

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

STATE OF NEVADA,)
)
Petitioner,)
)
v.)
)
UNITED STATES NUCLEAR)
REGULATORY COMMISSION,)
)
Respondent.)
_____)

Case No. 05-1350

PETITION FOR REVIEW

The State of Nevada hereby petitions the Court for review of the United States Nuclear Regulatory Commission's ("NRC's") August 10, 2005 denial of Nevada's Petition for Rulemaking to Amend the Commission's Waste Confidence Decision and Rule to Avoid Prejudging Yucca Mountain (the "Petition"). The denial is final agency action by NRC, published in the Federal Register on August 17, 2005. 70 Fed. Reg. 48329. In denying Nevada's Petition, NRC has arbitrarily and capriciously left unaltered a 1990 rule that has now become obsolete and is no longer grounded in fact or law. The rule harms Nevada by imposing an extraordinary bias on NRC's upcoming licensing proceeding for the proposed Yucca Mountain nuclear waste repository in Nevada ("Yucca").

This Court has jurisdiction over this Petition pursuant to Section 119 of the NWPA, 42 U.S.C. § 10139.

I. Background

1. NRC regulates over a hundred commercial and research reactors in the United States, each of which produces tons of spent nuclear fuel, a form of high-level radioactive waste. It has been United States policy since 1982 that the safest method for ultimate disposal of spent fuel is burial in a deep geologic repository, a finding reflected in the Nuclear Waste Policy Act of 1982, as amended, 42 U.S.C. §§ 10101, *et seq.* That act gives the Department of Energy (“DOE”) responsibility for the disposal of all spent fuel in this country.

2. In the 1980s, at the time the NWPA was passed, it was customary for nuclear reactor operators to store their spent nuclear fuel in water-filled spent fuel pools, generally located inside reactor buildings. As these pools filled up, it became relatively urgent that a geologic repository site be selected and developed so that spent fuel could be shipped away for disposal before the pools became full to capacity. That is why the original NWPA imposed the deadline of 1998 for DOE to begin disposing of utilities’ spent fuel.

3. When it became probable in the late 1980s and early 1990s that DOE would miss that statutory deadline, utilities began expanding and re-racking their fuel pools with high density racks and taking other measures to increase at-reactor storage capacity. As even those measures proved insufficient, utilities began to design, develop, and license dry storage facilities for spent fuel. These facilities consisted of robust, sealed, steel or concrete containers placed on large concrete pads that were located at reactor sites but away from the reactor buildings.

4. In 1990, NRC determined that such licensed facilities are safe and secure for at least 100 years. That finding was reaffirmed by NRC in Congressional testimony in 1999. Today, there are at least 19 such dry storage facilities in the U.S. and an additional 21 that are planned or under construction. As a result of the widespread use and acceptance of such facilities as a temporary means to manage spent fuel pending ultimate geologic disposal, the nation has at least 94 years to develop a geologic repository before NRC's present findings would suggest that continued on-site dry storage of spent fuel poses a health, safety, or environmental issue.

5. DOE's final environmental impact statement for the Yucca project surmises that, *even completely unattended*, such dry storage facilities could last for 1000 years without leakage to the environment.

6. An integral component of NRC's licensing regime for nuclear power reactors for almost three decades has been its so-called "Waste Confidence" rule. In 1977, NRC denied a petition by an environmental group that it suspend all licensing of reactors until it had made a definitive safety finding that their nuclear wastes could be disposed of safely. In issuing its denial, NRC said it had "reasonable confidence" the wastes could and would eventually be disposed of safely. 42 Fed. Reg. 34,391 (1977). Moreover, NRC argued that, by putting reactor licensing into a statutory regime separate from its laws for nuclear waste disposal, Congress had effectively carved out the issue of waste disposal safety from nuclear reactor licensing. NRC's decision was upheld in *Natural Resources Defense Council v. NRC*, 582 F.2d 166 (2d Cir. 1978).

7. But the issue quickly surfaced again in 1979. Given the lack of a geologic repository, opponents argued that NRC could not continue to license dry storage facilities at reactor sites without first conducting reviews under the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321 *et seq.*, of the environmental and safety impacts of indefinite on-site storage.

8. On review, this Court remanded the issue to NRC. *Minnesota v. NRC*, 602 F.2d 412 (D.C. Cir. 1979). The Court did not challenge NRC's approach of eliminating NEPA reviews of indefinite on-site storage of

nuclear waste on the basis of NRC's confidence that safe disposal would be available when needed, but it said any such generic "confidence" findings that would be applicable to all on-site storage and nuclear plant licensing proceedings *must be the product of a public rulemaking proceeding*.

9. At this Court's direction, NRC commenced its Waste Confidence rulemaking proceeding, concluding in 1984, after analysis of extensive public comments, that its original confidence in the timely availability of a safe disposal option was justified, due principally to the NWPA's mandate that a repository be made available by DOE by 1998. 49 Fed. Reg. 34,658.

10. In 1987, Congress amended the NWPA to declare the Yucca site as the only remaining site to be studied for possible development of a repository. The act required the Secretary of Energy to report back to Congress in the event Yucca failed.

11. In 1990, NRC re-examined its 1984 conclusions, re-confirming its confidence based on new premises. NRC reasoned that, given the then-expected schedule for Yucca development, there would still be sufficient time (25) years to develop an alternative repository if Yucca failed. Though NRC said it did not dispute that dry storage facilities could safely house spent fuel at reactor sites for at least 100 years, it nevertheless expressed confidence that, by the year 2025, either the Yucca repository or a second,

alternative repository would be available for disposal of spent fuel. 64 Fed. Reg. 68005. At that time, NRC did not expect the lengthy delays DOE eventually experienced in developing its license application for Yucca.

Affording latitude for a second repository was done so as not to prejudge or bias the outcome of the Yucca repository project, since that site had yet to be declared suitable by DOE and the project had yet to be licensed by NRC.

NRC therefore premised its waste confidence rule on the expected availability of a second repository by 2025 if Yucca failed. NRC committed to conduct another waste confidence re-examination in the year 2000.

12. Under the terms of NRC's 1990 rule, were it to become evident at any time that a second repository could not be available by 2025 if Yucca failed, NRC would be obligated to reopen and update its Waste Confidence rule because, without a valid and updated waste confidence rule, NRC could no longer license new nuclear reactors or new dry storage facilities. This would, at a minimum, create a regulatory gap in which no licensing could occur.

13. In 1999, despite the continued unavailability of a nuclear waste disposal option, NRC reversed its prior commitment, stating it would not re-examine its 1990 confidence conclusions unless "significant and pertinent unexpected events occur, raising substantial doubt about the continuing

validity of the Waste Confidence findings.” 64 Fed. Reg. 68005. NRC cited “substantial progress” toward a repository, noting DOE’s intent to submit a license application to NRC in 2002, and the development of a new EPA standard for Yucca (the one later vacated by this Court).

14. Notwithstanding the continued unavailability of a nuclear waste disposal option to date, NRC has not re-examined the bases for its Waste Confidence findings, and, though those bases now appear to be invalid, *see infra*, it continues to license new on-site spent fuel storage facilities and is preparing to license new reactors.

II. The Proposed Yucca Mountain Nuclear Waste Repository

15. The Yucca site is approximately 90 miles northwest of Las Vegas, the nation’s fastest-growing city. It is located just upstream of the Amargosa Valley, which hosts one of the nation’s largest organic farming communities. In addition to the possible impacts from the repository itself, Nevada faces other impacts from the project. For example, DOE has applied to the Bureau of Land Management to withdraw 308,600 acres in Nevada from public use, so it can build a 319-mile-long new rail line through Nevada.

16. The Yucca site was declared “suitable” for repository development on February 14, 2002 by the Secretary of Energy. Pursuant to the NWPA,

Nevada's Governor vetoed that determination on April 8, 2002. Congress responded by overriding his veto with a Joint Resolution on July 9, 2002, which the President signed into law. Nevada challenged DOE's suitability determination in this Court, but its challenge was declared moot. *Nuclear Energy Institute v. EPA*, *supra*. Accordingly, Yucca Mountain is the official site of the Government's proposed geologic repository. No other site is being investigated.

17. But the Yucca repository project has yet to be evaluated by any impartial, regulatory body. The NWPA entrusted that analysis exclusively to the NRC.

18. Construction of the Yucca repository cannot even begin until DOE submits a license application to NRC for a construction permit and the NRC grants such permit after a full staff safety analysis and an adjudicatory hearing. 42 U.S.C. § 10134.

19. DOE has not yet submitted such an application.

20. On July 9, 2004, this Court invalidated the primary radiation protection standard that would be used by NRC and the Environmental Protection Agency ("EPA") to judge the safety of the Yucca repository when DOE files an application. *Nuclear Energy Institute v. EPA*, 373 F.3d 1251 (D.C. Cir. 2004).

21. EPA has not yet promulgated a new radiation protection standard for NRC's use in a licensing proceeding for Yucca. But based on a proposed new standard announced by EPA in August 2005, Nevada expects to challenge the new standard in this Court.

22. If and when EPA promulgates such a new standard, and if and when DOE submits an application, NRC may docket it only if it is "complete and accurate in all material respects." 10 C.F.R. § 63.10.

23. If and when NRC docket the application, a period of three to four years is provided by the NWPA for Yucca's licensing, though it is likely to take far longer. By statute, the earliest that a license proceeding could ever be completed for the Yucca repository is now 2009, assuming DOE files its application in 2006, as it has stated.

III. Nevada's Petition to Change the Waste Confidence Rule

24. NRC and DOE have determined that if Yucca were to fail, it would take at least 25 years before an alternative repository could become available.

25. Thus, it is now beyond question that if Yucca were to fail to receive a license, an event that would occur at the earliest in 2009, there is insufficient time for a second, alternative geologic repository to be located, studied,

licensed, and constructed to make it “available” by 2025, the legal premise of NRC’s Waste Confidence rule.

26. By the terms of this Court’s opinion in *Minnesota v. NRC, supra*, it now appears to be unlawful for NRC to continue to license new on-site dry storage facilities and new reactors.

27. Moreover, it appears that NRC can rationally maintain “confidence” in the availability of a repository by 2025 only if it presumes it will license the Yucca Mountain repository.

28. This creates an extraordinary bias in the agency’s upcoming licensing proceeding for Yucca, since NRC’s Waste Confidence rule irrationally and prejudicially couples the future of nuclear power (the licensing of all new reactors and storage facilities) to the success of Yucca.

29. Since NRC has itself determined that on-site dry storage is safe and secure for at least 94 more years, or until the year 2099, Nevada believes it is arbitrary and irrational for NRC’s Waste Confidence rule to employ the year 2025 as the temporal foundation for determining whether new licenses can continue to be entertained.

30. To correct this irrational and now obsolete premise, and to eliminate the clear bias it will impose on the Yucca licensing proceeding, Nevada submitted a Petition on March 1, 2005 to eliminate the year 2025 and

employ a factually realistic standard that would decouple other future Commission considerations from the success or failure of the Yucca licensing proceeding. Nevada did not ask NRC to reopen its general finding that one or more safe geologic repositories can be made available on a timely basis. It simply asked NRC to institute public rulemaking proceedings to reexamine with current facts what a “timely basis” means, that is, what now appears to be its arbitrary nuclear licensing “drop dead” window of 2025.

31. Nevada cited numerous “significant and pertinent unexpected events” that have occurred since the 1990 rule was established and since NRC made its affirming conclusions in 1999, “raising substantial doubt about the continuing validity of [NRC’s] Waste Confidence findings” being linked to operation of a repository in 2025, including the judicial invalidation of EPA’s and NRC’s primary radiation standard for the repository, the multi-year delays in Yucca’s projected schedule and date of availability, the broad availability of safe interim on-site storage facilities, and recent findings by NRC and DOE as to the extended duration of safety that those facilities provide.

32. Nevada three times formally requested NRC to publish the proposed rule change in the Federal Register for public comment, which is the

agency's usual practice for any petition for rulemaking. Nevada expected its modest proposal to be the subject of widespread public interest, as was the case with previous Waste Confidence proceedings.

IV. NRC's Rejection of Nevada's Petition

33. Departing (Petitioner believes for the first time ever) from its customary practice, NRC rejected Nevada's Petition without first publishing the Petition and soliciting public comment.

34. NRC concluded that Nevada had not established the "significant and pertinent events" that would justify its reopening.

35. NRC based its denial principally on its view that, because DOE had in 2002 declared the Yucca Mountain *site* to be "suitable" for proposing that a repository be developed, licensed and constructed there, this had "buttressed" NRC's "1990 finding of reasonable assurance that a repository will be available in 2025." 70 Fed. Reg. at 48332. In so doing, NRC effectively and ominously signaled that the result of its actual licensing proceeding for Yucca (which has yet to be initiated) is a foregone conclusion.

36. NRC conceded that, if Yucca were to fail to be licensed in the 2007 to 2009 time frame, it would take 25 years for attainment of repository operations at another site.

V. NRC's Violations of Law

37. A repository cannot lawfully or logically be “available” if it does not receive a license from the NRC.

38. NRC’s continued “confidence” that a repository will be available and operational by 2025 – the premise of its 1990 rule – simply because the repository’s proponent DOE has declared the Yucca *site* to be suitable, is arbitrary and capricious, in violation of the Administrative Procedure Act (“APA”), 5 U.S.C. § 706.

39. NRC’s refusal to institute rulemaking proceedings to change the 2025 premise of its 1990 Waste Confidence rule, even though the agency has found that on-site dry storage is safe and secure until at least 2099, and even though its rule imposes an extraordinary bias on the Yucca licensing proceeding, is irrational, arbitrary, and capricious, in violation of Section 706 of the APA.

40. Section 556(d) of the APA, and NRC’s Rules of Practice, 10 C.F.R. § 2.325, place the burden of proof on proponent DOE to demonstrate the safety and environmental integrity of the Yucca repository. By surmising that the Yucca repository will be “available” before 2025, long before an alternative repository could be made available, based only on DOE’s untested declaration that the site is “suitable,” NRC has effectively

transferred the burden of proof to Yucca challengers to demonstrate that the repository will be unsafe and has tainted every step of the impending licensing proceeding in favor of DOE's application, in violation of its own rules and the APA.

WHEREFORE, the State of Nevada respectfully requests that the Court, *inter alia*:


- (1) Grant this Petition for Review;
- (2) Declare that NRC's 1990 Waste Confidence rule is inconsistent with applicable law;
- (3) Declare that NRC's denial of Nevada's Petition for rulemaking was arbitrary, capricious, abusive of discretion, and not in accordance with law; and
- (4) Remand Nevada's Petition for rulemaking back to NRC for further proceedings consistent with the Court's opinion.

Respectfully submitted,

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A handwritten signature in black ink, appearing to be 'J. Egan', written over a horizontal line.

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Dated: September 1, 2005

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing Petition for Review was served this 1st day of September, 2005 via U.S. First Class Mail, on the following individuals:

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