

COMMENT

THE LEGAL PROBLEMS OF SPENT NUCLEAR FUEL DISPOSAL

I. INTRODUCTION

The United States nuclear power industry produced 753.9 billion kWh of electricity in 2000.¹ This made up almost 20% of all energy consumed in the United States that year.² The U.S. nuclear power industry also produced about 2,000 metric tons of extremely hot, highly radioactive Spent Nuclear Fuel (SNF), which added to the approximately 40,000 metric tons already produced through 1999.³ The question of what to do with this waste has plagued state and federal authorities since the nuclear industry began in the 1950's, and will continue for tens of thousands of years until a solution is found.⁴ The federal government addressed this issue when it passed the Nuclear Waste Policy Act in 1982.⁵ Lawmakers concluded that it was the responsibility of the federal government to take and dispose of the SNF at the expense of the various utilities.⁶ For several years the Utilities poured billions of dollars into this program and maintained smaller on-site storage facilities believing their waste would be transported away in the not-to-distant future, but almost four years after the date disposal was supposed to begin, no SNF has been moved from the Utilities' on-site storage.⁷

As the SNF disposal program became increasingly behind schedule, the Utilities' problems began to compound. As SNF began to fill up small storage facilities, the Utilities began to realize that at a certain date in the near future their plants would produce more waste than could legally be stored in their facilities, thus forcing the power generation to be halted.⁸

1. ENERGY INFO. ADMIN., *Nuclear Generation: Another Year, Another Record* (Mar. 15, 2001), available at <http://www.eia.doe.gov/ncic/press/press/175.html>.

2. ENERGY INFO. ADMIN., *Monthly Energy Review* (Sept. 2001), available at http://www.eia.doe.gov/emeu/mcr/pdf/pages/sec8_3.pdf.

3. Mark Holt, *Civilian Nuclear Waste Disposal*, Issue Brief for Congress, 92-059 at ¶ 43 (July 30, 2001), available at <http://www.cnie.org/NLE/CRSreports/Waste/waste-2.cfm> [hereinafter Congressional Brief].

4. *Id.* at ¶ 35.

5. Public Health and Welfare, 42 U.S.C. §§ 10101-10270 (2001).

6. The number of utilities involved in the litigation that this comment will address is very large. Therefore this comment will hereinafter refer to all of the affected utilities simply as "Utilities."

7. Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste, 10 C.F.R. § 961.11, Art. II (2001). Date of disposal was to begin no later than January 31, 1998.

8. See generally Margaret Kriz, *Mountain of Trouble*, 31 NAT'L J. 2543 (1999).

They also began to wonder if their multi-billion dollar investment into the disposal program would ever pay off. These fears caused the Utilities to file suit against the Department of Energy (DOE). The solution to the question of what to do with SNF is more complicated now than before 1982.⁹ The Nuclear Waste Policy Act (NWPA) is more than a decade behind schedule and the probable results of the Utilities' lawsuits will create more problems than they solve.

A. Spent Nuclear Fuel

SNF is the byproduct of a controlled nuclear reaction that takes place in a nuclear power plant. Nuclear plants operate by splitting atoms, which causes a great deal of heat.¹⁰ Water is pumped through the reactor core to be heated, and then released as steam into a turbine, thus creating electricity. "The fresh fuel rod, which emits relatively little radioactivity, contains uranium that has been slightly enriched in the isotope U-235."¹¹ Eventually, after several years of producing heat, the rods begin to decay and must be removed. By this point, they become very hot and highly radioactive.¹² The process of decay comes about:

[a]fter nuclear fission has taken place in the reactor, many of the uranium atoms in the fuel rods have been split into a variety of highly radioactive fission products; others have absorbed neutrons to become radioactive plutonium, some of which has also split into fission products. Radioactive gases are also contained in the spent fuel rods.¹³

This process creates a product that is extremely hot and "remains dangerously radioactive for tens of thousands of years."¹⁴ After these rods are withdrawn from the reactor, they are stored in on-site pools of water to contain radiation and to keep them from overheating.¹⁵

The amount of waste stored in these on-site pools has been growing for a number of years.¹⁶ The typical large commercial nuclear reactor produces about twenty to thirty metric tons of SNF a year.¹⁷ U.S. reactors produce about 2,000 metric tons annually.¹⁸ Approximately 40,000 metric tons of SNF is currently stored on-site at seventy plants around the nation.¹⁹ "As a result, the total amount of [SNF] is expected to reach 60,000

9. Public Health and Welfare, 42 U.S.C. §§ 10101-10270 (2001).

10. This process is called nuclear fission. Congressional Brief, *supra* note 3, at ¶ 42.

11. Congressional Brief, *supra* note 3, at ¶ 42.

12. *Id.* at ¶ 41.

13. Congressional Brief, *supra* note 3, at ¶ 42.

14. *Id.* at ¶ 35.

15. Congressional Brief, *supra* note 3, at ¶ 42.

16. The federal government allowed private ownership of nuclear facilities in the Atomic Energy Act of 1954.

17. *Id.*

18. Congressional Brief, *supra* note 3, at ¶ 42.

19. *Id.* at ¶ 43. Some waste is also held at two small central storage facilities.

metric tons by 2010 . . . and almost 80,000 metric tons by 2020.”²⁰

In the early days, SNF was not considered waste because of its ability to be recycled to produce uranium, which could be reused in nuclear reactors.²¹ This process requires the separation of the decayed material into plutonium, uranium, and a highly radioactive waste product.²² Approximately 95% of the product could feasibly be reused.²³ British Nuclear Fuels Ltd. (BNFL) currently reprocesses SNF for England, Japan, and several other countries.²⁴ BNFL has proposed reprocessing SNF from the United States at a cost of one million dollars per metric ton.²⁵ While the United States decided not to accept BNFL’s offer, it has considered the development of the recycling process here. The DOE’s Savannah River site formerly recycled uranium and plutonium for defense needs.²⁶ While it has been suggested that a reprocessing plant could be developed there, “questions have arisen about the ability of the 40-year-old . . . reprocessing facilities to meet current safety standards.”²⁷

The United States has been resistant to the idea of reprocessing SNF because the extraction of plutonium could be used in nuclear weapons. “Such a program, opponents contend, could undermine U.S. nuclear nonproliferation efforts aimed at discouraging other nations from separating plutonium from [SNF].”²⁸ While there is no prohibition on the reprocessing of SNF, it is currently not a politically viable option due to the vast effects it would have on nonproliferation policies.

The problem of disposing of SNF was a concern when the first reactors came online in the 1950’s.²⁹ The highly radioactive rods were removed from the reactors with no clear policy of what to do with them.³⁰ As the on-site storage facilities began to fill up, the Utilities and the federal gov-

20. Congressional Brief, *supra* note 3, at ¶ 42.

21. Mark Holt, *Civilian Nuclear Spent Fuel Temporary Storage Options*, Congressional Report for Congress, 96-212, at ¶ 13 (Mar. 27, 1998), available at <http://www.cnle.org/nle/waste-20.html>. [hereinafter Congressional Report].

22. *Id.* at ¶ 51.

23. When SNF is reprocessed it yields about one percent plutonium and ninety-five percent reusable uranium. Congressional Report, *supra* note 21, at ¶ 51.

24. *Id.* at ¶ 50.

25. Congressional Report, *supra* note 21, at ¶ 50.

If the U.S. [SNF] were reprocessed, the plutonium . . . and uranium . . . would be separated from highly radioactive waste products. The resulting liquid high-level waste would be vitrified dissolved in molten glass and poured into stainless steel canisters [in the BNLF’s facility]. The uranium, plutonium and waste canisters would then be returned to [the] DOE, or, for an additional fee BNLF could produce mixed-oxide (MOX) fuel from the plutonium and some of the uranium. Most U.S. nuclear plants could load at least a third of their reactor cores with MOX fuel.

Id. at ¶ 51.

26. Congressional Report, *supra* note 21, at ¶ 49.

27. *Id.* at ¶ 53.

28. Congressional Brief, *supra* note 3, at ¶ 27.

29. *Supra* note 16.

30. Congressional Report, *supra* note 21, at ¶ 12.

ernment began to look for ways of dealing with this problem.³¹

B. *The Nuclear Waste Policy Act*

In 1982, the federal government enacted the Nuclear Waste Policy Act (NWPA) to resolve the growing waste issue. The Act proposes three types of storage to handle the waste, dictates what agencies are to regulate it, explains the process for establishing a disposal facility, and also explains how the facility development is to be financed.³²

Congress, realizing the permanent solution was still decades away, suggested the development of interim storage facilities at each reactor to hold waste until a permanent disposal site was completed.³³ Since Congress never authorized any funding to implement an interim storage facility though, the solution never materialized and the Utilities began storing nuclear waste on-site at their own expense.

Monitored Retrievable Storage (MRS) was also proposed as an off-site interim storage facility.³⁴ The MRS facility was envisioned as a holding facility where the SNF could be monitored until a permanent solution was found. When Yucca Mountain was designated as the sole candidate for permanent repository in 1987,³⁵ the MRS facility was placed on hold.³⁶

The proposition of a permanent repository for disposal of SNF was, of course, the preferred choice of legislators because it would result in the removal of all SNF from that legislator's state. The concepts of interim storage and MRS were merely temporary solutions until permanent disposal became a reality. Congress found that the federal government had the "responsibility to provide for the permanent disposal of [SNF]."³⁷ Before the NWPA was amended in 1987, the DOE was required to locate at least five sites to pursue and recommend to the President.³⁸ "After DOE made little progress toward finding a site during the program's first five years (at least partially because of opposition from states and regions under DOE's consideration), Congress" amended the NWPA and "designated Yucca Mountain in Nevada as the sole candidate repository site in 1987."³⁹

After a candidate repository site is located, the NWPA requires that it be tested (or "characterized") to assure its suitability as a permanent repository.⁴⁰ The characterization criteria, development, and construction of

31. *Id.*

32. Public Health and Welfare, 42 U.S.C. §§ 10101-10270 (2001).

33. *Id.* § 10151.

34. *Id.* § 10161.

35. Public Health and Welfare, 42 U.S.C. § 10133 (2001).

36. Legislation proposing a site in Tennessee was considered "annulled and revoked." *Id.* § 10162 (a).

37. Public Health and Welfare, 42 U.S.C. § 10131(a)(4) (2001).

38. *Id.* § 10132.

39. Congressional Report, *supra* note 21, at ¶ 17; 42 U.S.C. § 10131 (a)(4).

40. Public Health and Welfare, 42 U.S.C. § 10133(a) (2001).

the repository are carried out by three different agencies: the Environmental Protection Agency (EPA), the Nuclear Regulatory Commission (NRC), and the DOE.⁴¹

The primary responsibility of the EPA is to set the standards for the general environmental concerns and public health.⁴² This is done through a series of technical requirements ranging from how many millirems of radioactivity will be allowed to be emitted from the facility,⁴³ to the number of years the characterization process must account for.⁴⁴

The NRC essentially oversees the DOE's activities during characterization, construction, operation, and closure of the facility.⁴⁵ NRC approval is required for most of the activities that occur in the characterization process. While the NRC puts forth its own list of requirements for the facility, it also incorporates those required by the EPA. The facility will not be licensed unless the NRC finds that the facility meets the requirements set forth by all three agencies.

Under the NWPA, the DOE has the overwhelming duty of actually characterizing, designing, constructing, and managing the facility.⁴⁶ The DOE is required to ensure compliance with the requirements set forth by the EPA and the NRC. Among other things, the DOE ensures that the facility meets: geologic, hydrologic, geophysical, geochemical, volcanic, and seismic requirements set forth by the EPA and NRC regulations.⁴⁷ The DOE is also required to hold hearings near the Yucca Mountain site in order to inform and receive comments from the residents, and to submit a final Environmental Impact Statement.⁴⁸

The characterization process was completed February 14, 2002, when the Secretary of Energy, Spencer Abraham (the Secretary), presented his recommendation to President Bush.⁴⁹ The Secretary found the Yucca Mountain facility was "scientifically and technically suitable for the development of a repository."⁵⁰ President Bush approved this recommendation on February 15, 2002 and urged Congress to pass legislation to further this process.⁵¹ Once the President approves of the Secretary's recommendation and submits his approval to Congress, the NWPA allows the state where the facility is to be located to effectively veto the establishment of the facil-

41. *Id.* §§ 10191-10204 (2001).

42. Public Health and Welfare, 42 U.S.C. § 10141.

43. Protection of Environment, 40 C.F.R. §197.4 (2002); *see also* 40 C.F.R. § 191.03 (2002).

44. The EPA has required that the facility meet these requirements for at least 10,000 years. 40 C.F.R. § 197.20 (2002).

45. Public Health and Welfare, 42 U.S.C. § 10134 (d) (2001).

46. *Id.* § 10191.

47. Energy, 10 C.F.R. § 963.17(2002).

48. Public Health and Welfare, 42 U.S.C. § 10134 (2001).

49. Letter from United States Secretary of Energy Spencer Abraham to President George W. Bush (Feb. 14, 2002), *available at* <http://www.ymp.gov/new/salp.pdf>.

50. *Id.* at ¶ 2.

51. Letter Submitted to Congress by President George W. Bush (Feb. 15, 2002) (*available at* WL 228239). [hereinafter President's Letter].

ity in that state.⁵² However, this state veto can be overruled by a Congressional vote.⁵³ If the veto is overcome by Congressional action, the Secretary is then able to submit an application to the NRC for construction authorization.⁵⁴ Upon approval of the application, the DOE could begin construction of the facility.

In addition, the NWPA created the Nuclear Waste Fund (NWF) to finance the program.⁵⁵ Essentially, the NWPA required the formation of contracts between individual Utilities and the DOE for the taking and disposing of SNF to one national facility. The NWF required Utilities to pay into the fund a one-time fee based on the amount of electricity produced before January 7, 1983.⁵⁶ It also required every utility to pay one mil per every kilowatt-hour produced since January 7, 1983.⁵⁷ The contracts required the DOE to begin disposing of SNF no later than January 31, 1998.⁵⁸ Although the Utilities have consistently paid into the Fund since 1983, the DOE has yet to remove any waste.

C. *Yucca Mountain*

Yucca Mountain (Yucca) is located approximately 100 miles northwest of Las Vegas, Nevada on land owned by the federal government.⁵⁹ It is also on the edge of the Nation's nuclear weapons test site, where more than 900 nuclear tests have been conducted.⁶⁰

Volcanic eruptions, 20 miles away, created Yucca Mountain on surrounding flat land between 7.5 and 15 million years ago. Molten magma spewed into the atmosphere and clouds of ash rolled southward depositing ash, some of it so hot it welded together. Over the ages, layers and layers of volcanic ash compressed and consolidated into [Yucca].⁶¹

Yucca was chosen by Congress in the 1987 amendment to the NWPA as the sole candidate site because it appeared to be the most suitable location for disposing of SNF.⁶² Scientists claim three physical characteristics set it apart from other sites: (1) its remote location from a large population center; (2) its very dry climate; and (3) its extremely deep water table.⁶³

52. Public Health and Welfare, 42 U.S.C. § 10135(b) (2001).

53. *Id.* § 10135(c).

54. Public Health and Welfare, 42 U.S.C. § 10134(b) (2001).

55. *Id.* § 10222.

56. Public Health and Welfare, 42 U.S.C. § 10222(a)(2)-(3) (2001).

57. *Id.*

58. "[I]n return for the payment of fees established by this section, the Secretary, beginning not later than January 31, 1998, will dispose of the high-level radioactive waste or spent nuclear fuel involved as provided in this subchapter." Public Health and Welfare, 42 U.S.C. § 10222(a)(5)(B) (2001).

59. DEPARTMENT OF ENERGY, *Viability Assessment of a Repository at Yucca Mountain* ¶ 4 (Oct. 4, 2001), available at <http://www.ymp.gov/timeline/va/vanew.htm>.

60. *Id.*

61. DEPARTMENT OF ENERGY, *Tests in the Exploratory Studies Facility* ¶ 2 (Oct. 4, 2001), available at <http://www.ymp.gov/reference/photos/esfcon/default.htm>.

62. Public Health and Welfare, 42 U.S.C. § 10172(a) (2001).

63. DEPARTMENT OF ENERGY, *Why Yucca Mountain* ¶ 1 (Oct. 4, 2001), available at

While Yucca appears to be the most likely location of a future SNF repository: “[t]he state of Nevada has fought [the] DOE’s efforts on the grounds that the site is unsafe, pointing to potential volcanic activity, earthquakes, water infiltration, underground flooding, nuclear chain reactions, and fossil fuel and mineral deposits that might encourage future human intrusion.”⁶⁴ This effort by the State of Nevada, along with budgetary problems, has greatly slowed the development of the Yucca repository.

The excavation and testing of Yucca began in October of 1994, when a twenty-five foot diameter tunnel-boring machine began cutting a tunnel through the mountain.⁶⁵ It broke through the surface of the other side on April 25, 1997.⁶⁶ Studies of the viability of the site began immediately. In that same year, Congress directed the DOE to complete a viability assessment to predict the size, feasibility, and cost of the repository.⁶⁷ On December 18, 1998, Secretary Richardson of the DOE submitted the assessment and found that no “show stoppers had been identified.”⁶⁸ This finding was supported by the Environmental Impact Statement (EIS) completed in February 2002.⁶⁹ Based on the EIS and the recommendation by the Secretary, the President approved the Yucca Mountain site on February 15, 2002.⁷⁰ If all permits and licenses are granted according to schedule, construction at Yucca will begin in 2005 and operations will begin in 2010.⁷¹

II. IMPORTANT PRIOR EVENTS AND LITIGATION AFFECTING RECENT COURT DECISIONS

The delays in construction and development of the Yucca repository in the early 1990’s caused many of the Utilities to doubt whether the DOE would be able to take and dispose of the waste by the January 31, 1998 deadline. For this reason, several Utilities requested the DOE to reaffirm its duties under the NWPA.⁷² In response to these concerns, the Director of DOE’s Office of Civilian Radioactive Waste Management, Daniel

<http://www.ymp.gov/about/why.htm>. Yucca is approximately 100 miles from Las Vegas, Nevada, it receives less than six inches of rainfall a year, and its water table is 800 to 1000 feet below the level of the proposed repository.

64. Congressional Brief, *supra* note 3, at ¶ 13.

65. *Id.* at ¶ 53.

66. Congressional Brief, *supra* note 3, at ¶ 53.

67. DEPARTMENT OF ENERGY, *Secretary Richardson Submits Viability Assessment to the President and the Congress* ¶ 3 (Dec. 18, 1998), available at <http://www.ymp.gov/new/vadoc.htm>.

68. *Id.* at ¶ 4.

69. DEPARTMENT OF ENERGY, Environmental Impact Statement, Yucca Mountain Repository (Feb. 14, 2002)(on file with the Office of Civilian Radioactive Waste Management).

70. President’s Letter, *supra* note 51.

71. DEPARTMENT OF ENERGY, *Licensing* ¶ 2 (Oct. 4, 2001), available at <http://www.ymp.gov/timeline/license/index.htm>.

72. *Indiana Michigan Power Co. v. Dept. of Energy (Indiana Michigan)*, 88 F.3d 1272, 1274 (D.C. Cir. 1996). The Utilities were particularly interested in what the DOE was going to do about its contractual obligations under section 10222(a)(5) of Title 42 of the United States Code.

Dreyfuss, commented in a letter that the DOE "does not have a clear legal obligation under the [NWPA] to accept [SNF] absent an operational repository or other facility."⁷³ The DOE's Secretary, Hazel O'Leary, also claimed that:

[when the] NWPA was enacted [the] DOE "envisioned that it would have a waste management facility in operation and prepared to begin acceptance of [SNF] in 1998," [the] DOE subsequently concluded it did not have a "clear legal obligation under the [NWPA] to accept [SNF] absent an operational repository or other facility constructed under the [NWPA]."⁷⁴

From the beginning, the DOE took the stance that its obligation to take the SNF was conditioned on the existence of a storage facility.

By this point, all parties realized that a conflict was inevitable. The DOE, recognizing the Utilities' apprehension about its earlier comments, addressed the issue in a notice of inquiry. On May 25, 1994, the DOE published the Notice of Inquiry on the Waste Acceptance Issues (Inquiry).⁷⁵ The Inquiry confirmed the Utilities' fears when it projected "the earliest possible date for acceptance of waste for disposal at [the] repository [was] 2010."⁷⁶ The purpose of the Inquiry was to elicit views of the Utilities on three specific issues:

- (1) The Department's preliminary view that it does not have a statutory obligation to accept spent nuclear fuel in 1998 in the absence of an operational repository of other facility constructed under the Act;
- (2) the need for an interim, away-from-reactor storage facility prior to repository operations; and
- (3) options for offsetting, through the use of the Nuclear Waste Fund, a portion of the financial burden that may be incurred by utilities in continuing to store spent nuclear fuel at reactor sites beyond 1998.⁷⁷

The Inquiry was not the response the Utilities were hoping for. It confirmed that the DOE would not be taking responsibility for the waste.

On June 20, 1994, the Utilities brought suit in the District of Columbia Circuit of the United States Court of Appeals against the DOE.⁷⁸ The Utilities' petition for review of the Inquiry was dismissed upon motions by the DOE because the Inquiry "did not constitute final agency action sufficient to confer jurisdiction pursuant to the [NWPA] . . ." because "it did not 'impose an obligation, deny a right, or fix some legal relationship.'"⁷⁹

73. *Indiana Michigan*, 88 F.3d at 1274.

74. *Id.* at 1274.

75. Notice of Inquiry, *Waste Acceptance Issues*, 59 Fed. Reg. 27,007 (1994)[hereinafter Inquiry].

76. *Id.* at 27,008. This projection is based on the assumption that the site proves to be scientifically suitable, that a license from the Nuclear Regulatory Commission is granted and that Congressional approval is achieved.

77. Inquiry, *supra* note 75, at 27,008-9. The use of Nuclear Waste Funds to offset individual utility's financial burdens would be conditioned on the utility's releasing of the DOE's contractual obligations to accept waste by the specified date.

78. *Northern States Power Co. v. Dept. of Energy*, No. 94-1457, 95-1321, 1995 WL 479714 (D.C. Cir. July 28, 1995).

79. *Id.* Ironically the case was not dismissed until over a year later on July 28, 1995. This was almost three months after the DOE had in fact issued its binding statement in the Final interpretation.

The Inquiry, while clearly indicating that the DOE did not intend to accept liability concerning the acceptance of SNF, merely requested comments concerning this issue and did not relay any conclusive intentions.⁸⁰

The defect that existed with the Utilities' petition in the *Northern* case was soon rectified when the DOE issued its Final Interpretation of Nuclear Waste Acceptance Issues (Final Interpretation) on May 3, 1995.⁸¹ The Final Interpretation set forth the DOE's conclusions concerning the questions presented in the Inquiry. In dealing with the first issue of legal obligation, the Final Interpretation recognized: "[m]ost of the commenters . . . expressed the view that language in section 302(a)(5)(B) of the act . . . create[d] an unconditional legal obligation, beginning January 31, 1998, for [the] DOE to initiate acceptance of SNF from [U]tilities."⁸² While most of those responding to the Inquiry believed the DOE did have an unconditional duty to dispose of the SNF, the DOE concluded that it did not have a "legal obligation under either the Act or the Standard Contract to begin disposal of SNF . . . in the absence of a repository or interim storage facility constructed under the Act."⁸³ The DOE based this decision on the wording of the contract. It held that its duty to accept the SNF was conditioned on the availability of a disposal facility. The DOE claimed that the use of the word "dispose" in the contract presupposed the existence of the facility.⁸⁴ Therefore, since the repository was not yet available, its duty to take SNF had not materialized.

Dealing with the second issue of interim storage, the DOE found that it had no authority to provide interim storage facilities.⁸⁵ It found that the NWPA forbade using the NWF to construct sites without the express authorization of Congress.⁸⁶ Therefore, it could not act unilaterally to provide an interim storage facility for the Utilities.

As to the final issue of using monies from the NWF to offset financial burdens caused by on-site storage, the DOE stated: "Section 302(d) of the Act states that the [NWF] may be used only for radioactive waste disposal activities under titles I and II of the Act, including a number of enumerated activities. Paying for the costs of on-site storage is not enumerated in that provision."⁸⁷

80. Inquiry, *supra* note 75.

81. Notices, Department of Energy Office of Civilian Radioactive Waste Management; Nuclear Waste Acceptance Issues, 60 Fed. Reg. 21,793 (1995) [hereinafter Final Interpretation].

82. Section 302(a)(5)(B) of the act states: "In return for the payment of fees established by this section, the Secretary, beginning not later than January 31, 1998, will dispose of the high-level radioactive waste or spent nuclear fuel as provided in this subtitle." *Id.* at 21,794.

83. Final Interpretation, *supra* note 81, at 21,794.

84. The DOE reached this definition by asserting that the words "dispose" and "disposal" were "merely different grammatical forms of the same word, and that the Act's definition of 'disposal' . . . defines DOE's obligation . . . to take title to SNF, requires the existence of an operating repository." *Id.* at 21,795.

85. Final Interpretation, *supra* note 81, at 21,797.

86. *Id.*

87. Final Interpretation, *supra* note 81, at 21,797.

The Final Interpretation also found that if the DOE were found to have an unconditional obligation to begin disposing of SNF, the Delays Clause would apply.⁸⁸ Accordingly, under the contract, if a delay occurred the appropriate remedy would lie not in the courts, but in a contractual dispute resolution procedure.⁸⁹ Therefore, the Final Interpretation essentially relieved the DOE of any duty to begin accepting waste on the date of January 31, 1998.

On January 17, 1996, several Utilities joined together and again brought suit against the DOE in the District of Columbia Circuit Court of Appeals.⁹⁰ Alleging that the Final Interpretation was invalid, the Utilities petitioned for review of the DOE's decision. The court first reviewed the DOE's argument that there was no legal obligation to take SNF until there was a facility to dispose of the waste.⁹¹ The DOE essentially made the same argument it presented in the Final Interpretation that use of the word "dispose" implies that in order to take SNF, there must first be a place to "dispose" of SNF or else there is no obligation.⁹² The court disagreed with this interpretation. It found that a common understanding of the word "dispose" does not support the DOE's interpretation.⁹³

The DOE also made the argument that two subsections of the Act must be read together in order to properly interpret them.⁹⁴ The gist of the DOE's argument was that properly interpreting these subsections together "evinced Congress's intent that [the] DOE take title to the waste *before*" becoming liable for its disposal.⁹⁵ Finding this unpersuasive, the court held that it was quite possible and common for one party to have ownership and yet another to actually possess.⁹⁶ "[C]ontrary to [the] DOE's assertions, it is not illogical for [the] DOE to begin to dispose of SNF by the 1998 deadline and yet not take title to the SNF until a later date."⁹⁷ The court found all arguments by the DOE to be very weak and without merit. In response to this it stated:

The [DOE's] treatment of this statute is not an interpretation but a rewrite. It not only blue-pencils out the phrase "not later than January 31, 1998," but destroys the quid pro quo created by Congress The Secretary now contends that the payment of fees was for nothing. At oral argument, one of the panel compared the government's position to a Yiddish saying: "Here's air; give me money," and asked counsel for the [DOE] to distinguish the Secre-

88. *Id.* Whether a delay had occurred was dependent on the question of fact of whether it was avoidable or not.

89. Final Interpretation, *supra* note 81, at 21,797.

90. *Indiana Michigan Power Co. v. Dept. of Energy*, 88 F.3d 1272 (D.C. Cir. 1996).

91. *Id.* at 1275.

92. *Indiana Michigan*, 88 F.3d at 1275.

93. *Id.*

94. *Indiana Michigan*, 88 F.3d at 1276. Subsection (A) and (B) of 302(a)(5) deal respectively with taking title to waste and disposal of waste.

95. *Id.* at 1276 (emphasis added).

96. *Indiana Michigan Power Co. v. Dept. of Energy*, 88 F.3d 1272, 1276 (D.C. Cir. 1996).

97. *Id.* at 1276.

tary's position. He found no way to do so, nor have we.⁹⁸

Therefore, the court vacated the decision of the Secretary in the Final Interpretation and found the DOE did have an obligation to take the SNF by the contracted date of January 31, 1998.⁹⁹ Since the date for taking the SNF had not yet arrived, the DOE had not yet technically breached the contract. Thus, the court could not award any damages to the Utilities.¹⁰⁰

After the decision in *Indiana Michigan*, the DOE informed the Utilities once again that it was not able to take SNF by the statutory deadline.¹⁰¹ In response to this, in September 1997, the Utilities returned to the same court it petitioned in *Indiana Michigan* to request a writ of mandamus to force the DOE to comply with the earlier decision. According to the court:

[t]he remedy of mandamus is a drastic one, to be invoked only in extraordinary situations" . . . Mandamus is proper only if "(1) the plaintiff has a clear right to relief; (2) the defendant has a clear duty to act; and (3) there is no other adequate remedy available to plaintiff."¹⁰²

The court then sought to establish whether these criteria had been met. Reiterating its holding in *Indiana Michigan*, the court stated the Utilities did have a clear right to relief.¹⁰³ Citing the NWF, the court found that the only limitation on the DOE's duties were the Utilities' obligation to pay fees. Thus, the Utilities had "dutifully complied" with this condition since 1983 by paying billions of dollars into the NWF.¹⁰⁴ For this reason, the court found that the Utilities had a clear right to relief.

The court also found the second requirement to be satisfied. The court again returned to its decision in *Indiana Michigan* and stated: "We held that [the] DOE's interpretation was inconsistent with the text of the NWSA, which clearly demonstrates a congressional intent that the Department assume a contractual obligation to perform by the 1998 deadline, 'without qualification or condition.'"¹⁰⁵ The court concluded that the DOE did have a clear duty to act.¹⁰⁶

While the court had little difficulty finding that the first two requirements had been met, it could not issue a writ of mandamus because of the possibility of an alternative remedy.¹⁰⁷ The contract, signed by the Utilities, contained a dispute resolution provision that required all claims arising

98. *Indiana Michigan*, 88 F.3d at 1276.

99. *Id.* at 1277.

100. *Indiana Michigan*, 88 F.3d at 1277.

101. *Northern States Power Co. v. Dept. of Energy (Northern I)*, 128 F.3d 754, 757 (D.C. Cir. 1997).

102. *Id.* at 758.

103. *Northern I*, 128 F.3d at 758.

104. *Id.*

105. *Northern I*, 128 F.3d at 758.

106. *Id.*

107. *Northern I*, 128 F.3d 754, 759 (D.C. Cir. 1997).

“under” the contract to be settled there first before initiating litigation.¹⁰⁸ This provision, the court claimed, had not been proven inadequate to deal with the anticipated delay.¹⁰⁹ To issue the writ of mandamus, there must be “no other adequate remedy available to the plaintiff.”¹¹⁰ While the court did not comment on whether the dispute resolution provision was actually adequate to resolve the dispute, it merely found that the existence of a possible alternative remedy was enough.¹¹¹

While the court did not issue a writ of mandamus for the Utilities, it did prevent the DOE from raising the argument that it was not obligated to perform because of “unavoidable delays.”¹¹² The DOE argued that Article IX of the contract relieved its duties because of governmental delays in the preparation of the repository.¹¹³ Based on DOE’s interpretation of the article, the government could always absolve itself from liability for breaching a contract when the breach was caused by the government’s own acts.¹¹⁴ The court took a firm stand against this interpretation. “[The] DOE is simply recycling the arguments rejected by this court in *Indiana Michigan*, . . . [where] we pointed out . . . the NWPA directs [the] DOE to undertake the duty to begin taking the SNF . . . whether . . . it has a repository [or not]”¹¹⁵ Therefore, the court precluded the DOE from using the “unavoidable” argument and reaffirmed its earlier decision that the DOE has an unconditional duty to begin accepting SNF by January 31, 1998.

Neither the DOE nor the Utilities were satisfied with this decision. The DOE was still being held to the 1998 deadline, and the Utilities were being forced to submit to dispute resolution under the contract. For these reasons, the DOE and the Utilities petitioned for a rehearing.¹¹⁶ The petitions were denied on May 5, 1998.¹¹⁷ Then in September 1998, both the Utilities and the DOE petitioned the U.S. Supreme Court for certiorari.¹¹⁸ The petitions were denied on November 30, 1998.¹¹⁹

108. 10 C.F.R. § 961.11, Art. XVI (2001).

109. *Northern I*, 128 F.3d at 759.

110. *Id.* at 758.

111. *Northern I*, 128 F.3d at 758.

112. *Id.* at 759-60.

113. *Northern I*, 128 F.3d 754, 759-760 (D.C. Cir. 1997). Article IX of the contract states:

Neither the Government nor the Purchaser shall be liable under this contract for damages caused by failure to perform its obligations hereunder, if such failure arises out of causes beyond the control and without the fault or negligence of the party failing to perform . . . such as acts of God, or of the public enemy, acts of Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unusually severe weather.

114. *Id.* at 760.

115. *Northern I*, 128 F.3d at 760.

116. *Yankee Atomic Electric Co. v. United States*, 42 Fed. Cl. 223, 229 (Fed. Cl. 1998).

117. *Id.*

118. *Department of Energy v. Northern States Power Co.*, 525 U.S. 1016 (1998); *Michigan v. Dept. of Energy*, 525 U.S. 1015 (1998).

119. *Id.*

The January 31, 1998, deadline had passed and no SNF had moved from the Utilities' on-site facilities. Since the D.C. Circuit Court decision in *Northern I* did not afford an adequate remedy¹²⁰ for the Utilities, the Utilities filed two separate suits in the Federal Claims Court.¹²¹ The main reason for filing two separate suits was due to the cessation of operations by Yankee Atomic Electric Company (*Yankee*) prior to the April 3, 1983 date; while the other Utilities (represented by *Northern II*) had ongoing electricity production and thus paid more into the NWF.¹²²

On February 18, 1998, Yankee filed a four-count complaint and motion for summary judgment.¹²³ The four counts included: Count I: the DOE's breach of express duty to dispose of waste by the January 31, 1998 deadline; Count II: the DOE's implied duty to perform in good faith; Count III: the DOE's failure to begin disposal amounted to a taking of Yankee's property, requiring just compensation; and Count IV: the DOE's violation of the NWPA causing an illegal exaction of SNF storage costs from Yankee.¹²⁴ Before deciding these counts, the court first established: "[i]t is undisputed that Yankee has paid all the contract fees and, . . . [the] DOE has not begun accepting, transporting, and disposing of Yankee's SNF. Accordingly, [the] DOE has breached the contract."¹²⁵

Based on the assumption that the DOE had actually breached the contract, the question to be determined was whether the dispute resolution provision was appropriate and binding. The court sought to determine this issue by questioning whether the event which caused the breach arose "under" the contract.¹²⁶ The court defined disputes arising "under" the contract as disputes where:

complete relief is available under a specific provision of the contract A corollary principle is that, to the extent complete relief is not made available under a specific contract provision, a controversy is not subject to administrative determination via the Disputes clause and may be tried de novo in the proper court.¹²⁷

Therefore, the court found that if the dispute provision of the contract was inadequate to bring about complete relief for the Utilities' problems caused by the breach, the Utilities were free to seek other remedies in court.¹²⁸ The court then tested each count to find whether it arose "under"

120. The D.C. Circuit supported the dispute resolution provision of the contract, but, for reasons which will be discussed later, the dispute resolution provision was considered inadequate.

121. *Yankee*, 42 Fed. Cl. 223; *Northern States Power Co. v. United States (Northern II)*, 43 Fed. Cl. 374 (Fed. Cl. 1999).

122. *Northern States Power Co. v. United States (Northern III)*, 224 F.3d 1361, 1367 (Fed. Cir. 2000). April 3, 1983, was the date utilities would begin paying ongoing fees into the NWF.

123. *Yankee Atomic Electric Co. v. United States*, 42 Fed. Cl. 223, 229 (Fed. Cl. 1998).

124. *Id.* at 225.

125. *Yankee*, 42 Fed. Cl. at 235.

126. *Id.* at 230.

127. *Yankee*, 42 Fed. Cl. at 230 (internal citations omitted).

128. *Id.* at 230.

the contract.¹²⁹

The court considered Yankee's first count, which alleged that the DOE breached an express duty to dispose of waste by January 31, 1998. The court looked at the statute and found that the plain language of the clause covers "any delay" in the taking of SNF.¹³⁰ Since the language is so broad, the DOE's delay in accepting the SNF would be covered by the contract. "Therefore, [the contract] will convert Yankee's breach claim into a claim arising under the contract if an adjustment is available under the clause which affords Yankee complete relief."¹³¹ While the remedy put forth by the contract was an adjustment of fees for prospective charges, it did not allow any adjustments for fees already paid.¹³² Since the Yankee plant had previously shut down, it had already paid all the fees required of it.¹³³ The court found that since the contract did not provide an adequate remedy in its dispute resolution section, Yankee's claim did not arise "under" the contract.¹³⁴ Therefore, Yankee's motion for summary judgment on count I was granted.¹³⁵

The court denied the DOE's motion to dismiss Counts II and III. It held that since the contract's dispute resolution section did not "cover or redress a breach of implied duty of good faith and fair dealing," Count II did not arise under the contract and was available for judicial review.¹³⁶ Similarly, Yankee's third Count (governmental taking) was not covered by the dispute resolution section and was therefore also redressable by a remedy of the court.¹³⁷

Yankee's final count alleged an illegal exaction when the DOE violated the NWPA by not taking its SNF.

Illegal exaction jurisdiction will lie in cases where a "plaintiff has paid money over to the Government, directly or in effect, and seeks return for all or part of that sum" that "was improperly paid, exacted or taken from the claimant in contravention of the Constitution, a statute, or a regulation."¹³⁸

The court found the claim failed because the DOE's duty was contractual rather than statutory.¹³⁹ While the DOE's failure to dispose of the SNF breached the contract it did not violate any statutory duty. Therefore, the court granted the DOE's motion to dismiss on Count IV.¹⁴⁰

129. *Yankee Atomic Electric Co. v. United States*, 42 Fed. Cl. 223 (Fed. Cl. 1998).

130. *Id.* at 231.

131. *Yankee*, 42 Fed. Cl. at 232.

132. *Id.* at 234.

133. *Yankee*, 42 Fed. Cl. at 234. Since the Yankee plant shut down before April 7, 1983 it was only required to pay a one-time fee for a percentage of electricity produced up until the point at which it shut down. Therefore, Yankee was not making ongoing payments that could be adjusted.

134. *Id.* at 235.

135. *Yankee Atomic Electric Co. v. United States*, 42 Fed. Cl. 223, 236 (Fed. Cl. 1998).

136. *Id.* at 236.

137. *Yankee*, 42 Fed. Cl. at 236.

138. *Id.* at 237. (quoting *Bowman v. United States*, 35 Fed. Cl. 397, 400 (1996)).

139. *Yankee*, 42 Fed. Cl. at 237.

140. *Id.*

This suit was largely successful because Yankee was freed from the DOE's cumbersome dispute resolution procedures. It also made the DOE liable for not taking the SNF by the deadline. Unfortunately, Yankee's wish to have the DOE take its SNF was not advanced because the court stopped short of ordering the DOE to begin disposing the SNF.¹⁴¹

Four months after Yankee filed its claims, several other Utilities filed claims in the same court under a different judge.¹⁴² The facts of *Northern II* vary only slightly from those in the *Yankee* case. Whereas *Yankee* paid only one-time fees to the NWF before dismantling its facilities, the Utilities in *Northern II* consisted of plants, which continued to produce electricity and therefore have continued to pay fees to the NWF.¹⁴³ Although the facts in these two cases were very similar, the *Yankee* court focused its reasoning on the adequacy of the dispute resolution provision of the contract, and the *Northern II* court based its conclusion on what was intended in the Delay Clause of the contract.¹⁴⁴ The courts formed opposite conclusions in the two similar cases by focusing on different issues and using different lines of reasoning.

In *Northern II* several Utilities filed a complaint and motioned for summary judgment based on the DOE's failure to take SNF in 1998.¹⁴⁵ Northern States claimed that the DOE's failure to take SNF from its plant was causing it to incur substantial costs for the extended on-site storage of SNF.¹⁴⁶ It also claimed that its current on-site storage facilities would be full in 2007, at which time it would have to invest more money to develop more storage sites or be forced to shut down.¹⁴⁷

Northern States presented two counts: (1) partial breach of contract and (2) breach of implied covenant of good faith and fair dealing.¹⁴⁸ The court combined these two counts finding that the facts did not support having both.¹⁴⁹ The DOE countered these claims asserting: "Northern States must exhaust its contract remedies before seeking relief in court."¹⁵⁰ To support its claim, Northern States made several arguments, discussed in detail below.

Northern States first argued that the DOE's delay in taking SNF is not the type of delay comprehended by the contract.¹⁵¹ According to Northern States, the clause in the contract spoke to delays which arose after performance by the DOE had begun.¹⁵² Therefore, since performance had

141. *Yankee Atomic Electric Co. v. United States*, 42 Fed. Cl. 223, 237 (Fed. Cl. 1998).

142. *Northern States Power Co. v. United States (Northern II)*, 43 Fed. Cl. 374 (Fed. Cl. 1999).

143. *Id.* at 376.

144. *Northern II*, 43 Fed. Cl.

145. *Id.*

146. *Northern II*, 43 Fed. Cl. at 380.

147. *Id.*

148. *Northern II*, 43 Fed. Cl. 374, 380-1 (Fed. Cl. 1999).

149. *Id.* at 388.

150. *Northern II*, 42 Fed. Cl. at 381.

151. *Id.*

152. *Northern II*, 42 Fed. Cl. at 382-3.

never actually started, the Delay Clause would not govern this situation. The court rejected this reading and instead favored the DOE's interpretation of the contract. "Taken at face value, the words 'any delay in the delivery, acceptance or transport of SNF' include[d] not only delays during performance but also delays preceding the commencement of performance."¹⁵³

The court also disagreed with Northern States' second argument.¹⁵⁴ The utility asserted that even if the delay in taking the SNF was intended in the delay clause, it would be inappropriate to resolve the issue in the dispute resolution section of the contract because of the magnitude of the delay.¹⁵⁵ The projected twelve-year delay in performance was so brazen, Northern States contended, the delays provision should not apply.¹⁵⁶ Again the court considered the wording of the contract. It found that the use of the word "any," when referring to the types of delays, was broad enough to include the projected twelve-year gap between contracted date of performance and that of actual performance.¹⁵⁷

Another argument put forth by Northern States was very similar to one posed by *Yankee* in the *Yankee* case. It asserted that the contract could not decide the remedies for this dispute because they were inappropriate and incomplete.¹⁵⁸ The remedy proposed in the contract would deduct costs, which Northern States would incur from storing SNF during the delay, from fees paid into the NWF.¹⁵⁹

This remedy, [Northern States] maintains, is inadequate because, under the act's requirement of full cost recovery, [the] DOE would be obligated to increase purchaser fees in order to insure the [NWF]'s sufficiency to meet program expenditures. . . . In short, [Northern] would end up funding its own equitable adjustment. Such a remedy, [Northern] contends, is no remedy at all.¹⁶⁰

The court did not accept this argument. It concluded that since the contract, including its remedies section, was created after an extensive notice and comment period and that both parties agreed to its terms, it should be binding on the parties.¹⁶¹

The final argument presented by Northern States was that since remedies provided in the contract are inadequate, the claim for breach of contract does not arise under the contract.¹⁶² The court responded to this by suggesting "a claim is said to 'arise under' the contract where the con-

153. *Id.* at 383.

154. Northern II, 43 Fed. Cl. 374, 384 (Fed. Cl. 1999).

155. *Id.* at 383.

156. Northern II, 42 Fed. Cl. at 383.

157. *Id.* at 384.

158. Northern II, 42 Fed. Cl. at 385.

159. *Id.*

160. Northern II, 43 Fed. Cl. 374, 385 (Fed. Cl. 1999).

161. *Id.* at 385-6.

162. Northern II, 42 Fed. Cl. at 385-6.

tract contains 'some substantive contract provision [that] authorizes the granting of a specific type of relief [for the particular injury in question].'"¹⁶³ The court held that the effectiveness of the remedy does not matter as long as the language "addresses the specific contingency" to which the claim relates and "specifies the adjustment" to be provided.¹⁶⁴ Based on the courts findings, any claim would "arise under" the contract as long as these two conditions were met, regardless of the appropriateness of the remedy.¹⁶⁵ This finding by this court was very different than the court in *Yankee*, where the court ultimately found very little to "arise under" the contract and certainly not any of the claims presented by the Utilities.¹⁶⁶

The claims presented by Northern States did not persuade the court. Therefore, the court granted the DOE's motion to dismiss. More importantly, it ordered Northern States to submit to the DOE's dispute resolution procedures.¹⁶⁷

Yankee and *Northern II* had very similar facts and were decided in the same court (by different judges) at roughly the same time. Despite these similar elements, the holdings in each were completely opposite. These conflicting decisions led the Federal Circuit Court of Appeals to decide these cases together upon appeal there in 2000.

III. RECENT DECISIONS

While the court presented two separate decisions in *Maine Yankee* and *Northern III*,¹⁶⁸ the cases were decided simultaneously by the same judges. The court felt the disparity in decisions from the lower court needed to be resolved and found: the "factual difference between the two cases [did] not warrant a different outcome . . ."¹⁶⁹ Essentially, the differences in the facts of the two cases were not significant factors in deciding the important issues. Therefore, this analysis of the *Maine Yankee* and *Northern III* decisions will examine the court's finding in the two cases simultaneously.

The court first concluded the issue of whether the Utilities were required to submit to the dispute resolution section of their contract had not been resolved.¹⁷⁰ In *Indiana Michigan*, it was clearly established that the DOE was responsible for disposing of the Utilities waste and would be in breach if, by the January 31, 1998 deadline, it had not begun to perform.¹⁷¹ While the DOE's duty to take SNF by the deadline was reaffirmed in

163. *Id.* at 386.

164. *Northern II*, 42 Fed. Cl. at 386.

165. *Id.*

166. *Yankee Atomic Electric Co. v. United States*, 42 Fed. Cl. 223 (Fed. Cl. 1998).

167. *Northern II*, 43 Fed. Cl. 374, 386 (Fed. Cl. 1999).

168. *Maine Yankee Atomic Power Co. v. United States (Maine Yankee)*, 225 F.3d 1336 (Fed. Cir. 2000); *Northern States Power Co. v. United States (Northern III)*, 224 F.3d 1361 (Fed. Cir. 2000).

169. *Northern III*, 224 F.3d at 1367.

170. *Maine Yankee*, 225 F.3d at 1340.

171. *Indiana Michigan Power Co. v. Dept. of Energy*, 88 F.3d 1272 (D.C. Cir. 1996).

Northern I the appropriate remedy became clouded when the court found that the Utilities must submit to dispute resolution under the contract. The question of whether the Utilities' remedies should derive from the contract or the court reached its height of ambiguity when two judges from the same court reached opposite conclusions.¹⁷² Therefore, the court's decision focused on resolving this issue.

The court began by addressing the decision in *Northern I*. In response to the Utilities' motion for a writ of mandamus, the court in that case stated: "the remedy of mandamus is a drastic one, to be invoked only in extraordinary situations. Mandamus is proper only if . . . there is no other adequate remedy to plaintiff."¹⁷³ The court in the present case found that the lower court's statements did not attempt to explain whether the remedies under the contract were adequate only that they were "potentially" adequate.¹⁷⁴ Concerning the lower court's holding the court stated:

The court's concern was whether there was an alternative potential remedy available that made mandamus inappropriate; it held that there was. It was not required to, and did not determine the precise scope of that remedy "[I]t was simply the existence of those remedies as opposed to any determination regarding the completeness of the relief they afforded"¹⁷⁵

The court reasoned that the broad language of the lower court's opinion must be read in light of all the issues.¹⁷⁶ For this reason it found that the lower court's decision could not "properly be interpreted as a holding that the Utilities were precluded from suing the government for breach of contract by the contract's administrative disputes resolution provision."¹⁷⁷

The DOE argued the dispute resolution procedure was appropriate because of the contract's Delay Clause.¹⁷⁸ It claimed that use of the words "any" and "acceptance" was broad enough to include the events which lead to its breach.¹⁷⁹ Therefore, the DOE argued failure on its part to begin disposing of SNF by the deadline constituted a "delay" and thus required the Utilities to submit to the "equitable adjustment" as provided in

172. Judge Merow, in *Yankee*, found Yankees' claims to be outside the reach of the contract and granted summary judgment for the Utilities. Judge Wiese in *Northern II*, found that the Utilities claims were appropriately addressed by the contract remedies and dismissed in favor of the DOE. *Yankee Atomic Electric Co. v. United States*, 42 Fed. Cl. 223 (Fed. Cl. 1998); *Northern II*, 43 Fed. Cl. 374 (Fed. Cl. 1999).

173. *Northern III*, 224 F.3d 1361, 1366 (Fed. Cir. 2000).

174. *Id.* at 1366-1367.

175. *Northern III*, 224 F.3d at 1366-7.

176. *Id.* at 1367.

177. *Northern III*, 224 F.3d at 1367.

178. *Maine Yankee Atomic Power Co. v. United States*, 225 F.3d 1336, 1341 (Fed. Cir. 2000). The Delay Clause states:

In the event of any delay in the delivery, acceptance or transport of [SNF] to or by [the] DOE caused by circumstances within the reasonable control of either the Purchaser or [the] DOE or their respective contractors or suppliers, the charges and schedules specified in this contract will equitably adjust to reflect any estimated additional costs incurred by the party not responsible for or contributing to the delay.

179. *Id.*

the contract.¹⁸⁰ The court responded to this argument by stating: “Although this may be a possible interpretation and application of the provision, it is neither plausible nor persuasive, and certainly is not preferred.”¹⁸¹ The court disagreed with the DOE’s interpretation, finding the language used in the contract was not broad but rather very limited.¹⁸² The Delay Clause spoke of specific kinds of delays such as those “in the delivery, acceptance or transport of nuclear waste.”¹⁸³ These were delays which would arise after performance had already begun.¹⁸⁴ The court found the DOE’s breach was much broader than the delays expressed in the contract.¹⁸⁵ It supported this finding by noting Congress specifically required that the January 31, 1998, deadline be expressed in every contract because it was such an important facet of the agreement.¹⁸⁶ Ultimately, the court concluded: “[t]he breach involved all the Utilities that had signed the contract – the entire nuclear electric industry. The language of the avoidable delays provision of the contract cannot properly be read to cover Yankee’s claim.”¹⁸⁷

In addition, the court supported its conclusion that the contract remedies were not appropriate, especially in the case of *Maine Yankee*, because they would not adequately compensate the Utilities for the damages being suffered from the DOE’s breach.¹⁸⁸ This is because the contract’s system of adjusting fees “would provide virtually no basis for compensating Yankee for any damages it may have sustained from the [DOE]’s failure to perform its contractual obligations” because there was no specific date at which the Utilities could expect the DOE to begin disposing of SNF.¹⁸⁹

The court decided that the Utilities were not required to submit to the remedies afforded by the contract and could therefore seek judicial review of the DOE’s actions. The court affirmed the lower court’s decision in *Yankee* and reversed the lower court’s decision in *Northern II*.¹⁹⁰ While the court brought uniformity to the string of cases dealing with the DOE’s breach and announced that the courts could apply a remedy, it did not comment on what that remedy should be.

A. Subsequent History

While there has been some legal maneuvering by the Utilities and the DOE since the *Maine Yankee* and *Northern III* decisions, little actual

180. *Maine Yankee*, 225 F.3d at 1341.

181. *Id.*

182. *Maine Yankee*, 225 F.3d at 1341.

183. *Id.*

184. *Maine Yankee Atomic Power Co. v. United States*, 225 F.3d 1336, 1341 (Fed. Cir. 2000).

185. *Id.*

186. *Maine Yankee*, 225 F.3d at 1342.

187. *Id.*

188. *Maine Yankee*, 225 F.3d at 1342.

189. *Id.*

190. *Maine Yankee Atomic Power Co. v. United States*, 225 F.3d 1336, 1343 (Fed. Cir. 2000); *Northern III*, 224 F.3d 1361, 1367 (Fed. Cir. 2000).

headway has been made toward a legal solution to this issue.

Another utility, Consolidated Edison Company of New York (Consolidated Edison), filed an individual claim against the DOE based on similar facts as those of the Utilities. After its case was dismissed in April 1999, Consolidated Edison petitioned the U.S. Supreme Court for certiorari.¹⁹¹ That petition was denied March 6, 2000.¹⁹² While the Supreme Court has discretion to review *Northern* or *Maine Yankee's* case upon petition, its denial of *Consolidated Edison* makes it appear highly unlikely that would occur.

The Federal Circuit court denied rehearing of the *Maine Yankee* or *Northern III* cases on December 12, 2000. This decision insured the Utilities next avenue of relief to be back in the Federal Claims Court.

The denial of rehearing in *Maine Yankee* and *Northern III* left to the Federal Claims Court the duty of awarding damages. These cases also opened the door for other Utilities to file lawsuits. In December, after the rehearing was denied in the Federal Circuit Court, the Federal Claims Court reopened the *Northern III* case.¹⁹³ The Utilities motion for summary judgment was granted in July 2001.¹⁹⁴ Currently the court is deciding what appropriate damages should be awarded, but a final decision is not expected in the near future.¹⁹⁵ In *Maine Yankee*, the DOE motioned on January 9, 2001, to reassign all nuclear waste disposal cases to a single judge.¹⁹⁶ As the legal wrangling goes on, little is actually being accomplished toward finding a final solution. While it appears the Utilities have ultimately won their lawsuits against the DOE, a large award of damages will present additional complications.

B. Further Complications

An award of monetary damages by the court will resolve very little and would actually present new problems for both the Utilities and the DOE. Most of the Utilities would prefer performance by the DOE rather than monetary damages. When the Utilities developed their on-site storage facilities for SNF, the facilities were expected to be temporary and therefore small.¹⁹⁷ They were built in reliance on the DOE's promise to begin disposing of SNF. As these on-site facilities became more crowded with radioactive material, state governments began to fear that these facilities might become permanent waste dumps. In response to this fear, many state governments began passing legislation severely restricting the size

191. *Consolidated Edison Co. of N.Y. v. Dept. of Energy*, 68 U.S.L.W. 3327 (2000)(lower court's decision unpublished).

192. *Id.*

193. Telephone Interview With Court Clerk, U.S. Federal Claims Court (Oct. 5, 2001). [hereinafter Oct. 5 Interview].

194. *Id.*

195. Telephone Interview With Court Clerk, U.S. Federal Claims Court. (Feb. 19, 2002).

196. Oct. 5 Interview, *supra* note 193.

197. H.R. REP. NO. 105-290, pt. 2, at § 702(III)(1997).

and amount of SNF that could be kept on-site. "A 1994 state law, passed by Minnesota legislators who were aggravated by the federal energy agency's constant delays, bars Prairie Island from maintaining more than 17 outdoor casks at the plant site."¹⁹⁸ As SNF continues to fill the limited storage facilities, Utilities fear the inevitable. Limited by the state regulations and with no assistance by the federal government, Utilities will be forced to shut down nuclear power plants when their storage facilities become full.

Prairie Island is slowly running out of storage space for its nuclear waste. By 2007, the company could be forced to shut down the lucrative, 26-year-old plant, which provides 20 percent of the electricity that Northern States Power sells to its 1.5 million customers in five Midwestern States.

[C]ompany President James J. Howard said . . . [t]he [DOE]'s delays, . . . "have jeopardized the future of the entire nuclear power industry."¹⁹⁹

The problem of SNF disposal could compound into a much larger one if nuclear power plants around the country begin shutting down. By 2010, it is predicted that eighty reactors will reach storage capacity and be forced to shut down.²⁰⁰

The court's award of damages to the Utilities could be disastrous for the DOE. Damages may include fees the Utilities have already paid into the NWF, interest on those fees, and costs incurred by the Utilities in maintaining interim storage facilities on-site. The estimates of these damages are staggering. It has been predicted that damages could reach from fifty to eighty billion dollars.²⁰¹ It is unclear whether these funds could be taken directly from the NWF, because of statutory reasons, or if they would have to come from the federal government's general budget.²⁰² Either way, the development of the Yucca Mountain repository would definitely be slowed if not halted. This would in turn multiply the problems facing the Utilities' lack of storage space. Therefore, while monetary damages would be very problematic, the court is likely to grant this type of damages because of its fear of getting too involved this hot political issue.

IV. ALTERNATIVE SOLUTIONS

As litigation continues, other avenues of relief are also being sought. On July 19, 2000, the DOE reached a settlement agreement with PECO Energy Company (PECO).²⁰³ The agreement required the DOE to take title to PECO's waste and storage facility, therefore relieving the utility of

198. Margaret Kriz, *Mountain of Trouble*, 31 NAT'L J. 2543, ¶ 2 (1999).

199. *Id.* at ¶ 3, 8.

200. H.R. REP. NO. 105-290, pt. 2, at § 702(III)(1997).

201. H.R. REP. NO. 106-98 § 302 (Litigation)(1999); *Energy Secretary Hopes for Waste Pact This Session*, LAS VEGAS R./J., Mar. 9, 2000, at 4a.

202. Public Health and Welfare, 42 U.S.C. § 10222 (2001).

203. Congressional Brief, *supra* note 3, at ¶ 21.

pressure from state regulations because the waste would become property of the federal government.²⁰⁴ The DOE also allowed PECO to keep up to eighty million dollars in fees over the next ten years that it would have paid into the NWF.²⁰⁵ In return, PECO agreed not to sue the DOE for missing its January 31, 1998 deadline.²⁰⁶ While many Utilities oppose this type of agreement, fearing that the federalized waste would never be moved from the sight, the "DOE said others are considering similar settlement."²⁰⁷

There have also been several attempts on Capital Hill to find a solution. While there have been no stand-alone nuclear waste bills introduced, some bills have contained provisions aimed at bringing about a resolution.²⁰⁸ The Securing America's Future Energy Act of 2001 (H.R. 4), introduced July 27, 2001, included a provision to establish a SNF recycling research and development program to explore options of reprocessing SNF.²⁰⁹ Opponents of the provision reiterated concerns about violating current nonproliferation policy.²¹⁰ With the recent terrorist attacks and the fear of nuclear terrorism, it is doubtful that a provision of this nature would survive congressional scrutiny.²¹¹

Interim storage has been a much talked about option for displacing the SNF until the Yucca repository is available. Interim storage has been evaluated in two forms, building a federal off-site facility at Yucca, or allowing a privately owned facility to operate in Utah.

The 106th Congress introduced a bill in April 1999 (H.R. 45), that would mandate interim storage and modify the licensing standards of the Yucca repository to allow the development of a temporary storage site at the Yucca facility to store SNF until the facility is completed.²¹² H.R. 45 passed on March 22, 2000, and was sent to the President.²¹³ President Clinton vetoed the bill a month later due to concerns that the Yucca area had not been adequately studied as a safe place to dispose of, or store the waste.²¹⁴ The Senate fell three votes short of the votes needed to override

204. *Id.*

205. Congressional Brief, *supra* note 3, at ¶ 21.

206. *Id.*

207. Congressional Brief, *supra* note 3, at ¶ 21.

208. *Id.* at ¶ 23-33.

209. Congressional Brief, *supra* note 3, at ¶ 27. It allotted \$10 million for this program.

210. *Id.*

211. The fear of terrorist capturing plutonium for use in a nuclear weapon was substantiated when several green peace activists evaded thirty French marine commandos in five boats and came along side a freighter carrying recycled SNF in the form of plutonium. The activists protested for half an hour before being arrested. Nuclear Press Releases, *Greenpeace Activists Arrested in Sea-Based Protest Against Loading of Japanese Plutonium Fuel*, (Jan. 19, 2001) available at <http://www.nuclearpressreleases.org/pressreleases/nuctrans/2001jan19.html>; see also Congressional Brief, *supra* note 3, at ¶ 51.

212. Congressional Brief, *supra* note 3, at ¶ 29.

213. *Id.* at ¶ 32.

214. Congressional Brief, *supra* note 3, at ¶ 30, 33.

the veto.²¹⁵ Since H.R. 45's defeat, no legislation has been introduced proposing an interim storage facility.

Several Utilities have sought interim storage in the private sector. "A utility consortium signed an agreement with a Utah Indian Tribe on December 27, 1996, to develop a private spent fuel storage facility on tribal land."²¹⁶ This facility would be located on the reservation of the Skull Valley Band of Goshute Indians, approximately seventy miles southwest of Salt Lake City.²¹⁷ The facility would not require any assistance or approval from the DOE, Congress, or state authorities.²¹⁸ The venture has received a great deal of opposition by the state of Utah, but it appears the Goshutes' sovereignty surpasses state authority.²¹⁹ While this option does have the potential to alleviate some of the constraints placed on the Utilities' ever shrinking storage facilities, it is at best another temporary solution to a much larger dilemma.

V. CONCLUSION

Nuclear waste disposal is a problem that will not go away for at least ten thousand years.²²⁰ The federal government attempted to deal with the issue when it passed the NWPA in 1982. Twenty years later the problem still exists and no SNF has moved any closer to being permanently disposed of. While President Bush has approved and recommended Yucca Mountain to Congress, a veto by the state of Nevada is certain. Legal challenges by the state of Nevada have already ensued and are sure to slow the process even more.²²¹ Assuming that Congress, will and can, overcome the Nevada's veto,²²² it is far from certain that the NRC will approve the DOE's application for construction.²²³ Even if Yucca Mountain does pass the NRC reviews, the earliest construction could begin is 2005.²²⁴

The Utilities, affected the most by the delay, brought suit as their only means of relief. After a long string of cases, *Maine Yankee* and *Northern III* confirmed the DOE's duty to perform. It appears though, that in place

215. *Id.* at ¶ 33.

216. Congressional Brief, *supra* note 3, at ¶ 55.

217. *Id.* "The initial lease for the site would run for 25 years, with possible renewal for another [twenty-five] years. The facility's capacity would be 40,000 metric tons . . ." of SNF.

218. Congressional Brief, *supra* note 3, at ¶ 55.

219. *Id.*

220. Congressional Brief, *supra* note 3, at ¶ 35.

221. Matthew L. Wald, *Bury the Nation's Nuclear Waste in Nevada, Bush Says*. N.Y. TIMES, Feb. 16, 2002.

222. *Id.*

Yucca Mountain was chosen by Congress in 1987 on a largely bipartisan vote. Lately, however, . . . Yucca Mountain is developing as a partisan issue, with Democrats seeking to portray it as another assault by the Bush administration on the environment and the Republicans arguing that its selection fills a federal obligation to take the waste, cuts risk and improves energy security, too, by allowing the nuclear industry to keep operating.

223. DEPARTMENT OF ENERGY, *supra* note 71.

224. Congressional Brief, *supra* note 3, at ¶ 55.

of performance the court will require monetary damages. This solution is as dysfunctional as the one attempted in the NWPA. Unfortunately though, while the Utilities wait for a permanent repository they draw closer to the day when they will be forced to shut down. Utilities, state, and federal authorities must work together in fashioning a solution to this pressing problem before the only light visible at nuclear power plants is the radioactive glow of decayed uranium.

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