The Time Has Come For The Government To Develop and Implement a Transportation Plan For Yucca Mountain

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I. INTRODUCTION

This article will explore the twenty-year debate over the Yucca Mountain repository, specifically the issues surrounding the transportation of hazardous waste. The Yucca Mountain Project is a proposed storage site for nuclear waste in the Nevada desert. This article will examine both opponent's contentions as well as the arguments of supporters of this controversial program. As a critical part of any proposed centralized shipment and storage of nuclear waste, the additional constraints imposed on the transportation industry as a result of the terrorist attacks of September 11, 2001, will also be examined.

II. BACKGROUND

In the summer of 2002, Congress voted on the historic Yucca Mountain bill that will no doubt affect all Americans for thousands of years.[1] The Yucca Mountain Project began in 1987 when Congress chose a desolate, uninhabited area in the Nevada desert 100 miles north of Las

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1. Aletheia Gooden, *The 10,000 Year Guarantee: High-Level Radioactive Waste Disposal at Yucca Mountain, Nevada*, 26 ENVIRONS ENVTL. L. & POL'Y J. 95, 110 (2002).

Vegas.[2] This area in Nevada was chosen over spots in three other states as the safest receptacle for all of the nation's nuclear waste.[3] The Department of Energy deemed the desert site suitable after more than fifteen years of analysis;[4] President Bush then subsequently endorsed the Department's recommendation.[5] It is estimated that by the project's conclusion, more than 77,000 tons of nuclear waste will be housed in sealed underground tunnels of the hollowed out volcano called Yucca Mountain.[6]

This project spurned fierce opposition from the state of Nevada along with many environmental groups including the Sierra Club, the U.S. Public Interest Research Group, Physicians for Social Responsibility and several political heavyweights.[7] These critics contend that the nuclear waste should be stored in concrete casks and kept in the existing temporary facilities to avoid transporting this hazardous radioactive material across the rails and highways of this country.[8]

However, the Bush Administration along with the Department of Energy argue that the Yucca Mountain site is the safest and most efficient way to deal with the growing amount of nuclear waste in this country.[9] Yucca supporters contend that the nation must create a central, secure, and remote location for more than 77,000 tons of the most radioactive nuclear waste.[10]

Currently, all of the nation's nuclear waste is stored in over 100 different temporary facilities in 39 states around the country in above-ground storage facilities.[11] Most of this waste is in the form of radioactive rods of uranium pellets that are no longer efficient for nuclear power but will remain radioactive and highly dangerous for thousands of years.[12]

A. Timeline of the Important Events Surrounding the Yucca Mountain Project

1973: Testing began at Yucca Mountain as part of a nationwide

2. 25 Vt. L. Rev. 815, 816-817 (2001).
3. Gooden, *supra* note 1, at 103.
4. Recommendation Notice, 67 Fed. Reg. 9048-50 (Feb. 27, 2002).
5. Gooden, *supra* note 1, at 109.
6. *Id.* at 106.
7. Tom Gorman, *The Nation Ads Aim to Sway Senators on Yucca Dump*, L.A. Times, Apr. 17, 2002, at A22.
8. Gooden, *supra* note 1, at 110-11.
9. Notice, *supra* note 4, at 9051-9052.
10. *Energy Secretary Approves Nevada Site as Nuclear Waste Repository*, 19 No. 21 Andrews Toxic Chemicals Litig. Rep. 13 (Jan. 25, 2002).
11. Notice, *supra* note 4, at 9051.
12. Tom Gorman, *The Nation Nevada Governor Vetoes Nuclear Waste Dump Site Environment: Hauling Spent Fuel to Yucca Mountain is dangerous, Guinn warns. Congress can override the decision,* L.A. Times, Apr. 9, 2002, at A10.

search for a nuclear waste storage site.[13]

1982: Congress ordered the development of a permanent storage receptacle for commercial radioactive waste.[14] The Government promised the nuclear industry it would take responsibility for the storage of nuclear waste.[15] Potential storage sites were being evaluated in Nevada, Texas, and Washington State.[16]

1987: Congress selected Yucca Mountain in Nevada as the lone site to be tested and evaluated.[17]

1994-1996: The Department of Energy was sued by the nuclear industry because it would not meet the 1998 deadline for accepting nuclear waste.[18] A Federal Court held that the government was liable if it failed to meet the deadline.[19]

2001: The Department of Energy estimated that the cost for research, construction, operation, and the 100-year monitoring of the Yucca Mountain site would probably exceed $58 billion.[20]

Feb. 2002: The Bush Administration endorsed the Department of Energy's recommendation of the Yucca Mountain Site and will apply for a permit in 2004 to begin construction from the nuclear Regulatory Commission. The licensing process will probably take up to four years.[21] Assuming a construction permit is granted by the Nuclear Regulatory Commission, the facility is optimistically projected to be completed by 2010.[22]

April 2002: Under a 1982 federal nuclear waste law, the state of Nevada vetoed President Bush's endorsement of Yucca Mountain, leaving Congress to decide this issue.[23]

May 2002: The U.S. House of Represented voted 306-117 to override Nevada's veto.[24]

July 2002: The U.S. Senate followed the house and voted 60-39 to override Nevada's veto.[25] President Bush signed the bill making Yucca

13. Gooden, *supra* note 1, at 101-103.
14. *Id.*at 102.
15. *Id.*
16. *Id.*at 103.
17. *Id.* 103.
18. *Id.* at 106-07.
19. *Id.*at 107.
20. Penelope Purdy, *At Yucca Mountain, Nevada Resists Becoming the Nation's Atomic BURIAL GROUND*, DENV. POST, July 29, 2001, at E.01.
21. Gorman, *supra* note 12.
22. Greg Schneider & Eric Pianan, *Nuclear Dump's Foes Hopeful; Reid, Now No.2 Senate Leader, Organizes Against Yucca Mountain*, WASH. POST, June 13, 2001, at E01.
23. Gorman, *supra* note 12.
24. Gooden, *supra* note 1, at 109.
25. *Nevada Files Constitutional Challenge to Nuclear-Waste Storage Proposal*, 16 No. 21 ANDREW'S GOV'T CONT. LITIG. REP. 8 (February 13, 2003).

Mountain the nation's central nuclear waste repository.[26]

B. Opposition to the Yucca Mountain Project

The intense debate over the safety, the politics, and the details surrounding the Yucca Mountain project has raged for nearly twenty years. Obvious opponents to the project are the politicians from Nevada and their constituents.[27] Nevada and other opponents are concerned about the validity of the testing, the motives of the Department of Energy and the Bush Administration, and the specific details outlining the transportation of the waste and the subsequent storage.[28]

Opponents argue that there are problems with the site itself. Originally, the waste was to be protected by the geological structure on the site; specifically, the rock would protect the environment. Recently however, the Department of Energy has emphasized the need for human engineering focusing on corrosion-resistant canisters to store the waste. Opponents contend that this shift from the protection by the natural environment to an increased need for human engineering means that the site is not appropriate for a project with such potential hazardous risks.[29]

Additionally, opponents are concerned that there is no way for the Department of Energy to estimate what sort of weather and climate changes may occur over the next 10,000 years.[30] Climate can affect the amount of water that may run through Yucca Mountain and reach the tunnels that are housing the radioactive materials.[31] As one example of this, an increase in global warming might increase the amount of rainfall in the area, shifting the position of the rock and allowing more moisture to collect on the canisters, causing corrosion. Opponents fear the potential that increased water levels and canister corrosion will allow waste to seep into the groundwater and contaminate the drinking water.[32]

While the Department of Energy estimates that contaminated water would not reach the surface of the land for at least 500 years, opponents argue that it could happen in as little as 300 years.[33] Opponents such as Robert Loux, executive director of Nevada's Agency of Nuclear Projects, contend that although tests are not complete, the tests that are ongoing

26. Tom Gorman, *The Nation Bush Makes Yucca Mountain Project Official Environment: The President Quietly Signs a Bill Making Nevada Site the Nation's Nuclear Waste Repository*, L.A. Times, July 24, 2002, at A12.

27. Gooden, *supra* note 1, at 116-117.

28. *Id.* at 115-117.

29. Purdy, *supra* note 20.

30. *Id.*

31. *Id.*

32. *Id.*

33. *Id.*

are biased and politically motivated.[34] "I don't think the degree of uncertainty about the site is reaching the people at the top levels," said Frishman. As he continued, "Just 40% of DOE's claims about Yucca Mountain are based on actual data, the rest are expert guesses."[35] Obviously, supporters disagree.

Many opponents believe that once the Department of Energy selected Yucca Mountain as its chosen site, it swept all safety concerns under the rug in order to make the site work.[36] The focus is no longer on analyzing the suitability of Yucca Mountain as a waste repository, but on making the site work at any cost.[37] Opponents also believe that the Department of Energy is trying to prevent the public from learning of all the potential problems and safety concerns in order to meet the government's need to rapidly provide a storage facility to accommodate the growing amount of nuclear waste.[38] Thus, opponents maintain that the motivation for the Yucca Mountain project is politically motivated.[39]

In addition to geologic and climate concerns, opponents also question the capacity of the Yucca Mountain project.[40] The Department of Energy has stated that Yucca Mountain could hold up to 128,000 tons of radioactive waste, despite a 1982 federal law mandating that any permanent waste receptacle must not hold more than 70,000 tons of waste.[41] Some Department of Energy experts believe that the site may hold up to 140,000 tons.[42] Also, the Department of Energy has stated that the design of Yucca Mountain will change and evolve over the next few years to accommodate any changes that may impact safety.[43] This concerns opponents because they only have a vague idea as to what the Department of Energy is actually proposing.[44] Opponents maintain that this gives the Department far too much freedom from scrutiny and regulations.[45] Finally, all of the storage space at Yucca Mountain will be reserved the day it is deemed operational.[46] Opponents question whether the government will try to expand the site or open an independent site elsewhere.[47] There is too much ambiguity and too few concrete answers for the

34. *Id.*
35. *Id.*
36. Penelope Purdy, *Uncertainty over Yucca*, DENV. POST, May 17, 2002, at B.07.
37. *Id.*
38. *Id.*
39. Gooden, *supra* note 1, at 116.
40. Purdy, *supra* note 20.
41. *Id.*
42. *Id.*
43. *Id.*
44. *Id.*
45. *Id.*
46. *Id.*
47. Purdy, *supra* note 20.

opponents.[48]

C. Support for the Yucca Mountain Project

The Yucca Mountain Repository would provide a storage receptacle for thousands of tons of radioactive waste that is currently paralyzing the nation's nuclear power plants.[49] Yucca Mountain would enable the nuclear power plants to free up space to increase America's energy supply.[50] As one newspaper article describes it, "[n]uclear power provides 20% of the nation's electricity; emits no airborne pollution or greenhouse gases; and now gives us one of the cheapest forms of power generation we have. Securing these benefits requires finding a permanent, safe and secure site for nuclear waster."[51]

Supporters argue that there have been ample scientific studies conducted that support the Yucca Mountain project.[52] Since the 1950s, scientists have been conducting experiments to determine the best method for storing waste.[53] The studies included burying the waste in the Artic ice, inserting waste into ocean trenches where it might sink into the earth's mantle, and sending the waste into space.[54] It was determined that burying the waste into geologic rock formations was the most effective method.[55]

Additionally, the Department of Energy has spent over $7 billion to ensure the Yucca Mountain site is suitable.[56] The Department contends that Yucca Mountain will meet strict EPA standards even under extreme conditions such as an earthquake or any volcanic activity.[57] Also, the climate and its characteristics are an advantage to the project.[58] The water table is more than 2000 feet below the surface, so the storage facility could reach as far as 1000 feet down, minimizing the possibility that any contaminants could reach the surface and eliminating any need for pumping out water.[59] Further, the arid climate supports the project. The area receives less than seven inches of rainfall per year and at least 95% of that moisture evaporates.[60] Thus, supporters argue that Yucca Moun-

48. *Id.*
49. Notice, *supra* note 4, at 9051.
50. *Id.* at 9061.
51. Spencer Abraham, *One Safe Site is* Best, Wash. Post, March 26, 2002, at A19.
52. Notice, *supra* note 4, at 9051.
53. *Id.* at 9051.
54. *Id.*
55. *Id.*
56. Purdy, *supra* note 20.
57. Abraham, *supra* note 51.
58. Notice, *supra* note 4, at 9059.
59. Gooden, *supra* note 1, at 103.
60. Notice, *supra* note 4, at 9059.

tain is the safest and most suitable site for this repository.

Proponents also maintain that a central repository for the nation's radioactive waste is far safer than the current 100-plus different sites.[61] Yucca Mountain will provide a centralized, secure, and underground receptacle for all of the waste that has been accumulating across America.[62] The threat of contamination will be confined to one heavily monitored site rather than over a hundred sites near populated areas.

II. The Time Has Come For the Department of Energy to Develop and Implement a Transportation Plan for Yucca Mountain

A. Many Government Entities Already Possess the Requisite Regulatory Experience in Handling Nuclear Waste and are Capable of Safely Transporting this Waste Across the Country

The Department of Energy, the Environmental Protection Agency, the Department of Transportation, and the Transportation Safety Administration all have studied and created methods to ensure the safe handling and transport of hazardous materials. The USA Patriot Act, the Department of Transportation's Risk Management Self-Evaluation Framework, certain EPA provisions, and the recent changes to the Transportation Security Administration are recent governmental measures that have been implemented to increase and ensure the safety of the transportation of radioactive waste.

1. USA Patriot Act

On October 26, 2001 President Bush signed into law an Act entitled the "Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001," also known as the Patriot Act.[63] The Act included over one thousand sections and 342 pages.[64]

One section that the Patriot Act focused on was imposing stricter requirements for transporting hazardous materials.[65] First, the Patriot Act placed more stringent requirements on drivers carrying hazardous materials.[66] The Act required background checks including an inquiry of

61. *Id.* at 9050.

62. *Id.* at 9050-9051.

63. USA Patriot Act of 2001, Pub. L. No. 107-56, 115 Stat. 272 (codified as amended in scattered sections of 18 U.S.C.).

64. *Id.*

65. USA Patriot Act of 2001, Pub. L. No. 107-56, 115 Stat 272 (1975) (amended 2001).

66. *Id.*

criminal, immigration and FBI records on all commercial drivers.[67] The checks also will verify that the driver is a U.S. citizen or a lawful permanent resident.[68]

2. *EPA Provisions Concerning the Transportation of Hazardous Materials*

The purpose of the Environmental Protection Agency is to ensure the protection of individual health and the health of the environment.[69] After the events of September 11, 2001, the EPA has joined the Department of Homeland Security in its counterterrorism planning and response activities.[70] The EPA's Criminal Enforcement Program employs a group of engineers, analysts, environmental and computer experts who conduct experiments and investigations concerning terrorist activities.[71] These groups provide "[d]etection of terrorist activities, evaluation of terrorist and counter terrorism activities, investigation of safe operations at crime scenes involving chemicals, toxic substances and toxic materials, and resources to respond to terrorist attacks involving chemical/biological weapons of mass destruction."[72]

In addition to the EPA's Criminal Enforcement Program, the EPA has legislation that helps to ensure the safety of transporting hazardous materials.[73] The EPA's Clean Water Act imposes strict criminal penalties and liability for endangerment for anyone who knowingly releases a hazardous material into the air that puts a person in imminent danger of serious bodily injury or death.[74] Stiff penalties such as fines up to $1,000,000 and imprisonment for up to fifteen years can be imposed for knowing endangerment.[75]

Also, the Chemical Security Act of 2003 requires the EPA to review and monitor high risk facilities included in section 112(r) of the Clean Air Act such as nuclear power plants near heavily populated areas.[76] The EPA must monitor and regulate the risk of contamination by these facilities including the storage of hazardous materials, safety, security, and

67. *Id*

68. *Id.*

69. U.S. Envtl. Protection Agency, *EPA's Role and Authority in Counter Terrorism*, at http://yosemite.epa.gov/oswer/ceppoweb.nsf/content/ct-epro.htm.

70. *Id.*

71. *Id.*

72. *Id.*

73. *See generally,* U.S. Environmental Protection Agency, *Criminal Enforcement: Counter Terrorism, at* http://www.epa.gov/compliance/criminal /homelandsecurity/counter.html.

74. 42 U.S.C. § 7413(c)(5) (2001).

75. *Id.*

76. Chemical Security Act of 2003, 2.157, 108th Cong. (2003).

containment.[77] This legislation highlights the EPA's concern over the safety of these current nuclear storage facilities. The EPA has stated that at least 123 plants each keep amounts of toxic chemicals that, if released, could form deadly vapor clouds that would put more than one million people in danger.[78]

3. The Department of Transportation's Risk Management Self-Evaluation Framework (RMSEF)

RMSEF was developed by the U.S. Department of Transportation to enhance the security of hazardous materials shipments against acts of terrorism or sabotage.[79]

The Department of Transportation has recognized the heightened risk of terrorism surrounding the transportation of hazardous materials and has made its security and safety a priority.[80] RMSEF is a voluntary tool that helps carriers, emergency responders, storage facilities, and government officials manage, evaluate, and safeguard against terrorist attacks.[81]

RMSEF provides a step-by-step process for assessing and reducing security risks when transporting hazardous materials.[82] The initial step is scoping.[83] Scoping involves a facility or carrier identifying its greatest potential threats such as an attack on its radioactive cargo or eliminating driver's license fraud by conducting an intensive employee screening process.[84] Outlining the scope of activities to be considered in terms of safety and security also includes the screening of the shipper, container manufacturer, local emergency response, and law enforcement agencies involved in the security of the hazardous materials transportation process.[85]

RMSEF's second step in the process is knowledge of the operations.[86] This involves collecting detailed information about the quantities of the materials, the handling of the materials, the routes, and the security precautions employed.[87] Having a working knowledge of this information enables facilities to compare their safety procedures with industry

77. *Id.*

78. John Podesta, *Secrecy is a Real Enemy to Us All; True Homeland Security Comes Only From an Informed Public,* ORLANDO SENTINEL, March 16, 2003 at G6.

79. Dep't of Transportation, *Risk Management Self-Evaluation Framework*, at http://hazmat.dot.gov/risk.htm.

80. *Id.*

81. *Id.*

82. *Id.*

83. *Id.*

84. *Id.*

85. *Id.*

86. *Id.*

87. *Id.*

standards and other facilities.[88]

Steps three, four, and five are the assessment of a facility's operations and security risks, the strategy, and action used to address those risks.[89] The assessment includes identifying where potential weaknesses exist in the transportation process.[90] These areas may include employee training, changing routes, or enhancing emergency responses.[91] The strategy involves developing a plan outlining specific preventative actions to reduce risk, and the action is the implementation of that plan.[92]

Steps six and seven include verification and evaluation of the plan developed in step four.[93] Independent inspectors can be requested to evaluate the facility's plan, and any security breaches would then be immediately addressed.[94] The final step, evaluation, determines whether the plan is effective in reducing security risks.[95] A facility's performance logs may provide relevant information such as the incidence of theft or property damage to determine whether improvements have resulted from implementation of the security plans.[96] The National Tank Truck Carriers Association often publishes industry standards regarding safety related information that facilities may compare to their own safety procedures.[97] RMSEF encourages regular evaluations and assessments of existing plans.[98]

4. Changes at the Transportation Security Administration

Created in the wake of September 11, 2001, the Transportation Security Administration was developed by legislation designed to improve airline travel as well as the transportation of commerce.[99] The TSA has struggled to define its mission as to whether it is a law enforcement agency or an agency designed to create new safety plans for transportation.[100] Amid widespread criticism of mismanagement and waste, both Republicans and Democrats are frustrated with the agency's inability to define its goals and manage its costs.[101]

88. *Id.*
89. *Id.*
90. *Id.*
91. *Id.*
92. *Id.*
93. *Id.*
94. *Id.*
95. *Id.*
96. *Id.*
97. *Id.*
98. *Id.*
99. Sara K. Goo, *TSA's Hiring Practices to Be Probed; Homeland Security Office Questions Background Checks*, WASH. POST, May 28, 2003, at E02.
100. *Air Marshals; Confusion at Homeland Security*, STAR-TRIB., August 11, 2003, at 14A.
101. *Id.*

However, the TSA, part of the Department of Homeland Security, was given the difficult task of overseeing and securing the transportation of both the American public and American goods.[102] After the terrorist attacks, no one could appreciate the tall task undertaken by the TSA.[103] Despite its rocky beginnings, the TSA has demonstrated that it is serious in creating and implementing measures that will ensure the safety of transportation.[104] The Department of Homeland Security and the TSA will provide a safer environment for the traveling public and the transportation of commerce.[105] Simply, the increased scrutiny and attention surrounding transportation will promote more precautionary procedures.[106] In this climate of uncertainty over terrorism, the American public will demand nothing less.[107]

Thus, the increasing activities of the Department of Energy, the Environmental Protection Agency, the Department of Transportation, and the Transportation Security Administration demonstrate the government's focus and efforts on ensuring the safe transportation of hazardous materials. The American public must be aware and reassured that the government recognizes the potential dangers and will not enter into the transportation of hazardous materials lightly or unprepared.

B. Waste Consolidation is Already Happening without the Regulationor Scrutiny by the Government

The Yucca Mountain Repository must proceed for other security reasons. Nuclear waste is accumulating at such a rapid rate, that power companies are looking at alternative storage options that are far more dangerous than the federally regulated Yucca Mountain.[108] One option that power plants are considering is multiplying the existing onsite temporary storage.[109] These power plants were designed to generate power, not store waste.[110] So, the temporary storage receptacles that are currently being used are not intended for permanent storage.[111] Accumulat-

102. *Id.*

103. Transportation Security Administration, *TSA's Mission, Vision, and Values,* at http://www.tsa.gov/public/display?theme=7&content=090005198005def5.

104. *Id.*

105. *Id.*

106. *Id.*

107. Air Marshalls, *supra,* note 100.

108. Michael Remez, *Nevada or Bust; Running Out of Room At the Reactors . . . Series: Yucca Mountain of Controversy,* Hartford Courant, June 17, 2002, at A1.

109. Tom Meersman, *Nuclear Waste is Here To Stay; Casks will be at Prairie Island until at least 2038,* Star Trib., April 7, 2003, at 1A.

110. Bob Jefferson, *Yucca Mountain: Is it Safe? Yes; Store Nuclear Waste in One Place,* St. Louis Dispatch, April 20, 2002, at B7.

111. Alfred Meyer, *Destination: Yucca Mountain,* Milwaukee J. Sentinel, July 21, 2002, at 1J.

ing more waste than these temporary storage containers were designed to hold is a disaster waiting to happen.[112] The nuclear industry says that by 2010, 79 of the nation's power plants will be out of space in their cooling pools.[113] Scientists have studied the storage receptacles at Yucca Mountain for over twenty years, and this technology will be far more secure than stuffing these overflowing temporary containers.[114]

Remember, that these power plants are often situated near major cities and waterways, and the degree of security varies widely between each particular facility.[115] After the terror attacks of September 11, 2001, the Nuclear Regulatory Commission ordered power plants to increase their monitoring and security, but there is debate over whether all facilities are complying.[116] Storing the waste 1000 feet underground at Yucca Mountain is preferable to the temporary storage in 39 states.[117] When the waste is placed in specially designed chambers beneath the desert, the radioactive materials provide a much less attractive target that is almost impossible for terrorists to reach.[118] The risk of terror attacks and the further deterioration of the over-stuffed temporary storage facilities far outweigh the risk of transporting and storing this waste into one centralized receptacle.[119]

Additionally, if Yucca Mountain is not opened and the reactors run out of space to store the radioactive waste, the power plants will be forced to shut down.[120] This will leave the taxpaying consumer with higher rates for energy and energy shortages.[121] The time has come for Yucca Mountain.[122] The Department of Energy sums it up by stating that it is the smartest thing to do in the interests of national security and environmental protection.[123] It is a national issue of the utmost urgency as radioactive fuel accumulates.

More frightening than the power companies cramming this radioactive material into temporary containers near large cities is the potential for this waste to be dumped on Indian reservations. Specifically, the Goshute Indian Tribe in Skull Valley, Utah has struck a deal with several

112. Remez, *supra* note 108.

113. *Id.*

114. Jefferson, *supra* note 110.

115. Jim Drinkard, *Cleanup Won't End Nuclear Waste Sites,* USA TODAY, June 25, 2002, at A21.

116. Meersman, *supra* note 109.

117. Jefferson, *supra* note 110.

118. *Id.*

119. *Id.*

120. Michael J. Kolar, *Waste That Won't Go Away: It's Time for Washington To Store Nuclear Leftovers at Yucca Mountain,* PITTSBURGH POST-GAZETTE, August 15, 2001, at A13.

121. *Id.*

122. *Id.*

123. Drinkard, *supra* at note 115.

power companies called Private Fuel Storage to house over 40,000 tons of the nation's nuclear waste until a permanent receptacle is built.[124] Private Fuel Storage and the Goshutes have agreed to store the waste on the reservation until a permanent receptacle opens.[125] The Goshutes are a sovereign nation and the issue of nuclear waste on their reservation is between them, Private Fuel Storage and the Federal Nuclear Regulatory Commission.[126] Utah legislators and residents are understandably upset, but with no control over Indian land, they are left to wait for the Nuclear Regulatory Commission to decide whether to license the Goshute's waste storage facility.[127] If the NRC grants the license, the site could be operational in 2005.[128]

The Department of Energy has spent billions of dollars and over twenty years testing the appropriateness of Yucca Mountain. Because of the delays in building a permanent centralized nuclear waste storage facility, a few nuclear companies and an Indian tribe in Utah are making decisions that will impact the entire country's safety and nuclear waste policy.[129] They are developing a plan to deal with the looming waste-storage crisis.[130] The nation cannot let independent parties control the issue of nuclear waste. The extensive testing and regulations required by the federal government will not be matched by private entities. The government will ensure that a federal waste-storage facility such as Yucca Mountain is far safer than any temporary site on an Indian reservation. Americans cannot afford to wait any longer for Yucca Mountain – our safety and security is at stake.

C. Terrorists' Window is Shrinking

Terrorist attacks are unpredictable, but the terrorists are not going to wait until the nation has approved and constructed a permanent centralized nuclear waste repository. Terrorists will attack the nations' weaknesses, and those weaknesses are the 100-plus different nuclear power plants situated near large metropolitan areas. Although the Nuclear Regulatory Commission ordered these Nuclear power plants to increase their security after the September 11, 2001 attacks, there is no adequate security plan in place. These facilities are in jeopardy now.

124. Martin Kasindorf, *Tribe Seeks Uranium Enrichment; Utah Leaders Fighting Indian Proposal to Store Nuclear Waste on Reservation*, USA Today, August 12, 2002, at A.04.

125. Charles Seabrook, *Utilities Offer Million: Poor Utah Tribe Gambles On Nuclear Waste,* Atlanta Journal-Const., September 22, 2002, at A1.

126. Dan Egan, *Nuclear Waste Plan Divides Poor Tribes in Desolate Land,* Milwaukee J. Sentinel, September 29, 2002, at 1A.

127. Seabrook, *supra* note 125.

128. *Id.*

129. Egan, *supra* note 126.

130. *Id.*

After a recent visit to Prairie Island, a power plant near Minneapolis, Minnesota, a state representative was less than impressed with the presence of security at the plant.[131] Representative Jean Wagenious said that she inadvertently carried a double bladed pocketknife through scanning machines and security screenings.[132] This type of security breach is extremely troublesome in the wake of September 11, 2001. The number of existing nuclear storage facilities makes consistent heavy security very difficult. These 100-plus different known sites are prime targets for terrorists. One centralized facility is much easier to monitor and secure and will decrease the risk of a terrorist attack. Under the current system of different nuclear sites spread throughout the county, the terror threat is high.

III. Waiting for a Viable Transportation Plan is Not a Safe Option

A. The Government Has the Research to Develop a Suitable Transportation Plan

Opponents fear the Department of Energy's plan for transporting the hazardous materials to Yucca Mountain.[133] The Department of Energy plans to transport more than 77,000 tons of nuclear waste from over 78 different temporary sites to Yucca Mountain's permanent storage facility.[134] Opponents believe that thousands of shipments traveling by road and by rail through heavily populated areas threaten to expose millions of people to this highly toxic nuclear waste from an accident or a terrorist attack. As one newspaper columnist described it, "[w]ith over 50,000 nuclear trucks and trainloads moving through our streets, even the government admits nuclear accidents are inevitable."[135] But the biggest concern regarding the transportation of this hazardous material is the Department of Energy's failure to present a detailed transportation plan. The Department feels that it is premature to outline a transportation plan until it completes all of its research and submits its permit request to the Nuclear Regulatory Commission sometime in 2004.[136]

However, it would be foolish for the government to wait to present a transportation plan in light of all of the work that has been done to ensure the safe transportation of hazardous materials. The nation needs to

131. Meersman, *supra* note 109.

132. *Id.*

133. Notice, *supra* note 4.

134. Matthew T. Hall, *San Onofre Power Plant Builds Aboveground Storage Vaults to Keep Used Nuclear Fuel On Site,* San Diego Union-Trib., October 1, 2003 at B1.

135. Tom Gorman, *The Nation Ads Aim to Sway Senators on Yucca Dump*, L.A. Times, April 17, 2002, at A22.

136. *Disclosure of routes to Yucca urged*, San Diego Trib., Oct. 27, 2002, at A5.

hear a long-standing plan, and the government has the resources to outline it. The actions previously discussed by the Department of Energy, the Environmental Protection Agency, the Department of Transportation, and the Transportation Security Administration in section II of this article provide more than enough information to provide the public with a detailed transportation plan. The government is aware of the cost and risks of transporting this waste. The risks of not transporting the waste to Yucca Mountain far outweigh the risks associated with transporting hazardous waste.

B. The Transportation of Hazardous Waste is Safe

Opponents argue that since September 11, 2001 and the increased threat of terrorist activity against the United States, transporting nuclear waste to Yucca Mountain would be dangerous because of potential terror attacks or accidents.[137] However, supporters contend that this nation has been transporting radioactive materials for more than thirty years over 1.6 million miles without any contamination or release of hazardous radiation.[138] Plutonium contaminated waste is shipped daily in the United States.[139] These operations have been carried out with absolute safety and security.[140] People do not realize that highly radioactive materials are routinely shipped across the nation with no incident.[141] Over the past 40 years, there have been over 3000 shipments of nuclear waste by rail and truck without a single instance of contamination.[142]

Further, many more shipments of nuclear waste have occurred abroad. Transporting waste is not a new endeavor; the world has been transporting nuclear waste for many years.[143] As noted in a Washington Post article, "Europe has already safely moved about as much nuclear material from place to place as we expect to ship over the entire active life of the Yucca Mountain project."[144]

Additonal safety enhancements come in the form of special containers called casks developed by the government to contain the waste during shipping.[145] These casks have survived tests that have smashed them into concrete walls at 80 mph and had them being hit by locomotives going up to 120 mph.[146] They have been exposed to extreme temperatures, fire,

137. Gorman, *supra* note 135.
138. Abraham, *supra* note 51.
139. *Id.*
140. Notice, *supra* note 4.
141. *Id.*
142. Jefferson, *supra* note 110.
143. Notice, *supra* note 4.
144. Abraham, *supra* note 51.
145. Kurt Loft, *Taking a Licking*, The Tampa Trib., July 22, 2002.
146. *Id.*

and icy waters and have remained intact.[147] These casks have proven to be virtually indestructible. Thus, the government must implement a specific transportation plan using the new research coupled with the existing methods that have successfully transported waste for over forty years. The current system of relying on temporary storage of nuclear waste in 39 states leaves the nation for more vulnerable than relying on one centralized site.

The Bush Administration and the Department of Energy are urging the public to be patient. They state that this is just the beginning of the process, and they are just "[s]eeking permission to have independent experts at the Nuclear Regulatory Commission objectively and scientifically decide whether to approve construction of the repository. That will take at least three years and yet more scientific studies."[148] The Department of Energy urges the Yucca Mountain opponents to understand that this problem of waste storage will not vanish, and it is the nation's responsibility to seek a viable solution.[149]

IV. Conclusion

The risks associated with Yucca Mountain are worth the result. Imagine one site containing all of the nation's radioactive waste, freeing up space for increased energy and preventing millions of people from the possible contamination from nearby waste storage. While there is no guarantee that a terrorist attack or an accident would never occur, there is no guarantee that the existing sites will be safe from an attack either. A lone target – a centralized, secure, underground repository with continuous monitoring is far safer than over 100 different targets with varying degrees of security.

Finally, the government has spent in excess of $7 billion over the last 20 years studying the suitability of Yucca Mountain. The licensing process is the next step. Opponents must concede that something must be done to relieve the build-up of nuclear waste, and the Yucca Mountain Project must proceed as a viable and logical solution. There is no perfect, absolutely safe, non-controversial site or solution. However, Yucca Mountain and its concrete tunnels buried deep underground, surrounded by heavy security, and far from population centers is the best that could be found.

147. *Id.*

148. Abraham, *supra* note 51.

149. *See generally,* Abrahams, *supra,* note 51.