE to determine administratively whether a particular activity presented a "substantial" nuclear risk.[113]

E. "Precautionary Evacuations" Covered

For the first time, the Price-Anderson Act as of 1988 clearly covered liability arising from a "precautionary evacuation," even if it later is determined no "nuclear incident" had occurred.[114]

F. Federal Court Jurisdiction

Federal court jurisdiction and consolidation of claims specifically were made available for any "nuclear incident," instead of just for ENOs or where it appears the limitation on liability will be reached as had been the case.[115] This 1988 provision was made effective retroactively specifically to allow for consolidation of certain pending Three Mile Island cases that had been removed to state courts.[116]

G. Punitive Damages

Section 14 of the 1988 Act provided no court may award punitive damages where the Federal Government is obligated to make payments under an agreement of indemnification.[117] This

[113]Prior to the 1988 Amendments, DOE regulations permitted routine issuance of Price-Anderson indemnity only when it was determined by the Head of a Procuring Activity that there existed a risk of damage to persons or property due to the nuclear hazard of $60 million or more. *See* DOE Procurement Regulation 41 C.F.R. §9-10.5005(b) (1983), *reprinted in 1983 DOE Report, supra* note 7, at B-3. Such a determination often was very distasteful for DOE to make from a political and public relations standpoint, with the result that both the general public and the particular contractor may have been subject to substantial uninsured risk if that determination proved to have been overly optimistic. For example, DOE's discretion became a significant issue for the State of New Mexico in connection with the Waste Isolation Pilot Plant (WIPP) Project in the early 1980s. At the time, DOE stipulated that it was the Department's "current intention" to include a Price-Anderson indemnity article in any WIPP operating contract, but DOE said it could not "stipulate away its discretion in this regard." Supplemental Stipulated Agreement Resolving Certain State Off-Site Concerns Over WIPP, *State of New Mexico, ex rel. Bingaman v. DOE,* No. 81-0363 JB, at 5-6 (D.N.M., Dec. 29, 1982). *See also* Opinion of the DOE General Counsel on Application of the Price-Anderson Act to WIPP at 13-15 (Dec. 9, 1982). In 1987, the Senate Energy Committee indicated it felt that the protection afforded the public by the Price-Anderson Act was important enough to justify removing DOE's discretion. *1987 Senate Energy Committee Report, supra* note 3, at 19, *reprinted in* [1988] U.S. Code Cong. & Ad. News 1432. H.R. 1414 also eliminated the substantiality test and required DOE to indemnify all contractors. *1987 House Interior Committee Report, supra* note 3, at 12-13. *See also 1987 House Science Committee Report, supra* note 3, at 9-10.

[114]Pub. L. No. 100-408, §5; 102 Stat. 1070. *See* 42 U.S.C. §2014gg (defining "precautionary evacuation"). *See also 1987 House Science Committee Report, supra* note 3, at 14-15.

[115]*Id.*, §11; 102 Stat. 1076. This overruled a decision of the U.S. Court of Appeals for the Third Circuit in the litigation following the Three Mile Island accident that federal courts did not have subject matter jurisdiction for claims arising out of a non-ENO nuclear incident. *Stibitz v. GPU,* 746 F.2d 993 (3d Cir. 1984), *cert. denied,* 469 U.S. 1214 (1985). *See 1987 Senate Environment Committee Report, supra* note 6, at 13, *reprinted in* [1988] U.S. Code Cong. & Ad. News 1488. *See* also *Acuna v. Brown & Root, Inc.,* 200 F.3d 335, 339 (5th Cir. 2000); and, *Kerr-McGee Corp. v. Farley*, 115 F.3d 1498, 1502 (10th Cir. 1997).

[116] *In re TMI Litigation Cases Consol. II,* 940 F.2d 832 (3d Cir. 1991), *cert. denied* 503 U.S. 906 (1992) (upholding constitutionality of retroactive application of Federal court jurisdiction).

[117]Pub. L. No. 100-408, §14; 102 Stat. 1078 (codified at 42 U.S.C. §2210s).

provision was added to ensure that Federal taxpayers would not have to pay punitive damages, consistent with established Federal policy (most forcefully stated in the Federal Tort Claims Act[118]) that punitive damages may not be awarded against the Federal Government.[119]

H. Inflation Adjustment

Section 15 of the 1988 Act made the retrospective premium applicable to power plant licensees subject to inflation indexing not less than every five years based on the Consumer Price Index.[120]

I. Other 1988 Amendments

Certain changes also were made in the Act's ENO provisions: First, the ENO waivers of shorter statutes of limitations are modified to eliminate the twenty-year outside limit, *i.e.*, the ENO waiver now would apply to any statute shorter that a three-year-from-discovery limit. Second, the ENO provisions also were made applicable to DOE nuclear waste activities.[121]

Finally, in addition to technical and conforming amendments, the 1988 Act established a Presidential Commission on Catastrophic Nuclear Accidents to conduct a two-year study on certain issues (including special standards or procedures for latent injuries).[122] It also required NRC to

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[118]28 U.S.C. §2674.

[119]*1987 Senate Energy Committee Report, supra* note 3, at 27, *reprinted in* [1988] U.S. Code Cong. & Ad. News 1440; *1987 Senate Environment Committee Report, supra* note 6, at 12-13, *reprinted in* [1988] U.S. Code Cong. & Ad. News 1487-1488. The Senate Energy Committee report of June 12, 1987 said this provision did not preclude the award of punitive damages against persons, including NRC licensees, who are not indemnified by DOE under the Price-Anderson Act. The Energy Committee report said it intended no preference, for or against the awarding of punitive damages against such persons, be inferred from the inclusion of this new provision. *Id.* The Senate Environment Committee Report of November 12, 1987 went a little further by adding punitive damage awards also would be prohibited in suits against NRC licensees covered by the retrospective premium system if, as a result of such an award, payments beyond the primary and secondary layers of financial protection would be necessary, since the United States is obligated to provide a source of funding for such claims. It added the bill (S. 1865) did not otherwise affect current law regarding punitive damages. *Id.* At one point, the House considered an amendment that would have prohibited use of either private financial protection or government indemnity funds available under the Act to pay punitive damage awards. *See 1987 House Interior Committee Report, supra* note 3, at 19.

[120]Pub. L. No. 100-408, §15; 102 Stat. 1078 (codified at 42 U.S.C. §2210(t)).

[121]Pub. L. No. 101-408, §10; 102 Stat. 1075. The rest of the Act previously applied to DOE's nuclear waste activities, but the 1988 Amendments Act made this more explicit. *See 1987 Senate Environment Committee Report, supra* note 6, at 10, *reprinted in* [1988] U.S. Code Cong. & Ad. News 1485; *1987 House Interior Committee Report, supra* note 3, at 12; *1987 House Energy Committee Report, supra* note 3, at 13.

[122]Pub. L. No. 100-408, §9; 102 Stat. 1074. The Commission issued its report in 1990. *Report to the Congress from the Presidential Commission on Catastrophic Nuclear Accidents* (Aug. 1990). It contains a number of recommendations on civil procedures, claim priorities and latent injury.

conduct a negotiated rulemaking on possible Price-Anderson coverage for radiopharmaceutical licensees.[123]

J. More Attention to DOE Contractor Coverage

As in the case of prior Congressional considerations of Price-Anderson legislation, most attention during the 1988 extension had been expected to focus on liability coverage and the limit for nuclear power plants. However, by mid-1985, several environmental groups had begun to criticize the scope of coverage for DOE contractors. For example, at a House Interior Committee hearing on June 6, 1985, Keiki Kehoe, testifying for several environmental groups, said DOE should be responsible for "fully" compensating all damages to the public resulting from its contractor activities (and should be allowed to indemnify its contractors against the risk of public liability). However, she added that, if the accident is "caused" by the contractor's "negligence," DOE should be required to seek recovery of the amount of compensation through legal action against the contractor.[124] She repeated this statement at a Senate Energy Committee hearing on June 25, 1985. At that hearing, Senator Metzenbaum announced his intention to introduce a bill that would hold DOE contractors "liable for their own negligence" and hold company executives criminally liable for "gross negligence." By the end of July 1985, even House Interior Committee Chairman Udall was leaning toward supporting some sort of subrogation provision.[125]

In October 1985, the Coordinating Committee of the Price-Anderson Contractors Policy Issues Study issued an updated position statement criticizing suggestions that Price-Anderson indemnification somehow acts as a disincentive to safety at DOE facilities. M.G. Johnson of Bechtel, Chairman of the Coordinating Committee, made a similar pronouncement at a hearing before the Senate Environment Subcommittee on Nuclear Regulation on October 22, 1985 and in a statement submitted to the House Science Subcommittee on Energy Research and Production on November 15, 1985.[126] At the October 22, 1985 hearing, James Vaughan, then acting DOE Assistant Secretary for Nuclear Energy, in response to a question, said the Department "would not object" to a provision allowing a right of subrogation against contractors for "willful misconduct" and "gross negligence." Later, in response to a question from the House Science Committee, DOE

[123]Pub. L. No. 100-408, §19; 102 Stat. 1083.

[124]Two days earlier, Rep. Weiss had introduced H.R. 2665, 99th Cong., 1st Sess. (1985), containing a provision that would have required actions against contractors, which he said had been inspired by Ms. Kehoe's organization. *See* 131 Cong. Rec. H2528 (daily ed. June 4, 1985).

[125]For example, in a July 23, 1985 draft of a memorandum to the members of the House Interior Subcommittee on Energy and the Environment, Chairman Udall said he did "...not believe that the federal government should be in the position of shouldering all of the cost of an accident that is the fault of a reckless contractor." He suggested therein that the Subcommittee might want to consider providing a "right of subrogation" if a contractor were found "negligent or grossly negligent." In an October 22, 1985 memorandum, he suggested limiting this approach to cases of "gross negligence." Then, on October 24, 1985, he circulated a draft bill containing a subrogation provision based on the "willful or wanton conduct of a [contractor's] director or executive officer."

[126]*1986 House Science Inquiry, supra* note 84, at 154, 157.

on February 18, 1986 submitted a written answer indicating the Department did "...not recommend the inclusion of legally imprecise terms as gross negligence, willful misconduct, or bad faith, which could lead to uncertainty on the part of our contractors and to their possible withdrawal from participation."[127]

K. Consideration of DOE "Contractor Accountability" Provisions

DOE contractors began vigorously opposing any subrogation provision during October 1985. Arguments used included the fact that it is virtually impossible to distinguish among levels of negligence in today's tort law, so more litigation would ensue and Price-Anderson's "omnibus" feature[128] would be destroyed. Largely due to strong opposition from the contractor community, the House Interior Subcommittee eliminated the subrogation provision from the then unnumbered Udall bill[129] at its markup on November 19, 1985.[130]

The dispute over whether to include some "contractor accountability" provision continued into 1986: The full House Interior Committee put a subrogation provision back into H.R. 3653 at its April 23, 1986 markup, but then eliminated it by voice vote at the May 21, 1986 final markup when the bill was reported.[131]

On February 18, 1986, Senator Metzenbaum introduced S. 2072.[132] Among other things, this bill would have eliminated Price-Anderson's limitation on liability for contractors, and required DOE to seek subrogation in cases of "gross negligence" or "willful misconduct." At its March 26, 1986 markup session, the Senate Energy Committee rejected (3 to 12) a subrogation amendment to S. 1225 (the mark-up vehicle) offered by Senator Metzenbaum. Subsequently, at the same Committee's April 24, 1986 markup (when it reported S. 1225), a civil penalty provision offered by Senator Rockefeller was added to S.1225. The Rockefeller amendment would have created a new discretionary civil penalty of up to $10 million for DOE contractors, if a "nuclear incident" or

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[127] *Id.,* at 5, 46.

[128] This, as discussed, *infra* notes 217 and 218 and accompanying text, is the feature whereby Price-Anderson nuclear hazards indemnity agreements cover "anyone liable," not just the entity with whom the agreement is executed.

[129] The Udall bill, later introduced as H.R. 3653, 99th Cong., 1st Sess. (1985), was reported to the full Interior Committee on December 10, 1985.

[130] The Interior Subcommittee did this by adopting by voice vote an amendment offered by Rep. Huckaby to delete the entire subrogation section. This followed a 10-to-16 roll call vote on an amendment in nature of a substitute offered by Rep. Seiberling to change the Udall subrogation provision from one requiring "willful or wanton conduct" to one requiring only simple negligence.

[131] *See 1987 House Interior Committee Report, supra* note 3, at 57 and 60 (providing additional views on the merits of removing any subrogation provisions from the final bill) and at 69-70 (providing a dissenting view on removing the subrogation provisions). After the bill was reported from the Interior Committee, the House Energy and Science Committees both sought sequential referrals of H.R. 3653; and, were given until August 11, 1986 to act.

[132] 99th Cong., 2d Sess. (1986).

"precautionary evacuation" were the result of "gross negligence or willful misconduct on the part of any contractor who is a party to [an] agreement of indemnification, or any subcontractor or supplier of such contractor."[133]

On July 29, 1986, the House Science Committee reported a modified version of H.R. 3653[134] containing a provision requiring DOE to conduct a six-month study on the need for civil and criminal penalties.[135]

The House Energy Committee reported a third version of H.R. 3653 on August 12, 1986. This version was the most extreme of the five bills reported from Committees during the 99th Congress. For example, it would have provided "unlimited" liability (and indemnity) for all DOE contractor activities. Nevertheless, the House Energy Committee had rejected an attempt to add a subrogation provision.[136]

Price-Anderson extension consideration resumed shortly after the 100th Congress convened at the beginning of 1987. On March 4, 1987, Chairman Udall introduced H.R. 1414,[137] which then was substantially the same as H.R. 5650,[138] the October 1986 "compromise" bill (*i.e.*, without any subrogation provision, but with the requirement for DOE to submit a report to Congress on civil and criminal penalties). H.R. 1414, as introduced, thus included a requirement (§12(3)) that DOE submit a report to Congress identifying and explaining the criminal and civil liabilities of all DOE contractors and other persons indemnified.

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[133]The full Senate Environment Committee reported its own version of S. 1225 on August 6, 1986. This version (unlike the Energy Committee's) did not contain any DOE contractor civil penalty provision. On October 6, 1986, Senators Simpson, McClure, Stafford, Johnston, Bentsen and Domenici (the Chairmen and Ranking Minority members of the two Committees) introduced a proposed amendment (No. 3238) in the nature of a substitute for the two different versions of S. 1225 that had been reported by the Energy and Environment Committees. *See* 132 Cong. Rec. S15403 (daily ed. Oct. 6, 1986). It dropped the DOE contractor civil penalty provision that had been in the Energy Committee version of S. 1225.

[134]99th Cong., 2d Sess. (1986).

[135]Otherwise, this bill probably contained the most features favorable to DOE contractors of any Price-Anderson bill reported during the 99th Congress. *See 1987 House Science Committee Report, supra* note 3, at 13. The Science Committee Report, in explaining its amendment requiring DOE to report to Congress on the civil and criminal liability of any contractor or other person indemnified for intentionally causing, or attempting to cause, a nuclear accident at a contractor-operated facility, said the Committee believed "strongly that such misconduct should be punished." *Id.* The report noted that contractors had alleged that the government already possessed authority to punish misconduct.

[136]*See 1987 House Energy Committee Report, supra* note 3, at 53 (providing the additional views of five House Energy Committee members that holding harmless a party in the case of "gross negligence or willful disregard to the public safety is bad policy...").

[137]100th Cong., 1st Sess. (1987).

[138]99th Cong., 2d Sess. (1986).

Senators Johnston and McClure introduced S. 748[139] (a bill covering only DOE contractors) on March 17, 1987 in time for a Senate Energy Committee hearing the next day. At that hearing, the DOE witness (again James Vaughan) was questioned at length by Senator Metzenbaum about whether Price-Anderson should be modified to exclude coverage when contractors are found to have been "grossly negligent" or "willful and wanton."[140] While Mr. Vaughan strongly denied that Price-Anderson coverage acts as a disincentive to safety, this questioning was an indication that the subrogation and DOE contractor civil penalty issues (fought and won by contractors in 1986) had not been left behind.

The full Senate Energy Committee held a markup on S. 748 on April 8, 1987. The principal issue was whether a civil penalty provision should be added to Price-Anderson. At one point, it appeared that Senator Metzenbaum would agree to withdraw his three proposed amendments[141] (and agree not to offer them again on the Senate floor) in exchange for an amendment that would have provided a DOE contractor civil penalty of up to $30 million where a nuclear incident was the result of a contractor's "gross negligence or willful misconduct." However, a consensus on the exact language could not be reached.

The Senate Energy Committee resumed marking up S. 748 on April 22, 1987, and adopted extremely broad DOE contractor civil and criminal penalty provisions offered by Chairman Johnston, apparently as an alternative to even more onerous subrogation provisions. The amendment was passed by a vote of 15 to 2, subject to possible future amendments by Senator Bingaman (to exempt "nonprofit" contractors) and Senator Wirth (to broaden it to cover violations of even non-DOE "safety" requirements). The Johnston amendment of April 22d was not restricted to high corporate officials, and would have provided for fines up to $10 million in the case of a mere "nuclear incident." However, there was a provision requiring the Secretary of Energy to take into account various factors in determining the amount of the fine, including a contractor's ability to pay.

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[139] 100th Cong., 1st Sess. (1987).

[140] During this hearing, it even was suggested that DOE contractors should be required to maintain private insurance to protect themselves against claims from accidents resulting from "gross negligence." In response to a March 30, 1987 inquiry from Chairman Johnston, the nuclear insurance pools on April 3, 1987 wrote that a private insurance market for government contractor activities was not likely to arise and the possibility of developing a market restricted to covering "gross negligence" or "willful misconduct" was "very remote indeed." *See* April 3, 1987 letter from R.A. Schmalz, Esq. to Chairman Johnston. American Nuclear Insurers (ANI) re-confirmed that it was not in a position to write liability insurance for DOE facilities, primarily because of the type of activities conducted at these sites and the legacy exposure that exists. *See* August 17, 2001 letter from John L. Quattrocchi to Rep. Joe Barton. Mr. Quattrocchi made a similar point in an earlier January 21, 1998 letter to Omer F. Brown, II that was attached to DOE's 1999 Report to Congress as its Appendix B. ANI reconfirmed its earlier position in an August 10, 2021letter from Jim Palaia to Omer F. Brown, II.

[141] The three Metzenbaum amendments involved adding a subrogation provision, making the waivers of defenses now applicable only to "extraordinary nuclear occurrences" apply to all "nuclear incidents," and striking section 13 of S. 748, which prohibited the awarding of punitive damages in all cases covered by Federal Government indemnity.

Before the next Energy Committee Price-Anderson markup on May 20, 1987, a number of DOE contractors sent letters to Senators Johnston and McClure strongly opposing the April 22d civil penalty amendment. They indicated such penalty provisions would be excessive and unreasonable (especially in view of the largely non-profit nature of the contracts), and would create an adversarial relationship with DOE. Several expressed an unwillingness to continue contracting with DOE under such circumstances.[142]

The Senate Environment Committee's Nuclear Regulation Subcommittee held a hearing on April 30, 1987 at which Assistant DOE Secretary for Nuclear Energy David Rossin made strong statements opposing any provisions on subrogation or civil penalties. In a May 5, 1987 letter to Chairman Johnston, Secretary of Energy John Herrington said DOE would recommend a Presidential veto if the bill were passed in a form that was not sufficiently tailored to avoid the problems of subrogation or "severe" civil penalties.[143] Presumably in light of these reactions, the Energy Committee postponed markups that had been scheduled for May 6 and 13, 1987.

On May 20, 1987, the full Senate Energy Committee reported S. 748 with certain amendments, including alternative "contractor accountability" provisions offered by Senators Johnston and McClure. This modification apparently was influenced by the letters sent by DOE and various contractors. The Energy Committee reported S. 748 by a vote of 17 to 1.[144] (Senator Metzenbaum was the sole dissenter.) This vote followed a lengthy discussion of the "contractor accountability" issue, which Chairman Johnston opened by saying the Committee may have acted "improvidently" at its April 22d markup. He noted that, when he offered his four-tier civil penalty provision, he had been unaware of the "profits" DOE contractors earn. Senators Bingaman and Domenici of New Mexico offered an amendment to exempt certain nonprofit contractors, which was adopted by a vote of 12 to 5 after it was agreed to actually name nine exempt facilities (as opposed to contractors).[145] Senator Fowler offered an amendment to reinstate a $10 million civil penalty where there was a "nuclear incident;" it failed by a vote of 7 to 9. The civil and criminal penalty provisions of the Johnston-McClure amendment then were adopted by a vote of 12 to 7.

The Senate Environment Committee held a markup and unanimously reported the then-unnumbered Breaux bill (later numbered S. 1865[146] and dealing almost exclusively with nuclear

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[142] *See Berkovitz, supra* note 40, at 31.

[143] The Secretary's letter is reprinted in *1987 Senate Energy Committee Report, supra* note 3, at 65-66 and [1988] U.S. Code Cong. & Ad. News 1472-1473.

[144] *See 1987 Senate Environment Committee Report, supra* note 6, at 1, 67, *reprinted in* [1988] U.S. Code Cong. & Ad. News 1476.

[145] The exemption from civil penalties was for seven named DOE contractors (and any subcontractors or suppliers thereto) for activities associated with nine named laboratories.

[146] 100th Cong., 1st Sess. (1987).

power plant coverage) on August 4, 1987.[147] At that markup, the Committee adopted by voice vote an amendment offered by Senator Durenberger to apply to DOE nuclear waste contractors the same civil and criminal penalty provisions contained in S.748 as reported from the Energy Committee.[148]

Meanwhile, the Energy and Power Subcommittee of the House Energy Committee held a markup session on June 3, 1987, and reported to the full Committee H.R. 1414 (as previously reported from the Interior Committee) with certain amendments. Representative Wyden offered, but then withdrew for later consideration by the full Committee, an amendment providing for subrogation in the event of "bad faith, willful misconduct or gross negligence of any corporate officer, manager, or superintendent." Significantly, Subcommittee Chairman Sharp stated that he was committed to some contractor "financial responsibility" provision, *i.e.*, either some civil penalty or subrogation, and/or a program of independent oversight of DOE activities. He criticized DOE and its contractors for not agreeing to some "compromise." Other members also stressed the need for some "contractor accountability" provision. Nevertheless, throughout this period, DOE and its contractors maintained the position that no compromise was possible.

The full House Energy Committee on July 8, 1987 reported out H.R. 1414 without any DOE contractor civil penalty or subrogation provision (other than the penalty report requirement).[149] The key Energy Committee vote was on a civil penalty/subrogation amendment offered by Representatives Wyden, Sharp and Synar. The amendment failed on a 21-to-21 tie.

On July 23, 1987, Chairmen Udall, Dingell, Roe and Sharp introduced H.R. 2994,[150] a new "compromise" version of H.R. 1414. Since no substantive civil penalty/subrogation provisions had been adopted by any of the three House committees, those issues were not addressed in H.R. 2994.

L. Final Passage in 1987-1988

The House of Representatives passed the "compromise" version of H.R. 1414 (substituted for H.R. 2994 on the floor) without any further amendments on July 30, 1987 by a final vote of 396 to 17.[151] On July 29th, the House defeated the Wyden-Sharp-Synar DOE contractor civil penal-

[147] *See 1987 Senate Environment Committee Report, supra* note 6. The Environment Committee Report noted that the civil and criminal penalties applicable to DOE nuclear waste activities that would be available under its amendment were identical to those in the Energy Committee's reported version of S. 748 and "similar" to those already available for violations of NRC rules, regulations or orders by NRC licensees. *Id*. at 11 and 21, *reprinted in* [1988] U.S. Code Cong. & Ad. News 1486, 1496.

[148] On October 23, 1987, Senators Johnston and McClure introduced an amendment (No. 1038) as a proposed substitute for the bills previously reported from the Senate Energy and Environment Committees. *See* 133 Cong. Rec. S15057 (daily ed. Oct. 23, 1987). This amendment, which contained the previously adopted civil and criminal penalty provisions, apparently was introduced to provide a ready vehicle for Senate floor action before the end of 1987.

[149] *See 1987 House Energy Committee Report, supra* note 3.

[150] 100th Cong., 1st Sess. (1987).

[151] *See* 133 Cong. Rec. H6769 (daily ed. July 29, 1987) and H6828-H6832 (daily ed. July 30, 1987).

ties/subrogation amendment by a vote of 193 to 226.[152] This was a very significant victory for DOE and its contractors, especially in light of the fact that the amendment was supported by Chairmen Udall, Dingell and Sharp, and Majority Leader Foley.

Concerted efforts were made by Chairman Johnston and others to bring a bill to the Senate floor before the end of the 1st Session of the 100th Congress in December 1987, but time simply ran out before the Congress adjourned for the year. By around the end of January 1988, an agreement was reached among the leadership of the Energy and Environment Committees to take up the House bill, H.R. 1414, on the Senate floor. However, Senator Metzenbaum continued to threaten a filibuster if his "contractor accountability" amendments were not accepted. Finally, Senators Johnston and Metzenbaum reached a compromise whereby Senator Johnston would accept the DOE contractor civil and criminal penalty provisions as previously reported from the Energy Committee on May 20, 1987.

Senate floor debate on Price-Anderson extension finally was held on March 16-18, 1988. It began with adoption (on a roll call vote of 94 to 0) of the DOE contractor penalty provisions of S.748, almost verbatim as reported from the Energy Committee the previous May.[153] Because of the compromise reached ahead of time, there was minimal floor discussion about the penalty amendment. Chairman Johnston (the floor manager for the Energy Committee) did say this provision "...represents a good balance between not driving the good contractors out of business on the one hand and yet providing a severe enough penalty. After all, $100,000 per day is a tremendous penalty and we think it is sufficient to ensure that [contractors'] conduct will be of the very highest order."[154] On the same day, the Senate (on a roll call vote of 53 to 41)[155] tabled Senator Metzenbaum's attempt to add a subrogation provision to the bill.[156]

Between the time the Senate passed H.R. 1414 in March and final passage in August, there were some discussions about the DOE civil penalty provisions. These concentrated on the exemption for certain named nonprofit contractors, with a few nonprofit entities not on the list (such

[152]*See* 133 Cong. Rec. H6781-H6792 (daily ed. July 29, 1987).

[153]On the Senate floor, Senator Johnston offered a modification (previously agreed to by the affected committees) providing that DOE would not enforce U.S. Department of Transportation standards. *See* 134 Cong. Rec. S2309 and S2377 (reprinting Amendment No. 1664) (daily ed. Mar. 16, 1988).

[154]134 Cong. Rec. S2310 (daily ed. Mar. 16, 1988). The Federal Civil Penalties Inflation Adjustment Act of 2015 required agencies to adjust their civil penalties for inflation annually according to that Act's formula. Public Law 114–74, section 701, 129 Stat. 584, 599. DOE adjusted its civil monetary penalties, effective January 8, 2020. 85Fed. Reg. 827 (Jan. 8, 2020).

[155]*See* 134 Cong. Rec. S2335 (daily ed. Mar. 16, 1988).

[156]It is significant that the Metzenbaum amendment was defeated, even though Senator Bumpers had further amended it by limiting any subrogation to the lesser of the "contract's award fee" or the limitation on liability (*i.e.*, about $7 billion). *See* 134 Cong. Rec. S2325-S2329 (daily ed. Mar. 16, 1988).

as Oak Ridge Associated Universities) asking to be added.[157] There were no serious attempts to delete the penalty provisions or to modify them in other ways during this period. Finally, the "compromise" version of the bill taken to the House Rules Committee at the end of July by the Interior and Energy Committees added a new provision requiring DOE to "determine by rule whether nonprofit educational institutions should receive automatic remission of any [civil] penalty."

Final passage of the 1988 Amendments Act did not come until August: The House (on a roll call vote of 346 to 54) adopted a "compromise" version of H.R. 1414 modifying some of the Senate floor amendments on August 2, 1988.[158] The Senate (by voice vote) accepted the House amendments on August 5, 1988.[159] President Reagan signed the bill on August 20, 1988, a little over one year after the Act had expired on August 1, 1987.

VI. Congressional Actions Between 1988 and 2000

A. 1992 - Coverage for United States Enrichment Corporation

The Energy Policy Act of 1992 created the United States Enrichment Corporation (USEC) to conduct business as a self-financing corporation, and to lease DOE's uranium enrichment facilities, as needed.[160] In providing for the leasing of DOE's gaseous diffusion facilities at Paducah, Kentucky and Portsmouth, Ohio, Section 1403(f) of the 1992 Act specifically stated that any such lease executed between DOE and USEC "shall be deemed to be a contract for the purposes of section 170d."[161] In other words, DOE provided Price-Anderson indemnification to USEC for contractual activities under its Paducah and Portsmouth leases.[162]

B. 1996 Senate Bill

On June 7, 1996, Senator Johnston introduced a bill (S. 1852[163]) to "reduce radiation injury litigation against DOE contractors." S. 1852 ("The Department of Energy Class Action Lawsuit

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[157]The House Science Committee was particularly adamant about modifying the nonprofit exemption provisions. *See, e.g.,* 134 Cong. Rec. H6124-H6128 (daily ed. Aug. 2, 1988) (statement of Rep. Lloyd). These objections were rejected on July 27, 1988 by the House Rules Committee, which sent the bill to the House floor with a "closed" rule, *i.e.* one allowing no floor amendments.

[158]*See* 134 Cong. Rec. H6113-H6134 (daily ed. Aug. 2, 1988).

[159]*See* 134 Cong. Rec. S10929-S10935 (daily ed. Aug. 5, 1988).

[160]42 U.S.C. §§2297 *et seq.* USEC now is Centrus Energy Corp.

[161]42 U.S.C. §2297h-5(f).

[162]The DOE-USEC lease commenced on July 1, 1993. Section 1608 of the 1992 Act provides Section 170 shall not apply to any NRC license for a uranium enrichment facility constructed after that provision's enactment. 42 U.S.C. §2297e-7.

[163]105th Cong., 2d Sess. (1996).

Act") would have done three things: (i) made retroactive to cover pending lawsuits the 1988 Price-Anderson Amendments Act provision prohibiting punitive damages where the U.S. Government is providing indemnification,[164] (ii) eliminated class action lawsuits for "nonphysical injuries," and (iii) made medical monitoring by the Agency for Toxic Substances and Disease Registry under Superfund the exclusive remedy for claims against persons indemnified under the Price-Anderson contractor coverage. The medical monitoring provision was added at the suggestion of DOE to cover a remedy typically sought by radiation-injury plaintiffs in large cases, but it would not have applied if there were an "extraordinary nuclear occurrence." Section 5 of S. 1852 made it clear that the bill's provisions would have applied to pending lawsuits. No hearings on the bill were held.

C. 1999 DOE and 1998 NRC Reports to Congress

In 1988, when Congress extended the Price-Anderson Act to August 1, 2002, it amended Section 170p directing DOE and NRC to submit to the Congress by August 1, 1998 detailed reports concerning the need for continuation or modification of the Act beyond 2002. Both DOE and NRC submitted such reports.[165] DOE stated in its 1999 Report to Congress that, based on then 40 years of experience, that renewal the Price-Anderson Act was "…in the best interests of DOE, its contractors, its subcontractors and suppliers, and the public." DOE said the indemnification provisions should be continued without any substantial change.

VII. Price-Anderson Amendments Act of 2005

A. Overview; Review by Six Congressional Committees

Congress last began considering whether to again extend the Price-Anderson Act in 2001 after the NRC and DOE had submitted the reports required by the 1988 extension. In 2001-2005 (as it was during the period 1983-1988), Congressional action again was much more protracted and controversial, and concentrated more attention on DOE contractor coverage. Three House (Armed Services. Energy, and Science) and three Senate (Armed Services, Energy and Environment) Committees exercised jurisdiction over the last Price-Anderson extension. A number of hearings and floor actions were held between 2001 and 2005.[166] Short-term (two-year) extensions of DOE's indemnification authority were enacted as part of the FY2003[167] and FY2005[168] Defense Authorization Acts, while a one-year extension for NRC licensees was included in the 2003

[164]*Cf. Crawford, supra* note 100 (finding the 1988 punitive damages provision (42 U.S.C. §2210s) did not apply with respect to claims arising between 1951 to 1985). *See, supra* notes 116-118 and accompanying text.

[165]DOE*, Report to Congress on the Price-Anderson Act* at 10 (1999); NRC, *The Price-Anderson Act – Crossing the Bridge to the Next Century: A Report to Congress* (Aug. 1998).

[166]For example, the Senate Energy Committee held a hearing on June 26, 2001; the Senate Environment Committee held a hearing on January 23, 2002; and, the House Energy Committee held hearings on June 27 and September 6, 2001, and on March 5, 2003.

[167]Act of December 2, 2002, Pub. L. No. 107-314, §3171.

[168]Act of October 28, 2004, Pub. L. No. 108-375, §3141.

Consolidated Appropriations Act.[169] The Price-Anderson Amendments Act of 2005 was signed by President George W. Bush on August 8, 2005.[170]

B. 2000-2004 Senate and House Actions

The first reauthorization bill of the last cycle was introduced by Senators J. Bingaman and F. Murkowski on March 2, 2000.[171] The 2000 Senate bill (S. 2162) included provisions for an extension of the Act to August 1, 2012, and to set DOE's indemnification at $10 billion (subject to inflation indexing every five years) for domestic nuclear incidents and raising it to $500 million for foreign nuclear incidents. The next year, the Senate Energy Committee held a hearing on Price-Anderson reauthorization on June 26, 2001.[172] The House Energy Committee held hearings on the Act on June 27 and September 6, 2001. The House Energy Committee reported the Price-Anderson reauthorization bill (H.R. 2983) introduced by Rep. Wilson and eight other Republicans on October 2, 2001 on November 19, 2001.[173] H.R.2983 passed the House by voice vote on November 27, 2001.[174] It contained a fifteen-year extension for both DOE contractors and NRC licensees, as well as a DOE "contractor accountability" provision.[175] Like the 2000 Senate bill (S. 2162), H.R. 2983 included provisions to set DOE's indemnification at $10 billion (subject to inflation indexing every five years) for domestic nuclear incidents and raising it to $500 million for foreign nuclear incidents. It further included a provision prohibiting assumption by the U.S. Government of liability for nuclear accident in any country identified by the Secretary of State as engaged in state sponsorship of terrorist activities.

On January 23, 2002, the Senate Environment Committee's Subcommittee on Transportation, Infrastructure and Nuclear Safety held a hearing on the NRC portions of the Act. On April 25, 2002, the full Senate (88 to 11) passed an amended Energy Policy Act of 2002 bill[176] containing the amendment offered by Senator Voinovich, which was agreed to by the Senate (78 to 21) on March 7, 2002 providing for an indefinite extension for DOE contractors and a ten-year extension for NRC licensees.[177] On June 27, 2002, the Senate (97 to 2) passed the FY2003 Defense Authorization bill (S.2514) with simply a ten-year extension for DOE contractors. The Conference

[169]Act of February 20, 2003, Pub. L. No. 108-7, Division O, §101.
[170]Act of August 8, 2005, Pub. L. 109-58, §§601 to 610; 119 Stat.594.
[171]S.2162, 106th Cong., 2d Sess.
[172]S. Rept. 107-96, 107th Cong., 1st sess.
[173]H. Rept. 107-299.
[174]147 Cong. Rec. H8358 (daily ed. Nov. 27, 2001).
[175]Section 15 of H.R. 2983 of 2001 authorized the Attorney General to bring an action in the appropriate United States district court to recover from a DOE contractor (or subcontractor or supplier of such contractor) amounts paid by the Federal Government under an agreement of indemnification under subsection 170d. for public liability resulting from conduct which constitutes intentional misconduct of any corporate officer, manager, or superintendent of such contractor (or subcontractor or supplier of such contractor). The amount the Attorney General could recover could not exceed the amount of the profit derived by the defendant from the contract. Section 15 further provided that no amount recovered from any contractor (or subcontractor or supplier of such contractor) could be reimbursed directly or indirectly by DOE. This was the DOE "contractor accountability" provision contained in subsequent House bills until it was dropped when the final Price-Anderson reauthorization was adopted by both Houses in July 2005.
[176]H.R. 4, 107th Cong. 2d Sess.
[177]148 Cong. Rec. S3418 (daily ed. Apr. 25, 2002).

Report [178]on the final version of the Defense Authorization bill (H.R.4546) with a two-year extension for DOE contractors passed the House (by voice vote) on November 12, 2002[179] and the Senate (by voice vote) on November 13, 2002.[180] It was signed by the President on December 2, 2002. On September 12, 2002, House-Senate conferees on H.R. 4 (an energy bill) agreed to a fifteen-year extension for DOE contractors and NRC licensees (and no DOE contractor accountability provision). H.R. 4 did not pass in 2002.

Further actions on Price-Anderson reauthorization continued through 2003 again without final enactment. On April 10, 2003, the Senate Energy Committee reported an energy bill (S. 14) with an indefinite extension for DOE contractors and NRC licensees. On May 6, 2003, the Senate Energy Committee reported another energy bill (S. 1005) also with an indefinite extension for DOE contractors and NRC licensees (and no DOE contractor accountability provision).[181] The House Energy Committee held a hearing on Price-Anderson on March 5, 2003. In April 2003, the House Energy Committee reported precursor energy bills to H.R. 6. On April 9, 2003, the Senate Environment Committee reported S. 156, with a ten-year extension for NRC licensees. Its report was filed on December 9, 2003.[182] An energy bill (H.R.6EH) with a fifteen-year extension for DOE contractors and NRC licensees (with a DOE contractor accountability provision) passed the full House on April 11, 2003. The full Senate passed another version of the energy bill (H.R. 6EAS) with an indefinite extension for DOE contractors and a ten-year extension for NRC licensees on July 31, 2003. After that on November 17, 2003, House-Senate conferees adopted a Conference Report on H.R.6 with a twenty-year extension for both DOE contractors and NRC licensees (and no DOE contractor accountability provision).[183] Like the 2001 House bill, it included a provision prohibiting assumption by the U.S. Government of liability for nuclear accident in any country identified by the Secretary of State as engaged in state sponsorship of terrorist activities. The next day, on November 18, 2003, the Conference Report was adopted by the full House (246 to 180). On November 21, 2003, cloture on the Conference Report to accompany H. R. 6 was not invoked in Senate by a vote of 57 to 40. The 108th Congress, 1st Session adjourned on December 8, 2003 before the Senate acted on the Conference Report.

In 2004, the main action on Price-Anderson extension was by the Senate and House Armed Services Committees. The Senate Armed Services Committee on May 11, 2004 reported S. 2400 (the FY2005 Defense Authorization bill) again with simply a two-year extension for DOE contractors.[184] It passed the Senate (97 to 0) on June 23, 2004. Senate-House conferees adopted the Conference Report on the Defense bill (H.R. 4200) on October 8, 2004 with the House receding to the Senate's two-year extension.[185] The Conference Report passed the House (359 to 14) on

[178]H. Rept. 107-772 at 245.
[179]148 Cong. Rec. H8535-8541(daily ed. Nov. 12, 2002).
[180]148 Cong. Rec. S10858-10874 (daily ed. Nov. 13, 2002).
[181]S. Rept. 108-43.
[182]S. Rept. 108-218.
[183]H. Rept. 108-375.
[184]S. Rept. 108-260.
[185]H. Rept. 108-767 at 888.

October 9, 2004,[186] and the Senate (by voice vote) on October 10, 2004.[187] It was signed by the President on October 28, 2004.

C. Final Passage in 2005

Final passage of the last reauthorization of the Price-Anderson Act was completed in 2005. On May 26, 2005, the Senate Energy Committee reported an energy bill (S. 10) with a twenty-year extension for DOE contractors and NRC licensees (and no DOE contractor accountability provision).[188] On July 1, 2005, the Senate Environment Committee reported a Price-Anderson bill (S.865) with a twenty-year extension for NRC licensees.[189] On April 21, 2005, the full House (249 to183) passed an energy bill (H.R. 6) with a twenty-year extension for DOE contractors and NRC licensees (with a DOE contractor accountability provision).[190] On May 26, 2005, the Senate (85-12) passed an energy bill (S.10/H.R. 6EAS) with a twenty-year extension for DOE contractors and NRC licensees (and no DOE contractor accountability provision). Senate-House conferees adopted a Conference Report on H.R. 6 on July 27, 2005 with a twenty-year extension for DOE contractors and NRC licensees (and no DOE accountability provision).[191] The Conference Report passed the House (275 to 156) on July 28, 2005[192] and the Senate (74-26) on July 29, 2005.[193] President George W. Bush signed the final bill on August 8, 2005.

D. 2005 Changes for DOE Contractors

For DOE contractors, the principal changes brought about by the 2005 Amendments Act included setting the indemnification amount and limit of liability at $10 billion (subject to inflation indexing every five years). Previously, the indemnification had to be computed in accordance with a statutorily prescribed computational method. The 2005 Amendments also increased DOE's indemnification for nuclear incidents outside the United States to $500 million from the $100 million added to the Act in 1962. It provided that all previous DOE Price-Anderson agreements of indemnification "…shall be deemed to be amended, on the date of enactment of the Price-Anderson Amendments Act of 2005, to reflect the amount of indemnity for public liability and any applicable financial protection required of the contractor under this subsection.'' (The 1988 amendments had significantly increased the limitation on liability from about $715 million per incident at a power plant and $500 million at a DOE facility to about $7.313 billion at both power plants and DOE facilities.) The 2005 Amendments removed the exemption granted seven specified research contractors and suppliers regarding civil monetary penalties for violations of DOE safety regulations that was included in the 1988 Amendments Act. The civil penalty provision was

[186] 150 Cong. Rec. H9175 (daily ed. Oct. 9, 2004).

[188] S. Rept. 109-78.
[189] S. Rept. 109-99.
[190] 151 Cong. Rec. H2449-2450 (daily ed. Apr. 21, 2005).
[191] H. Rept. 109-190.
[192] 151 Cong. Rec. H6949-6973 (daily ed. Jul. 28, 2005).
[193] 151 Cong. Rec. S9373-9374 (daily ed. Jul. 289, 2005).

amended to provide in the case of any "not-for-profit" contractor, subcontractor, or supplier, the total amount of civil penalties paid under subsection a. of 42 U.S.C. §2282a may not exceed the total amount of fees paid within any one-year period (as determined by the Secretary of Energy) under the contract under which the violation occurs.

E. Further Consideration of DOE "Contractor Accountability"

The renewed attempt to add a "contractor accountability" provision during the last reauthorization of the Price-Anderson Act was rejected when the final 2005 Amendments Act was adopted by the House and Senate. Prior to final passage of the Amendments Act of 2005, the bill reported by the House Energy and Commerce Committee (H.R. 1640) (like Rep. Heather Wilson's H.R. 2983 of 2001) included a provision that would have authorized the Attorney General to bring an action to recover from a DOE contractor, subcontractor, or supplier amounts paid by the Federal Government under an indemnity agreement for public liability resulting from conduct which constitutes "intentional misconduct" of any corporate officer, manager, or superintendent of the DOE contractor, subcontractor, or supplier.[194] That provision was dropped in the Conference Report on the final bill (H.R. 6).[195]

F. 2021 DOE and NRC Reports to Congress

The 2005 Amendments provided that both DOE and NRC should submit to Congress by December 31, 2021 reports on the need to continue or modify the Price-Anderson Act again.[196] DOE on July 26, 2021 published a Federal Register Notice of Inquiry seeking public comments to assist in the preparation of the report.[197] NRC is not planning to seek public comments on its Report to Congress.

VII. Benefits of Price-Anderson Coverage

It is important to recognize that general government authority to indemnify contractors preceded the Price-Anderson Act,[198] and presumably would continue to exist in the absence of

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[194]*See* Energy and Commerce Report to accompany H.R.1640, §612 on financial accountability. H. Rept. 109-215, 109th Cong., 1st Sess. at 56-57.

[195]*See* H. Rept. 109-190, 109th Cong., 1st Sess.

[196]42 U.S.C. §2210p.

[197]86 Fed. Reg. 40012 (Jul. 26, 2021) and 86 Fed. Reg. 45714 (Aug. 16, 2021) (extending the comment deadline to October 25, 2021).

[198]For example, over the years, a few contractors of DOE and its predecessor agencies (AEC and ERDA) received special indemnity protection by use of Section 162 of the Atomic Energy Act of 1954, as amended. 42 U.S.C. §2202. Section 162 provides:

> The President may, in advance, exempt any specific action of the Commission [now Department of Energy] in a particular matter from the provisions of law relating to contracts whenever he determines that such action is essential in the interest of the common defense and security.

Price-Anderson.[199] Specific inclusion of contractors in the 1957 Act was an attempt to correct the deficiencies of contractor indemnification as it began under the MED, while furthering the broader goals and purposes of Price-Anderson, especially protection of the public.[200] As such, statutory contractor indemnification was seen at the time as desirable for several reasons that, as described, *infra,* are equally valid today.

A. Public Protection

First, protection of the public has been the principal purpose of the Price-Anderson Act. The statutory scheme of indemnification and/or insurance has been intended to ensure the availability to the public of adequate funds in the event of a catastrophic, yet unlikely, nuclear accident. Other benefits to the public include such features as emergency assistance payments, consolidation and prioritization of claims in one court, channeling of liability through the "omnibus" feature (permitting a more unified and efficient approach to processing and settlement of claims), and waivers of certain defenses in the event of a large accident (providing a type of "no-fault" coverage). If a very large accident were to happen, Congress recognized in 1957 (and again at the time of the 1988 Amendments) that a private company (such as the prime contractor or subcontractor) probably could not bear the costs alone. The company would be forced into bankruptcy, leaving injured claimants without compensation.[201] Price-Anderson was seen as a means of preventing this from happening by providing "a comprehensive, compensation-oriented system of

(..continued)

Section 162 has enabled the President to approve DOE contracts containing "general indemnities" not subject to the availability of appropriated funds. In other words, Section 162 has been used to provide exemptions to the Anti-Deficiency Act. 31 U.S.C. §1341. in connection with five different contracts that contained indemnity provisions without qualification as to the availability of appropriations. Presidential approval has been given: (1) by President Truman (on September 27, 1950) in connection with the DuPont contract for operation of the Savannah River Plant; (2) by President Eisenhower (on July 14, 1954) in connection with the aircraft nuclear propulsion program; (3) by President Eisenhower (on August 7, 1957) in connection with the Babcock & Wilcox contract for design and fabrication of the nuclear reactor for the nuclear ship *Savannah*; (4) by Presidents Truman, Eisenhower and Kennedy in connection with the General Electric Company contract for the operation of the Hanford Site; and, (5) by Presidents Johnson (on June 12, 1964 and December 19, 1968), Nixon (on December 31, 1973), Carter (in early January 1979) and Reagan (on September 30, 1983 and January 19, 1988) in connection with the AT&T Technologies, Inc. (formerly Western Electric Co., Inc.)/Sandia Corporation contract for operation of Sandia National Laboratories. The Presidential approvals were in response to recommendations of the heads of AEC or DOE. The most recent use of Section 162 was by President Reagan on January 19, 1988 in connection with the last five-year extension (through September 30, 1993) of the AT&T/Sandia contract. All contracts subject to a Section 162 Presidential exemption have expired.

[199]*See 1956 Hearings, supra* note 7, at 76-84; *1957 Hearings, supra* note 4, at 149-51, 176. Note, however, that a provision added in 1988 provides that, beginning 60 days after August 1988, §170d(1)(A) shall be "the exclusive means" of nuclear hazards indemnification for DOE contractors, including activities conducted under a contract containing Public Law 85-804 indemnification entered into during the 1987-1988 lapse. 42 U.S.C. §2210(d)(1)(B)(i)(I).

[200]*See, e.g., 1957 Hearings, supra* note 4, at 176.

[201]*See, e.g., S. Rept. No. 296, supra* note 4, at 15, *reprinted in* [1957] U.S. Code Cong. & Ad. News 1816-17; *H. Rept. No. 435, supra* note 4, at 15; *1984 Columbia Study, supra* note 4, at 57-58; 103 Cong. Rec. H9560 (daily ed. July 1, 1957) (statement of Rep. Van Zandt).

liability insurance for Department of Energy contractors and Nuclear Regulatory Commission licensees operating nuclear facilities."[202] In 2005, the Senate Energy and Natural Recourses Committee reported:

> Reauthorization of the liability and indemnification provisions of the Price-Anderson Act is critical for protection of consumers as well as stability in the industry.[203]

During consideration of the 1988 extension, the Senate Energy Committee summarized this point as follows:

> In general, failure to extend the Price-Anderson Act would result in substantially less protection for the public in the event of a nuclear incident. In the absence of the Act, compensation for victims of a nuclear incident would be less predictable, less timely, and potentially inadequate compared to the compensation that would be available under the current Price-Anderson system.[204]

At the same time, if the accident were so large as to exceed the statutory indemnity ceiling, Congress first recognized in 1957 it would be capable of legislating additional funds.[205] Indeed, the Price-Anderson Act specifically has provided since 1975 that, in the event of a nuclear incident involving damages in excess of the statutory limitation on liability, Congress will thoroughly review the particular incident and take whatever action is deemed necessary and appropriate to protect the public from the consequences of a disaster of such magnitude.[206]

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[202] *1987 Senate Energy Committee Report, supra* note 3, at 14, 16-18, *reprinted in* [1988] U.S. Code Cong. & Ad. News 1426, 1428-1430 (also noting the need for extending the Price-Anderson Act then was essentially the same as in 1957, *i.e.* the amount of private insurance available was insufficient and compensation to victims of a nuclear accident, in the absence of the Price-Anderson Act, therefore would be seriously limited). *See also 1987 Senate Environment Committee Report, supra* note 6, at 4, *reprinted in* [1988] U.S. Code Cong. & Ad. News 1479; *1987 House Science Committee Report, supra* note 3, at 3; *1987 House Energy Committee Report, supra* note 3, at 15, 17 (noting the House Energy Committee viewed the need to extend the Act as "urgent").

[203] S. Rpt. 109-78, 109th Cong., 1st Sess at 8.

[204] *1987 Senate Energy Committee Report, supra* note 3, at 18, *reprinted in* [1988] U.S. Code Cong. & Ad. News 1426.

[205] *See, e.g., S. Rep No. 296, supra* note 4, at 22, *reprinted in* 1957 U.S. Code Cong. & Ad. News 1823; *H. Rept. No. 435, supra* note 4D, at 22.

[206] 42 U.S.C. §2210(e)(2). This statutory provision was added by Act of December 31, 1975, Pub. L. No. 94-197, §6, 89 Stat. 1111. *See also Duke Power Co. v. Carolina Environmental Study Group,* 438 U.S. 59, 85-86 (1978) (discussing this provision in the decision that unanimously upheld the constitutionality of the Act's limitation on liability); and *1987 Senate Energy Committee Report, supra* note 3, at 14.

B. Encourage Participation of Private Industry

Although government contractors may have received indemnification before Price-Anderson, the types of coverage varied with unpredictable results. Consequently, potential contractors generally were deterred from associating with nuclear development, thereby deviating from the goals of the 1954 Atomic Energy Act to encourage such activities.[207] Several industrial spokespersons felt so strongly that at the time of the 1956 hearings, they saw no alternative but to recommend that work on various projects be stopped as soon as possible if appropriate legislation was not passed by the Eighty-Fifth Congress. Several contractors already had entered into a number of contracts, both large and small, that were negotiated with the view that the work would have to stop at some time if adequate liability protection could not be obtained.[208] This point was raised again in the 1957 hearings.[209] And, at least one spokesman indicated that, pending legislation, his company had gone ahead in good faith with AEC contract work on every project despite lack of protection for subcontractors in the "hope or expectation that legislation would cover work presently in process," adding that the same applied to his company's suppliers.[210] Price-Anderson was intended to eliminate these liability problems and to encourage private industry to participate in nuclear development, including Government activities. DOE contractors strenuously reiterated the same point prior to the 1988 extension, saying they would decline to work for DOE without nuclear liability protection of the type afforded by the Price-Anderson Act. Alternatives would be using Federal employees or possibly less responsible, less competent contractors.[211]

C. Extend Coverage Through Uniform Contracts

Prior to the enactment of Price-Anderson, indemnity clauses in AEC contractor agreements were generally broad in scope, but not all contracts contained such provisions.[212] Additionally, there often was an ill-defined exemption to this broad coverage for the contractors' "willful misconduct" or if "bad faith" caused losses, expenses, and damages.[213] This exception at times extended to

[207] *See, e.g., 1957 Hearings, supra* note 4, at 147, 176.

[208] *See, e.g., 1956 Hearings, supra* note 7, at 105, 116. *See also* Atomic Industrial Forum, Extension of the Price-Anderson Indemnification System (May 1965) at 5; and, *1966 Hearings, supra* note 20, at 230.

[209] *See, e.g., 1957 Hearings, supra* note 4, at 148.

[210] *Id.,* at 287.

[211] The 1987 Senate Energy Committee Report recognized the possibility some DOE contractors would discontinue work in DOE's nuclear activities altogether if the Price-Anderson system were not extended. *1987 Senate Energy Committee Report, supra* note 3, at 17, 34-35, *reprinted in* [1988] U.S. Code Cong. & Ad. News 1429, 1446-1447. In fact, the Committee noted, in that event, Federal nuclear activities would continue, but they would likely be carried out by Federal employees or possibly by less responsible, less competent contractors. If DOE's nuclear activities were to be carried out by Federal employees, victims of a nuclear accident could only attempt to obtain compensation by filing suit against the Federal Government under the Federal Tort Claims Act. *Id.*

[212] *1956 Hearings, supra* note 7, at 77-85.

[213] *Id.*

contractor representatives having "general supervisory and direction of the performance of the work." Also, "intermediate" company officials had been included under contract exceptions.

Although contractor indemnity was often broad, there existed a number of contract clauses with narrow scopes of coverage. This was a result of the *ad hoc* negotiations between private industry and the government. Many contracts varied in scope and limitation of coverage. Thus, one particular situation potentially could have resulted in coverage for some contractors and not for others.

Price-Anderson rendered coverage more uniform, and, since the 1988 Amendments, has been mandatory for DOE contractors (as it has been for power plants since 1957). For example, the Act currently provides coverage for any nuclear accident if it occurs at the contract location or takes place at other locations and arises in the course of contract performance by any person for whom the contractor must assume responsibility. Also, protection is extended to incidents that arise out of or in the course of transportation of source, special nuclear, or by-product material to or from a contract location or an incident that involves items produced or delivered under the contract. After a thorough examination of the issue before the last two extensions in 1988 and 2005, Congress, as it had in 1957, declined to make an exclusion for damages in case of "gross negligence," "willful misconduct" or "bad faith" of any contractor representatives.[214]

D. Extend Uniform Coverage to Different Contractor Tiers

A typical contractor-subcontractor relationship could potentially involve many different companies. Before the passage of Price-Anderson, indemnity agreements had to be negotiated at each tier of the contractor scheme. If construction and development of several atomic facilities occurred, the number of contractors and subcontractors that faced possible risks due to a nuclear mishap could reach into the "thousands."[215]

Moreover, the different scopes of coverage caused by contract negotiations at each tier could result in haphazard protection of the public. Price-Anderson corrected this deficiency, ensuring the availability of funds to cover damages and creating a uniform level of coverage among contractors, subcontractors, and other suppliers.[216] The Price-Anderson indemnity agreements cover "anyone liable," not just the entity with whom the indemnity agreement is executed.[217] This is the so-called

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[214] *S. Rept. No. 296, supra* note 4, at 21, *reprinted in* [1957] U.S. Code Cong. & Ad. News 1823; *H. Rept. No. 435, supra* note 4, at 21.

[215] *1961 Hearings, supra* note 7, at 49; 103 Cong. Rec. S13724 (daily ed. August 16, 1957) (statement by Sen. Anderson); *DOE Study, supra* note 6, at 1 (there then were over 100 DOE contracts containing Price-Anderson protecting about 50 prime contractors and 70,000 subcontractors and suppliers).

[216] *See, e.g., 1956 Hearings, supra* note 7, at 76-85.

[217] *See* Section 11t, 42 U.S.C. §2014t (defining "person indemnified"). *See also* S. Rept. No. 1677, *supra,* note 27, *reprinted in* [1962] U.S. Code Cong. & Ad. News 2207-22.

"omnibus" feature of the system.[218] In addition, Price-Anderson reduced the risk to bring it into proportion to the contractor's initial investment and volume of business.

E. Limitation on Funds for Indemnification

During the pre-Price-Anderson coverage period, the AEC negotiated indemnity contracts with individual contractors. The coverage, however, was subject to the availability of funds.[219] As a result, contractors and the public potentially could be left unprotected. Price-Anderson was intended to resolve this problem by providing and guaranteeing compensation up to the liability ceiling. DOE now is authorized under Section 170j of the Price-Anderson Act to enter into contracts in advance of appropriations. Also, DOE may incur obligations without regard to any limitation on the availability of funds. This feature allows DOE to act quickly, without prior consent from Congress for each contractor activity.

VIII. Conclusions

Contractor indemnification against the risks of nuclear incidents has been provided by the U.S. Government since the early 1940s. Contractor coverage prior to the Price-Anderson Act, however, often was inconsistent, subject to the individual contract idiosyncracies, inapplicable to subcontractors, and subject to the availability of funds. Price-Anderson was carefully designed to correct many of these deficiencies by providing a uniform system of contractor indemnification and public protection. The coverage now provides horizontal protection between contractors and vertical protection between contractors, subcontractors and other suppliers. It protects the public with a large source of funds and important features, such as consolidation and prioritization of claims in a single court. Enhanced criminal and civil penalty provisions were added in 1988 to further encourage "contractor accountability" after Congress rejected any subrogation provision. A further attempt by the House to add a “contractor accountability” provision was dropped before final passage of the 2005 Amendments. After over sixty years of indemnification, private industry

[218]The breadth of Price-Anderson's "omnibus" coverage is illustrated by an often-quoted example in the legislative history of the Act:

> In the [1957] hearings, the question of protecting the public was raised where some unusual incident, such as negligence in maintaining an airplane motor, should cause an airplane to crash into a reactor and thereby cause damage to the public. Under this bill the public is protected and the airplane company can also take advantage of the indemnification and other proceedings. S. Rept. No. 296, 85th Cong., 1st Sess., [1957] U.S. Code Cong. & Ad. News 1818.

[219]*Id.* at 162, 176; *1961 Hearings, supra* note 7, at 16-17; 111 Cong. Rec. H23168 (daily ed. September 16, 1965) (statement of Rep. Morris). A few of the pre-Price-Anderson indemnity agreements (for example, those with the operating contractors of the AEC's production facilities) were, under the special authority of Section 162 of the Atomic Energy Act of 1954, 42 U.S.C. §2202, not made subject to the availability of funds. But such indemnification arrangements were entered into only in exceptional cases. *See 1974 AEC Staff Study, supra* note 8, at 31. In the absence of Price-Anderson, the Anti-Deficiency Act, 31 U.S.C. §1341, would apply to DOE nuclear contracts. That statute prohibits contracting officers from incurring any financial obligations over and above those authorized for a particular year and in advance by Congress. *See also* Adequacy of Appropriations Act, 41 U.S.C. §11.

has maintained a large role in assisting the U.S. Government in its own nuclear activities without significant damage or injury to the public and with only two substantial settlements (at Fernald in 1989 and Rocky Flats in 2017). In other words, Price-Anderson contractor indemnification is a system that has worked well.