

# BACKGROUND

No. 2657 | MARCH 5, 2012

## Obama Administration: No Confidence in Nuclear Energy

*Cornelius Milmoie and Jack Spencer*

### Abstract

*A major public concern about nuclear reactors has been that the spent nuclear fuel could remain stranded at the reactor site indefinitely. In the 1970s, courts prohibited the Nuclear Regulatory Commission from licensing new reactors unless it assured the public that the waste would be removed—a requirement called the “waste confidence” rule. President Obama’s decision to abandon plans for removing the waste to the Yucca Mountain repository in Nevada creates an uncertainty that could be a barrier to the expansion of nuclear power. Two nuclear policy experts argue that the 1982 Nuclear Waste Policy Act provides sufficient confidence that spent nuclear fuel will be removed and, thus, that the waste confidence rule is unnecessary and should be abandoned.*

The Obama Administration and Senate Majority Leader Harry Reid (D–NV) scored a victory in their war against Nevada’s Yucca Mountain as a nuclear-waste repository when the Nuclear Regulatory Commission (NRC) voted in September to dispose of all pending matters in the Yucca licensing case without approving or disapproving the Department of Energy’s application to construct and operate the repository.

By pushing the nation further from a solution for nuclear-waste disposal, the vote also damages the prospects for nuclear energy expansion. Under current practice, the NRC can license new reactors only if it expresses confidence that the spent nuclear fuel (SNF) from the reactors will be disposed at an off-site facility. This requirement is referred to as the “waste confidence” rule.

Recognizing the link between new construction and waste disposal, the NRC’s chairman, Gregory Jaczko, persuaded the NRC to revise the waste confidence rule to reflect an assumption that no waste repository will be built in the foreseeable future. The problem is that this revision undermines the original purpose of the rule, which was to assure the public that nuclear waste would

### TALKING POINTS

- Under current law, the Nuclear Regulatory Commission can license new reactors only if it expresses confidence that the spent nuclear fuel from reactors will be disposed at an off-site facility. This requirement is referred to as the “waste confidence” rule.
- President Obama’s attempt to abandon the Yucca Mountain repository without an alternative undermines the credibility of any such confidence determination.
- The NRC has revised the rule to allow indefinite waste storage at reactor sites—precisely what the original rule was meant to prevent. The revision creates unnecessary uncertainty about the future of nuclear power.
- One way to avoid the uncertainty created by the NRC-revised rule is to abandon the waste confidence rule. It was implemented before the Nuclear Waste Policy Act of 1982, which made the federal government responsible for nuclear waste disposal. This provides adequate confidence that waste will be removed from reactor sites.

This paper, in its entirety, can be found at <http://report.heritage.org/bg2657>

Produced by the Thomas A. Roe Institute for Economic Policy Studies

**The Heritage Foundation**  
214 Massachusetts Avenue, NE  
Washington, DC 20002-4999  
(202) 546-4400 | [heritage.org](http://heritage.org)

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not remain at nuclear reactor sites indefinitely. Specifically, the revised rule:

1. Undermines the credibility of the 1982 Nuclear Waste Policy Act, as amended, and its mandate to complete the Yucca Mountain project;
2. Undermines confidence that any effective nuclear-waste-disposal plan will be implemented;
3. Provides the anti-nuclear movement with an opportunity to slow the expansion of nuclear energy through litigation;
4. Weakens investor and public confidence in nuclear power; and
5. Undermines incentives for government and industry to develop long-term waste-disposal solutions.

Fortunately, there is a way forward. The courts first required the NRC to make a “waste confidence” determination for new reactor licenses in the 1970s, before the U.S. government chose Yucca Mountain as the national repository site. This determination was to provide the public with the NRC’s pre-licensing assurance that nuclear waste from new reactors would not be left at reactor sites indefinitely. When the Nuclear Waste Policy Act (NWPA) became law in 1982, a waste

confidence determination became an unnecessary anachronism because the NWPA mandates that the Energy Department take responsibility for commercial nuclear-waste disposal. Given the confusion that the NRC’s rule revision will cause, Congress should simply acknowledge that the waste confidence rule is irrelevant and that the Nuclear Waste Policy Act alone meets the waste confidence requirements.

### History of the Waste Confidence Rule

As is the case with so many agency regulations, the waste confidence rule was a response to the courts. In the 1960s, the nuclear industry and the U.S. government planned to recycle spent nuclear fuel, like France and the United Kingdom do today. But in the mid-1970s, U.S. government policy changed, banning commercial spent-fuel recycling. As a result, reactor owners had no choice but to store SNF on-site until it could be moved to a geologic repository. The problem is that no such repository was ever licensed or constructed.

Nuclear opponents exploited the uncertainty caused by that policy change. They argued that because there was no program to remove the SNF from reactor sites, the NRC could not license new reactors without studying the environmental impact of perpetual on-site waste storage. They demanded that there be no new reactors until the “waste

issue” was resolved. As a result, 13 states passed legislation banning new nuclear construction.<sup>1</sup>

Federal courts ruled that the NRC could not issue a reactor license unless it either studied the long-term impact of on-site waste storage or expressed confidence as part of its regulatory determinations that SNF would not remain on-site for an extended period of time.<sup>2</sup> The NRC chose to adopt the waste confidence rule and avoid the long-term impact study for each individual site.<sup>3</sup> In adopting the rule, the NRC promised that it would not continue to license reactors if it did not have “reasonable confidence that the wastes can and will in due course be disposed of safely.”<sup>4</sup>

Then, in 1982, Congress enacted the NWPA, which mandated that the Energy Department build a repository and move SNF from reactor sites to the repository. In 1987, Congress chose Yucca Mountain as the site for the repository, subject to an NRC safety review and license. The NWPA provided the Energy Department, the NRC, the courts, and the public with a predictable process for nuclear-waste disposal and the mechanisms to resolve any legal issues that emerge. In essence, the NWPA resolved the waste issue, thus making the waste confidence rule obsolete. Even so, the NRC kept the rule in place, updating it in 1990 to express its confidence that the repository would be available

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1. The states are California, Connecticut, Hawaii, Illinois, Kentucky, Maine, Massachusetts, Minnesota, Oregon, Rhode Island, Vermont, West Virginia, and Wisconsin.

2. See *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519 (1978); *State of Minnesota v. NRC* 602 F.2d 412 (DC Cir. 1979); *Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc.*, 462 U.S. 87 (1983).

3. 10 CFR §51.23.

4. “NRC Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation; Waste Confidence Decision Update; Final Rules,” 10 CFR Part 51 75 Fed Reg. 246, December 23, 2010, p. 81038.

“within the first quarter of the twenty-first century.”<sup>5</sup> The NRC reviewed the availability date again in 1999 and made no changes. Its confidence was well grounded on the obligation of the Energy Department and NRC to implement the NWPA mandate to license and build a repository at Yucca.

However, the waste confidence rule created a linkage between the Yucca license and new reactor license that nuclear opponents could use as a weapon. They could potentially stop the construction of new reactors by stopping Yucca. For 30 years this linkage was all but irrelevant because no utilities were interested in building new nuclear power plants. In 2007, a new wave of reactor license applications arrived at the NRC. Unfortunately, nuclear opponents and Senator Reid had been working for decades to delay the Yucca project. By the time interest had emerged to build new reactors, not only was there no repository, there was no license to build one, either. This lack of progress allows reactor opponents to use the waste confidence rule to block new reactors.

### Jaczkowski Waste Confidence Rule

After 25 years and \$15 billion in pre-licensing activities, the Energy Department filed a license application with the NRC for the Yucca project in 2008. The NWPA required

an NRC decision on the application within three years of filing. During the 2008 presidential campaign, Candidate Barack Obama promised Senator Reid that he would oppose the Yucca project and cut its funding, beginning with his fiscal year 2010 budget.<sup>6</sup> Despite the uncertainty about Yucca in 2009, Gregory Jaczkowski, named chairman by President Obama, urged the NRC to update the waste confidence rule. The NRC initially voted 2 to 1 against updating it.<sup>7</sup> Explaining the majority vote, Commissioner Dale Klein said that an update at that point could be “perceived as a rush to judgment in the midst of a dynamic environment that promises to affect the Nation’s approaches to storage and disposal of SNF.”<sup>8</sup>

In January 2010, President Obama fulfilled his political promise to Senator Reid by announcing that he was terminating the Yucca project, because he considered the project “unworkable.” The President directed the Energy Department to withdraw the Yucca license application, which would prevent the NRC from fulfilling its NWPA obligation to approve or disapprove the license application. The Administration rationalized its defiance of the NWPA mandate by stating that the Yucca project does not have “social and political acceptance.” In June 2010, the NRC licensing board rejected this rationale and denied the Energy Department

motion to withdraw. The denial was appealed and was pending until the NRC’s September 2011 order suspending all action on the license.

In July 2011, the U.S. Court of Appeals ruled on the appeal, warning the NRC that it would intervene if the NRC did not make a final decision on Yucca within the three-year time frame set by the NWPA.<sup>9</sup> The NRC has not made the required final decision, and a group of petitioners, including the states of South Carolina and Washington, and the National Association of Regulated Utility Commissioners, supported by the Nuclear Energy Institute, have asked the court to force a decision by the NRC. The court’s decision is not expected until summer 2012.

In the midst of legal uncertainty and political turmoil, Chairman Jaczkowski pushed the NRC, including three new members appointed by President Obama, to approve a revision to the rule that assumes that the Energy Department and the NRC will successfully defy the NWPA and that Yucca would not be licensed.

On December 23, 2010, the NRC published its decision, making the following key revision to the waste confidence rule:

10 CFR §51.23(a) . . . the Commission believes there is reasonable assurance that **[at least one mined geologic repository will be available**

5. “NRC Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation; Waste Confidence Decision Update; Final Rules,” p. 81032.
6. Harry Reid, “Killing the Yucca Mountain Nuclear Waste Dump,” U.S. Senate, at <http://reid.senate.gov/about/upload/yucca-mountain-accomplishments.pdf> (February 13, 2012).
7. Jeff Beattie, “NRC Withholds ‘Waste Confidence’ Finding, Citing Yucca Decision,” *Managing Power*, November 2, 2009, at [http://www.managingpowermag.com/supply\\_chains/NRC-Withholds-Waste-Confidence-Finding-Citing-Yucca-Decision\\_212.html](http://www.managingpowermag.com/supply_chains/NRC-Withholds-Waste-Confidence-Finding-Citing-Yucca-Decision_212.html) (February 13, 2012).
8. Nuclear Regulatory Commission, “Dr. Klein’s Comments on SECY-09-0090: Final Update of the Commission’s Waste Confidence Decision,” September 9, 2009, at <http://www.nrc.gov/reading-rm/doc-collections/commission/cvr/2009/2009-0090vtr.pdf> (February 13, 2012).
9. “In Re: Aiken County, Petitioner,” U.S. Court of Appeals (DC Circuit) No. 10-1050, July 1, 2011, at [http://www.cadc.uscourts.gov/internet/opinions.nsf/872039F019B626D7852578C00053956D/\\$file/10-1050-1316111.pdf](http://www.cadc.uscourts.gov/internet/opinions.nsf/872039F019B626D7852578C00053956D/$file/10-1050-1316111.pdf) (February 13, 2012).

**within the first quarter of the twenty-first century, and] sufficient repository capacity will be available to dispose of the commercial high-level waste and spent fuel [originating in such] generated in any reactor [and generated up to that time.] when necessary.<sup>10</sup>**

The revised rule is a radical change because it removes the assurance that the repository would be available by the “first quarter of the twenty-first century.” The revised rule does not provide a basis for confidence that SNF will be removed from reactor sites to a repository in due course. As consolation for the broken promise to remove SNF, the NRC expressed its belief that SNF can be safely stored for 60 years after the reactor license expires, and that a repository will be available, “when necessary.” The NRC does not state when removal is necessary. The possibility of indefinite on-site storage is precisely the uncertainty that the rule was supposed to end. The NRC has increased uncertainty by signaling the waste may not be moved from the reactor sites for a century or more.<sup>11</sup>

## The Problems with the Revised Rule

The new waste confidence rule contains flaws that undermine current law and hinder future reactor construction:

**1. It Ignores the NWPA.** The NRC decision revising the waste confidence rule acknowledges that the NWPA “mandates a national repository program, and until the law is changed disposal in a repository remains the controlling policy.”<sup>12</sup> Yet, even though the NWPA also mandates that the repository be built at the Yucca site, the NRC decision expressly assumes that the Yucca facility will not be built.<sup>13</sup> The supposedly independent NRC blindly accepts the Administration’s defiance of the NWPA, a law enacted by Congress and reaffirmed in repeated votes and appropriations over the past 30 years. If the NRC can “assume away” the NWPA merely because of policy differences, the rule of law at the NRC has ended.<sup>14</sup> The NRC should have simply acknowledged that the NWPA gives sufficient basis to provide confidence that SNF

will be removed from reactor sites. This would have allowed the NRC and the Administration to respect the rule of law while allowing the policy debate to unfold.

## 2. It Is a “No Confidence” Rule.

The revised rule does not express confidence that the waste will be removed, although that is what the public demanded and the courts required when the NRC adopted the rule. In fact, the NRC decision expresses doubt about whether the waste will be removed, stating it could not predict “the time needed to bring about the necessary societal and political acceptance for a repository site.”<sup>15</sup> The NRC tried to finesse its failure to express confidence in removal to Yucca by emphasizing its determination that on-site storage would be safe for 60 years after the expiration of the reactor license. The 60-year interim-storage determination may give comfort to current reactor owners. It does nothing to give the public and investors confidence that waste from new reactors will ever be removed.

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10. “NRC Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation; Waste Confidence Decision Update; Final Rules,” pp. 81032-81076.
11. In conjunction with its recent actions on the waste confidence rule, the NRC directed its staff to provide a plan for a longer-term waste confidence rulemaking. This longer-term rulemaking would update the waste confidence rule to address impacts of storage beyond a 120-year time frame, and would include the development of a supporting environmental impact statement. Nuclear Regulatory Commission, “Staff Requirements Memorandum,” SECY 09-0090, September, 15, 2010, at <http://www.nrc.gov/reading-rm/doc-collections/commission/srm/2009/> (February 13, 2012).
12. “NRC Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation; Waste Confidence Decision Update; Final Rules,” p. 81063.
13. *Ibid.*, p. 81067.
14. The NRC licensing board addressed this issue in its decision on the Energy Department’s motion to withdraw the Yucca license application, stating, “Where the law is declared to require it, however, DOE and other agencies within the Executive Branch are often required to implement legislative directives in a manner with which they do not necessarily agree.” ASLBP No. 09-892-HLW-CAB04, June 29, 2010, slip opinion, p. 19.
15. “NRC Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation; Waste Confidence Decision Update; Final Rules,” p. 81037.

**3. It Will Promote Litigation by Raising Concerns that “Interim” Storage May Become Permanent.** NRC reactor regulations and reactor-operator best practices assure that on-site SNF storage is safe until the reactor is decommissioned. After decommissioning, permanent storage in an off-site geologic repository is necessary to mitigate the risks of SNF becoming stranded at a decommissioned site. The NRC based its revised-rule decision on the obvious conclusion that *interim* on-site storage is safe for 30 years after the reactor license expires, and on the less obvious conclusion that *long-term* storage should be safe for at least 30 years beyond that. Simply stating that on-site storage *can be* safe does nothing to move the nation closer to an effective nuclear waste disposal policy that resolves concerns that interim on-site storage will become permanent. By failing to express its confidence that the Administration would comply with the NWPA and remove SNF to Yucca, or to institute an alternative program to remove nuclear waste, the NRC has invited nuclear opponents to challenge the rule on the basis of on-site storage hazards. Indeed, this is already occurring.

In February 2011, the states of New York, Vermont, and

Connecticut challenged the new rule in federal court.<sup>16</sup> The states argue that the NRC should abandon the generic waste confidence approach and conduct full site-specific impact assessments of indefinite on-site SNF storage. The three states claim that:

- the revised rule does not reflect confidence that the waste problem has been solved;
- without Yucca or a certain alternative pathway, interim on-site storage might become long-term storage; and that
- long-term on-site storage poses a significant risk to health and the environment.

These changes to the rule will bring new, unnecessary, and costly delays to the licensing process. For example, in the rulemaking proceeding, the NRC advised parties with site-specific SNF-storage concerns that they could raise them in site-specific license proceedings. This is, in essence, an invitation to protracted hearings on a complex, controversial issue that may be worrisome for reactor developers and investors.

**4. It Undermines Investor Support for New Reactor Construction.** Nuclear business and non-profit organizations have

stated that building a repository is critical to the expansion of American nuclear power. Nuclear developers and investors need to know that there is a solution to the waste problem. Otherwise they may fear they would be saddling themselves with interminable licensing proceedings and indefinite SNF-disposal liabilities.<sup>17</sup> Some views from the industry:

- John Rowe, CEO of Exelon, the utility with the largest reactor fleet (including several in Illinois, a moratorium state) called Yucca the “lynchpin” to new reactor construction, and said that “Exelon will not build a new nuclear plant until there is a permanent solution to the disposition of SNF.”<sup>18</sup>
- James Miller, CEO of Southern Nuclear, the developer of the Vogtle reactors, which just received a license to build two new reactors, has stated that Yucca is the best available solution to the SNF problem.<sup>19</sup>
- The American Nuclear Society issued a position statement supporting expeditious processing of the Yucca Mountain license application.<sup>20</sup>
- The Nuclear Energy Institute stated, “Under any used fuel management scenario,

16. *New York, Vermont, and Connecticut v. NRC, US Ct. of App. (DC Circuit)*, Docket No. 11-1045. The State of New Jersey and several environmental groups have subsequently joined as petitioners.

17. The NRC has directed its staff to provide a plan for updating the waste confidence rule to address impacts of storage beyond a 120-year time frame. Nuclear Regulatory Commission, “Staff Requirements Memorandum,” SECY 09-0090. NRC hearing on extended storage was held on September 26, 2011.

18. Nuclear Energy Information Service, “What Do They Know?...and, When Did They Know it?” December 8, 2010, at [http://www.neis.org/Campaigns/Moratorium/what\\_do\\_they\\_know.shtml](http://www.neis.org/Campaigns/Moratorium/what_do_they_know.shtml) (February 13, 2012).

19. *Ibid.*

20. American Nuclear Society, “Licensing of Yucca Mountain as a Geological Repository for Radioactive Wastes,” February 2009, at <http://www.ans.org/pi/ps/docs/ps80.pdf> (February 13, 2012).

disposal of high-level radioactive byproducts in a permanent geologic repository is necessary.”<sup>21</sup>

Until waste confidence is firmly based on the NWPA and a Yucca repository, or a defined alternative, developers will be hesitant to move forward with new reactor projects. It may be expensive or impossible for them to prove the long-term safety of on-site storage in site-specific proceedings, because many sites are suitable for reactors but may not be appropriate for long-term waste storage. Finally, with the uncertainties created by the Administration and the new rule, state waste-based nuclear moratoriums are not likely to be repealed.

**5. It Undermines the Incentives for Long-Term Nuclear Waste Management Solutions.** The rule revision encourages a strategy of avoiding a permanent solution for nuclear-waste management. A basic condition for commercial nuclear power operations is that there must be a reliable method to dispose of SNF. Federal assumption of the responsibility for this commercial activity in the NWPA meets that condition. As long as the Energy Department was making slow but steady progress toward opening a repository at Yucca Mountain, it was reasonable for the NRC to deem the NWPA mandate an adequate basis for waste confidence.

However, the Administration’s attempt to terminate the Yucca project without any backup plan renders this notion obsolete. By expressing confidence that SNF will be removed despite any evidence to support such a conclusion, the NRC effectively removes any pressure for any party to move on the issue. The rule under current circumstances essentially fortifies the status quo.

The NWPA made the federal government responsible for waste disposal and required it to collect and store SNF beginning in 1998. The Administration, however, has demonstrated its disregard for this established law by abandoning the Yucca project and trying to stop the NRC from completing its safety review and issuing the facility license without establishing an alternative waste-disposal strategy. The NRC’s statement that it maintains confidence that a disposal solution will be developed without Yucca or establishing an alternative strains credulity. Further, it removes any incentive to find a way to remove the spent fuel from the reactor site.

#### **Time for Congress to Act**

Congress can provide significant clarity by doing two things:

- **Require the Nuclear Regulatory Commission to make a final decision on Yucca Mountain.** The Nuclear Waste

Policy Act provides a clear framework and timeline for the NRC to consider the Yucca application. The NRC has chosen to ignore this law, thus creating substantial confusion about the status of nuclear-waste disposal. Thus, Congress should compel the NRC to finalize its review of the Yucca application and make its final determination within a set time period, such as within one year.

- **Abandon the obsolete waste confidence rule.** The rule is an artifact, no longer needed or useful. The Blue Ribbon Commission on America’s Nuclear Future, and others, have criticized the NWPA’s approach to nuclear-waste management.<sup>22</sup> Nonetheless, until needed reforms are implemented, the NWPA is the law of the land and creates a legally binding obligation on the U.S. government to collect and dispose of nuclear waste. Congress should affirm the NWPA by barring consideration of the waste confidence issue in any administrative or judicial proceeding except as provided by the NWPA.<sup>23</sup> It is not the place of the Energy Department, the NRC, or the courts to act on their doubts about the social or political acceptability of the NWPA, or on their confidence about the will of Congress, in adjudicatory proceedings on reactor licenses. Abandoning the waste confidence rule and simply recognizing that the federal government is responsible for waste management under

21. Nuclear Energy Institute, “Key Issues: Nuclear Waste Disposal,” at <http://www.nei.org/keyissues/nuclearwastedisposal/> (February 13, 2012).

22. Blue Ribbon Commission on America’s Nuclear Future, “Draft Report to the Secretary of Energy,” July 29, 2011, at [http://brc.gov/sites/default/files/documents/brc\\_draft\\_report\\_29jul2011\\_0.pdf](http://brc.gov/sites/default/files/documents/brc_draft_report_29jul2011_0.pdf) (February 13, 2012), and Jack Spencer, “A Free-Market Approach to Managing Used Nuclear Fuel,” Heritage Foundation Backgrounder No. 2149, June 23, 2008, at <http://www.heritage.org/research/reports/2008/06/a-free-market-approach-to-managing-used-nuclear-fuel>.

23. NWPA, Sec. 119, gives the U.S. Courts of Appeals exclusive jurisdiction over any final decision or action by the Energy Secretary, the President, or the NRC on issues that fall under the purview of the NWPA.

current law would be a better approach. How the government meets that requirement, as long as it is done within established safety guidelines, should be irrelevant to the NRC.

The United States has struggled for decades to implement a predictable and rational nuclear waste management policy. The difficulties are the result of poor policy choices, not of technological or economic obstacles. This government-created problem has led to unnecessary

impediments to the expansion of clean and safe nuclear energy. Fixing this problem should begin with Congress simply demanding that America's government bodies follow the law.

—**Cornelius Milmo** is a lawyer and nuclear energy expert who has worked in the government and private sector. **Jack Spencer** is Research Fellow in Nuclear Energy in the Thomas A. Roe Institute for Economic Policy Studies at The Heritage Foundation.