

Not Yet Calendared for Oral Argument

Case No. 05-1350

IN THE
United States Court of Appeals
FOR THE DISTRICT OF COLUMBIA CIRCUIT

STATE OF NEVADA,

Petitioner,

v.

UNITED STATES NUCLEAR REGULATORY COMMISSION and the
UNITED STATES OF AMERICA,

Respondents.

On Petition for Review of a Decision of the
United States Nuclear Regulatory Commission

PETITIONER'S OPENING BRIEF

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**CERTIFICATE AS TO
PARTIES, RULINGS, AND RELATED CASES**

Pursuant to Circuit Rule 28(a)(1), Petitioner respectfully certifies as follows:

(A) Parties and Amici: As this action involves the direct review of a final agency decision, there were no proceedings before the district court. The parties, intervenors, and known *amici* before this Court are as follows:

- Parties: (1) State of Nevada, Petitioner
(2) United States Nuclear Regulatory Commission (“NRC”) and the United States of America, Respondents
- Intervenors: None
- Amici: None

Because Petitioner is not a corporation, an association, a joint venture, a partnership, a syndicate, or other similar entity, Circuit Rule 26.1 does not require the filing of a disclosure statement.

(B) Rulings Under Review: NRC’s final decision denying Nevada’s petition to amend NRC’s “Waste Confidence” rule, dated August 10, 2005, and published in the Federal Register at 70 Fed. Reg. 48,329 (Aug. 17, 2005).

(C) Related Cases: The matter under review was not previously before this Court or any other court. Petitioner does not believe that there are any cases pending before the Court that constitute “related cases” within the meaning of the Court’s rules.

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GLOSSARY

AEA	Atomic Energy Act
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
NEPA	National Environmental Policy Act
NRC	U.S. Nuclear Regulatory Commission
NRDC	Natural Resources Defense Council
NWPA	Nuclear Waste Policy Act
SA	Statutory and Regulatory Addendum

JURISDICTION

A. Subject Matter Jurisdiction

This action challenges the NRC's final decision denying a petition for rulemaking filed by the State of Nevada ("Petition"). NRC's denial is dated August 10, 2005, and was published in the Federal Register at 70 Fed. Reg. 48,329 (Aug. 17, 2005)("Denial"). The NRC issued its Denial in a proceeding (designated PRM-51-8) under section 189a of the AEA, 42 U.S.C. § 2239(a), and so this Court's original jurisdiction derives from AEA section 189b, 42 U.S.C. § 2239(b), and 28 U.S.C. § 2342. This action was timely filed on September 1, 2005, pursuant to the sixty-day filing deadline specified in the Hobbs Act, 28 U.S.C. § 2344.

B. Standing

Nevada's standing is addressed in detail in the arguments below, as the Court directed in its January 10, 2006 Order. In brief, NRC's Denial violates Nevada's right to a neutral decision-maker in the future adjudicatory proceeding before the NRC regarding whether a repository for the disposal of high-level nuclear waste and reactor spent fuel at Yucca Mountain, Nevada should be licensed, and Nevada has concrete interests at stake in that proceeding.

STATEMENT OF ISSUES

1. Whether NRC's codified finding that a repository will be operational by 2025, when the only repository that could meet that deadline is one proposed for the Yucca Mountain site, constitutes an unlawful prejudgment in favor of the DOE's impending application for a license to construct the Yucca Mountain repository.

2. Whether NRC's denial of Nevada's Petition is arbitrary and capricious because it assumes either that Yucca Mountain will be licensed or that the nation's spent fuel will be stored safely until another disposal facility becomes available. The first assumption belies NRC's claim

it will be an impartial adjudicator, and the second presumes the outcome of a rulemaking and fact-finding proceeding that NRC refuses to conduct.

STATUTORY/REGULATORY ADDENDUM

Pertinent statutes, regulations, and other material are bound in an addendum at the end of this brief.

STATEMENT OF THE CASE

Since 1977, NRC has periodically examined the prospects for safe and timely disposal of spent nuclear power reactor fuel in geologic repositories and for safe storage of such spent fuel pending disposal. These examinations stemmed from this Circuit's decision in *Minnesota v. NRC*, 602 F.2d 412 (D.C.Cir.1979), and resulted in Commission rulemaking decisions commonly known as "Waste Confidence" decisions or rules. The title "Waste Confidence" derives from the NRC's consistent series of findings that it had reasonable "confidence" spent fuel (a form of high-level radioactive waste from nuclear reactors) could and would (1) be disposed of safely by a particular date and (2) be stored safely and without any significant environmental impact until that date arrived.

On March 1, 2005, Nevada filed a petition for rulemaking with the NRC entitled "State of Nevada's Petition for Rulemaking to Amend the Commission's Waste Confidence Decision and Rule to Avoid Prejudging Yucca Mountain." Among other things, Nevada asked NRC to change its finding that a geologic repository for disposal of spent fuel would be operational by 2025 because, given the time constraints on developing an alternative site, this projection could be true *only* if NRC licensed Yucca Mountain, and NRC's finding accordingly prejudged the merits of DOE's planned (but not yet filed) Yucca Mountain license application.

NRC formally docketed Nevada's Petition on March 4, 2005 and denied it on August 10, 2005. NRC's decision was published at 70 Fed. Reg. 48,329 (Aug. 17, 2005). This August 17 publication was the first NRC public notice of the existence of Nevada's Petition. Contrary to usual NRC practice, no notice of the docketing of Nevada's Petition was published in the Federal Register and no public comments were solicited on the merits of Nevada's Petition before NRC denied it. *See* 10 C.F.R. § 2.802.

Nevada timely filed a petition for review with this Court on September 1, 2005. On October 24, 2006, NRC filed a "Motion to Dismiss for Lack of Standing." Nevada filed its opposition on November 7, 2005, arguing, among other things, that NRC had conflated standing and the merits. NRC replied on November 17, 2005. By Order dated January 10, 2006, this Court ordered that NRC's motion be referred to the merits panel, and it instructed the parties to address the issues presented in the motion in their briefs rather than incorporate them by reference.

STATEMENT OF FACTS

A. The NRDC and State of Minnesota Lawsuits

Spent (or used) nuclear power reactor fuel is highly radioactive and will remain so for thousands of years after it is removed from reactors. It must be managed safely for a very long time. *See Nuclear Energy Institute, Inc. v. EPA*, 373 F. 3d 1251, 1258 (D.C. Cir. 2004).

About three decades ago, the NRDC petitioned NRC to suspend licensing of nuclear power reactors until NRC made a definitive safety finding that the radioactive spent fuel they generated as waste could be disposed of safely. NRC denied the petition in 1977 on grounds that: (1) it had "reasonable confidence" these materials could and would be disposed of safely and, indeed, as a policy matter NRC would not license reactors if it thought otherwise; but (2)

the safety finding sought by NRDC was not legally required because, by putting reactor licensing into a statutory category separate from waste disposal, the AEA effectively carved out waste disposal safety from the scope of reactor pre-licensing safety findings. 42 Fed. Reg. 34,391 (July 5, 1977). NRC's decision was upheld in *NRDC v. NRC*, 582 F.2d 166 (2nd Cir. 1978).

The same spent fuel disposal issue resurfaced in a different context shortly thereafter. Power reactor operators stored their radioactive spent fuel in wet pools near their reactors. These pools began to fill up when the commercial program to reprocess spent fuel off site foundered, and the Government's program to develop a disposal facility was delayed. Various power reactor licensees sought permission (in the form of operating license amendments) from NRC to expand their on-site spent fuel pool storage capacity so their reactors could continue to operate. Opponents argued that NRC's environmental reviews supporting the operating license amendments needed to address the environmental effects of indefinite on-site storage of the spent fuel. Similar arguments were made by opponents of initial reactor licensing. The opponents argued that the delays and uncertainties in the Government's disposal program made indefinite on-site storage a reasonably foreseeable event that had to be considered under NEPA. NRC rejected these contentions. According to NRC, there would be no indefinite on-site storage on any reactor site because NRC had already found, in response to NRDC's petition, that there was "reasonable confidence" spent fuel could and would be disposed of safely before on-site storage posed any safety or environmental problem.

On review, this Court remanded back to the NRC. *Minnesota v. NRC*, 602 F.2d 412 (D.C. Cir. 1979). The Court had no problem with the NRC's basic approach of eliminating indefinite on-site storage from reactor NEPA reviews on the basis of a generic finding that safe disposal would be available when it became necessary, but remanded because the waste

confidence findings NRC relied on to reject the contentions (NRC's findings in response to the NRDC petition) were not the product of a public rulemaking proceeding.

B. NRC's Waste Confidence Reviews

Following the direction of *Minnesota v. NRC*, the NRC initiated its first Waste Confidence rulemaking proceeding. In its 1984 Waste Confidence Decision, 49 Fed. Reg. 34,658 (Aug. 31, 1984) ("1984 Decision"), NRC confirmed what it had said in its response to the NRDC petition: that it had reasonable confidence a repository for the disposal of reactor spent fuel could and would be developed. This allowed NRC to continue to license reactors. However, since NRC wanted to use the Waste Confidence proceeding to avoid having to consider, on a case-by-case basis, the environmental impacts from long-term storage of spent fuel at nuclear power reactor sites, it also needed to select a date when a repository would actually be available. The environmental impacts from storage of spent fuel during the reactor license term (then forty years) could be factored in easily as part of the NEPA review for the initial operating license, but storage after that could not be evaluated without some storage end-date. Moreover, NRC wanted to perform its long-term storage evaluation on a generic basis, thereby avoiding case-by-case consideration (and litigation) of this issue. The time period chosen by NRC in 1984 for the actual availability of a geologic repository was 2007-2009.

In its 1984 Decision, NRC promised to re-examine the relevant issues about every five years. This promise led to NRC's 1990 Waste Confidence Decision. 55 Fed. Reg. 38,474 (Sept. 18, 1990) ("1990 Decision"). In its 1990 Decision, NRC promised to re-examine the issues again in ten years. However, in 1999 NRC decided not to commence another Waste Confidence rulemaking proceeding, indicating instead that it would re-examine the 1990 decision only if "significant and pertinent unexpected events occur, raising substantial doubt about the continuing

validity of the Waste Confidence findings.” 64 Fed. Reg. 68,005 (Dec. 6, 1999). Since there has been no such re-examination, the 1990 Decision stands as NRC’s last word on the matters considered therein.

In 1987, Congress had amended the NWPAs to focus all of DOE’s nationwide repository development efforts on one site, Yucca Mountain in Nevada. *See e.g.*, 42 U.S.C. § 10133(c)(3). However, despite the apparent focusing of DOE’s efforts, by 1990 the projected date when a repository at Yucca Mountain would become available had slipped to 2010. 1990 Decision, 55 Fed. Reg. at 38,500. This invalidated NRC’s 1984 Decision projecting a repository availability date of 2007-2009. In its 1990 Decision, NRC therefore modified its projection, finding that there was reasonable assurance a geologic repository for disposal of spent fuel would be available by 2025 (as opposed to 2007-2009) and that this assurance still permitted reactor licensing. *Id.* at 38,474.

NRC offered the following reasons for choosing 2025 as the year when a repository would first become available. While NRC believed “the earliest date for a repository there [at Yucca Mountain] is 2010,” *id.* at 38,500, it emphasized repeatedly that licensing of Yucca Mountain should not be presumed. “The Commission does not want its findings here to constrain in any way its regulatory discretion in a licensing proceeding.” *Id.* at 38,501. “In predicting the timing of repository availability, the suitability of Yucca Mountain should not be assumed.” *Id.* at 38,505. “Another reason the Commission is unwilling to assume the suitability of Yucca Mountain is that NRC must be mindful of preserving all its regulatory options—including a recommendation of license application denial—to assure adequate protection of public health and safety from radiological risk. In our view, it is essential to dispel the notion

that for scheduler reasons there is no alternative to the currently preferred site [Yucca Mountain].” *Id.*

Accordingly, in predicting when a repository would actually be available, NRC could not responsibly assume that Yucca Mountain would succeed in gaining a license. However, “[i]f DOE were authorized to initiate site screening for a [second] repository at a different site in the year 2000, the Commission believes it reasonable to expect that a repository would be available by the year 2025. This estimate is based on the DOE position that site screening for a second repository should begin 25 years before the start of waste acceptance.” *Id.*

The 1990 Decision also addressed spent fuel storage. NRC concluded that “there is ample technical basis for confidence that spent fuel can be stored safely and without significant environmental impact at these reactors for at least 100 years. If a repository were available within the first quarter of the twenty-first century, the oldest spent fuel could be shipped off the sites of all currently operating reactors well before the spent fuel initially generated in them reached the age of 100 years.” *Id.* at 38,506. NRC did not address what would happen if no repository became available in 2025 and thus large amounts of spent fuel had to be stored at reactor sites for more than 100 years.

NRC’s 1990 decision about the safety and environmental impacts from on-site storage of spent fuel served as the factual predicate for NRC’s rule in 10 C.F.R. §51.23(a). *See also* 55 Fed. Reg. 38,474. This rule precisely codified the 2025 repository availability date. The rule limited somewhat NRC’s 1990 finding that spent fuel could be stored in a safe and environmentally benign manner – from 100 years to approximately 90 years (a 60-year reactor operating license term plus an extra 30 years to allow time for the fuel to be shipped off-site). Then, based on *Minnesota v. NRC*, the NRC used the 2025 repository availability date and the

90-year storage finding as the basis for a rule that prohibited any case-by-case consideration of the environmental impacts of spent fuel storage on reactor sites for periods beyond the reactor license terms. 10 C.F.R. §51.23(b); 55 Fed. Reg. 38,472, 38,473 (Sept. 18, 1990).

C. Nevada's Petition

Out of concern for the fairness of the upcoming Yucca Mountain Licensing hearing, Nevada filed its Petition to amend the 1990 Decision (and the related Waste Confidence rule) on March 1, 2005. In its Petition, Nevada pointed out that, under current circumstances, NRC would not be called upon to decide on the acceptability of Yucca Mountain until at least 2010, even assuming (1) EPA and NRC complete the complementary rulemaking proceedings required by *Nuclear Energy Institute v. EPA, supra.*, in 2005; (2) DOE tenders a reasonably complete NRC license application in late 2005; and (3) the application is deemed complete and docketed by NRC in early to mid-2006. Petition at 8. In fact, we now know that (1) EPA and NRC have still not completed their Yucca Mountain licensing rules; and (2) DOE's current official position is that it "*expects* to file the License Application after the end of FY 2007, *i.e.*, after September, 2007," but it currently has no idea when it will actually be able to do so. See DOE Eleventh Monthly Status Report Regarding LSN Certification and License Application Submittal, *In the Matter of U.S. Department of Energy (High Level Waste Repository: Pre-Application Matters)*, Docket No. PAPO-00, ASLBP NO. 04-829-01-PAPO (NRC April 3, 2006)(emphasis added)

Nevada also pointed out that if NRC denied DOE's Yucca Mountain license application in 2010, it would be impossible for *any* repository to be available by 2025, as predicted in the 1990 Decision, because (based on DOE's and NRC's own estimations) it would take at least twenty-five years to study, select, license and construct a repository at another site. Thus, the finding in NRC's 1990 Decision (as codified in 10 C.F.R. §51.23(a)) that a repository will be

available to accept and dispose of spent fuel by the year 2025 can now be true *only if* NRC grants all the necessary authorizations and licenses for the Yucca Mountain repository. Nevada asked NRC to drop the 2025 date to avoid unacceptably prejudging or tainting the results of the Yucca Mountain licensing proceeding. Petition at 7-10.

Nevada recognized that, if NRC dropped the 2025 availability date for a repository, the agency would have to evaluate the environmental impacts of the storage of spent fuel beyond power reactor license terms. As indicated above, NRC found in 1990 that if a repository were available by 2025, the oldest spent fuel could be shipped off the sites of all currently operating reactors before it reached the age of 90 years, and that spent fuel could be stored safely and without any significant environmental impacts for such a 90-year period. An extension of the 2025 date would imply longer periods of spent fuel storage, and so an extension of the 2025 date would require a review to determine whether spent fuel *could* in fact be stored safely and without any significant environmental impact for more than 90 years.

Since Nevada believes spent fuel can indeed be stored safely and without any significant environmental impact for at least several hundred years, Nevada saw no need for NRC to replace 2025 with another precise availability date. Nevada simply asked NRC to find that “there is reasonable assurance all licensed reactor spent fuel will be removed from storage sites to some acceptable disposal site well before storage causes any significant safety or environmental impacts.” Petition at 14. This would decouple the licensing proceeding for the Yucca Mountain repository from the exigencies of reactor licensing and operation.

D. NRC's Decision on Nevada's Petition

NRC denied Nevada's Petition on August 10, 2005. The Denial was published in the Federal Register at 70 Fed. Reg. 48,329 (Aug. 17, 2005). As noted, no public comments were solicited, an apparently unprecedented departure from standard NRC practice.¹

NRC did not disagree with Nevada's argument that, if it denied the license application for Yucca Mountain in 2010 or thereafter, no repository could possibly be available by 2025. However, NRC said its 1990 Decision was premised on the assumption that DOE (not NRC) might find Yucca Mountain unsuitable. "The Commission thought it 'reasonable to expect that DOE would be able to reach this conclusion [about suitability] by the year 2000 [which] would leave 25 years for the attainment of repository operations at another site.'" 70 Fed. Reg. at 48,332 (quoting from the 1990 Decision). "That DOE in fact found the Yucca Mountain site to be suitable – in early 2002 – buttresses the 1990 finding of reasonable assurance that a repository will be available in 2025...." *Id.* So, according to NRC, Nevada's Petition presented no grounds for reopening the 1990 Decision.

But the 1990 Decision also mentioned preserving NRC's regulatory options. What about the possibility that NRC might *reject* Yucca Mountain after DOE deemed it suitable? What would this do to the 2025 schedule? In its Denial, NRC addresses these questions as follows: "If in 1990 the Commission had been thinking in terms of 25 years being needed for an alternate repository site following an adverse Commission finding of acceptability, obviously it could not have chosen 2025 as the date for which it had reasonable confidence that a repository would be available. DOE's submission of a license application was at that time [1990] scheduled to be in

¹ It is particularly odd that NRC chose not to solicit the views of dozens of nuclear utilities and host states that are presently locked in litigation with DOE over the consequences of the unavailability of off-site storage locations and disposal options.

2001, meaning that any Commission rejection of the license could not have been the basis for computing the 25 years needed for evaluation of an alternate site.” 70 Fed. Reg. at 48,333.

However, even though the 1990 Decision took no account of the possibility that NRC might reject a license application for the Yucca Mountain repository, this presented no prejudgment problem, according to the NRC. For one thing, “the Commission allowed for reconsideration of its findings pending significant and unexpected events. Certainly, the denial of a license for the Yucca Mountain site would meet these criteria and the Commission would need to reevaluate its findings at that time.” *Id.* “The Commission did not see any threat to its ability to be an independent adjudicator in 1990 when it selected the 2025 date even though then, as now, a repository could only be available if the Commission decision is favorable. Should the Commission’s decision be unfavorable and should DOE abandon the site, the Commission would need to reevaluate the 2025 availability date, as well as other findings made in 1990.” *Id.* Also, “if the Commission were to assume that a license for the Yucca Mountain site might be denied in 2015 and establish a date 25 years hence for the ‘availability’ of an alternate repository (*i.e.*, 2040), it would still need to presume the ‘acceptability’ of the alternate site to meet that date.” *Id.*

SUMMARY OF ARGUMENT

A. Standing

Nevada clearly has standing to bring this case. As the so-called host state, Nevada will be a party in the future NRC licensing proceeding on Yucca Mountain and is entitled to a neutral decision-maker there. Moreover, Nevada has important substantive interests at stake in the NRC licensing proceeding. Among other things, the licensing, construction and operation of the Yucca Mountain repository will damage Nevada’s governmental interests in public projects and

tax revenues and, more importantly, in allocating and protecting the groundwaters of the State from radioactive contamination.

B. Merits

NRC grants the fundamental factual premise in Nevada's Petition: that NRC's Waste Confidence rule *presumes* it will grant the Yucca Mountain license application. True, NRC promises to strike this prejudgment of adjudicative facts later if it denies the Yucca Mountain license application, an "unexpected event" according to the NRC. But surely this is not an adequate response. The problem with prejudgment is that it taints the formal adjudicatory proceeding from the beginning; it cannot be purged after the fact. There is no doubt the prejudgment would be moot if NRC sided with Nevada after the licensing hearing, but Nevada's legitimate concern is that NRC's prejudgment of the facts even before an application is filed signals that such an outcome would be unlikely, regardless of the evidence.

Moreover, NRC's Denial is both irrational and irresponsible. If NRC were to deny the Yucca Mountain application and then, as it promised in its Denial, embark on a proceeding to codify a new date, this proceeding would also need to examine whether spent fuel can and will be stored safely until the new date arrived. What would NRC do at that point if, hypothetically, it found no repository would be available until 2040, but that spent fuel could *not* be stored safely in the meantime? When NRC says it will change the 2025 later, but not now, it must be assuming it will avoid this dilemma by either licensing Yucca Mountain or finding long-term storage safe. But the first assumption belies the NRC's claim it will be an impartial adjudicator, and the second presumes the outcome of a rulemaking proceeding that NRC currently refuses to conduct.

ARGUMENT

I. Nevada Has Standing to Bring this Case

The principal issue presented here is whether NRC's 1990 finding that a repository will be available by 2025 must be amended to avoid an NRC prejudgment of DOE's Yucca Mountain license application, and a consequent deprivation of Nevada's right to a neutral agency decision-maker in the formal licensing adjudication intended to be conducted before NRC. As explained below, Nevada has standing because (1) this procedural right is designed to protect its interests as a party before the NRC, and: (2) Nevada has concrete interests at stake in the NRC licensing proceeding where this procedural right applies.

NRC's proceeding on the licensing of the Yucca Mountain repository will be conducted as a formal adjudication. 10 C.F.R. §2.700. Nevada will be a party in that proceeding. 10 C.F.R. §2.309(d)(2)(i) & (iii). The right to a neutral decision-maker in this formal licensing adjudication is a procedural right that is intended to benefit all of the parties.

To be sure, a violation of a procedural right does automatically confer standing, even when (as here) that right is designed to benefit the petitioner. Standing in a procedural rights case also depends on whether the procedural right in question is designed to protect some threatened concrete interest of [petitioner] that is the ultimate basis of his standing." *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 573 n.8. For example, in a NEPA case (NEPA is essentially a procedural statute), a plaintiff must show that "the particularized injury that the plaintiff is suffering, or is likely to suffer, is fairly traceable to the agency action that implicated the need for an EIS," *Florida Audubon Society v. Bentsen*, 94 F.3d 658, 669 (D.C. Cir. 1996) (*en banc*) (emphasis added). See also *Wyoming Outdoor Council v. U.S. Forest Service*, 165 F.3d 43, 51 (D.C. Cir. 1999) ("In cases involving alleged procedural errors, the plaintiff must show that *the*

government act performed without the procedure will cause a distinct risk to a particularized interest of the plaintiff.”) (emphasis added and internal quotation marks and citations omitted).

The affidavit of Robert R. Loux, Executive Director of Nevada’s Agency for Nuclear Projects (SA1) establishes beyond question that Nevada will suffer a concrete injury from the underlying agency action in this case, the proposed licensing of the Yucca Mountain repository. Nevada is intensely interested in protecting the citizens and the environment of the State from all of the radioactive and other hazards, including transportation hazards, arising from the government’s use of Yucca Mountain. Among other things, “the disposal of [spent fuel and other highly radioactive wastes] in Yucca Mountain will inevitably contaminate the groundwater with radioactive materials. This directly harms Nevada’s sovereign interests because, under Nevada law, all ground waters are owned by the people of Nevada and administered by the State.” Loux Affidavit at SA2. In addition, Mr. Loux explains that the licensing of Yucca Mountain will have a huge fiscal impact on State agencies and that the withdrawal of lands for a three-hundred-mile transportation corridor to Yucca Mountain prevents these lands from being used for public infrastructure projects. *Id.*

II. Standard of Review

The standard of review is the familiar “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law” standard in 5 U.S.C. §706(2)(A) of the Administrative Procedure Act.

III. NRC’s Refusal to Amend its Rule Predicting that Yucca Mountain Will Be Licensed Violates Nevada’s Right to a Neutral Decision-Maker

A. NRC has Prejudged Yucca Mountain

NRC’s 1990 Decision provides the basis for its rule in 10 C.F.R. §51.23(a). This rule states specifically that “the Commission believes there is reasonable assurance that at least one

mined geologic repository will be available within the first quarter of the twenty first century....” NRC states in its Denial that it selected the year 2025 in 1990 “even though then, as now, a repository could only be available if the Commission decision [on Yucca Mountain] is favorable.” 70 Fed. Reg. at 48,333. Thus, NRC has a rule (and underlying decision) that is true *if and only if* it licenses the Yucca Mountain repository. This means NRC is predicting formally and firmly that, when DOE eventually files its application for a construction license for Yucca Mountain, it will grant it in time for the repository to be built and become operational by 2025.

While NRC used the phrase “reasonable assurance” to qualify its prediction, this should not be taken as signifying something tentative or preliminary. “Reasonable assurance” is the same standard NRC will use in adjudging safety in the future Yucca Mountain licensing proceeding. 10 C.F.R. §63.31. Moreover, a preliminary or tentative prediction would not be a sufficient ground for the NRC rule that precludes parties from raising questions about the environmental impacts of long term storage in individual power reactor licensing proceedings.

Provision of an unbiased, neutral decision-maker is one of the core requirements of a system of fair adjudicatory decision-making. *Withrow v. Larkin*, 421 U.S. 35, 46 (1975); *Amos Treat & Co. v. SEC*, 306 F.2d 260, 264 (D.C. Cir. 1960). While a tribunal is not necessarily disqualified for prejudging a question of law or policy or legislative fact, a tribunal will be disqualified if it prejudices a question of adjudicative fact. *Cinderella Career and Finishing Schools, Inc. v. FTC*, 425 F.2d 583 (D.C. Cir. 1970). *See also Wildberger v. American Federation of Government Employees, AFL-CIO*, 86 F.3d 1188, 1195-97 (D.C. Cir. 1996). Whether a tribunal has impermissibly prejudged a question of adjudicative fact depends on whether a disinterested observer would so conclude. *Cinderella Career and Finishing Schools, Inc. v. FTC*, 425 F.2d at 591.

In order for NRC to license Yucca Mountain it must resolve, on the record, thousands of questions of fact, including the precise nature of the geologic materials comprising Yucca Mountain, the precise nature of the waste that will be disposed of there, and the identity, background, and qualifications of the people who will operate the facility. *See* 10 C.F.R. §63.21. Even factual disputes about character and past conduct will be critical to licensing, for DOE's well-documented problems with falsification of records and other misconduct will be relevant to whether its scientific investigations are to be credited and its quality assurance programs have been implemented adequately. *See* U.S. Gov't Accountability Office, *Yucca Mountain: Quality Assurance at DOE's Planned Nuclear Waste Repository Needs Increased Management Attention*, GAO-06-313, at 1-9 (2006). These are clearly questions of adjudicatory fact. Any disinterested observer would conclude upon reading NRC's rule that the agency has prejudged all of these questions.

B. Changing the 2025 Date Later if the Yucca Mountain License Application is Denied Does Not Cure the Problem

In its Denial, NRC says its 1990 Decision "allowed for reconsideration of its findings pending significant and unexpected events." It then observes that "certainly, the denial of a license for the Yucca Mountain site would meet these criteria and the Commission would need to reevaluate its findings at that time." 70 Fed. Reg. at 48,333. Further, "[t]he Commission did not see any threat to its ability to be an independent adjudicator in 1990 when it selected the 2025 date even though then, as now, a repository could only be available if the Commission decision is favorable. Should the Commission's decision be unfavorable and should DOE abandon the site, the Commission would need to reevaluate the 2025 availability date, as well as other findings made in 1990." *Id.*

NRC compounded its prejudgment when conceded that denial of the Yucca Mountain application would be a “significant and unexpected event.” *Id.* But, apart from this, NRC’s theory that its prejudgment is of no consequence because it will be conveniently expunged later if the Yucca Mountain application is rejected is clearly inadequate. The problem with prejudgment is that it taints the formal adjudicatory proceeding from the beginning; it cannot be purged after the fact. There is no doubt that NRC’s prejudgment would be mooted if NRC sided with Nevada after the licensing hearing, but Nevada’s legitimate concern is that NRC’s prejudgment of the facts even before an application is filed signals that such an outcome would be unlikely, regardless of the evidence.

IV. NRC’s Denial is Irrational and Irresponsible

In its Denial, NRC promises it will change the 2025 date later if Yucca Mountain fails. *Id.* This is an irrational and irresponsible response to Nevada’s Petition.

NRC found in 1990 that if a repository were available by 2025, the oldest spent fuel could be shipped off of the sites of all currently operating reactors before it reached the age of 90 years, and that such spent fuel could be stored safely and without any significant environmental consequences for such a 90-year period. An extension of the 2025 date would imply longer periods of spent fuel storage. Thus, an extension of the 2025 date would require a review to determine whether spent fuel could in fact be stored safely and without any significant environmental impact for more than 90 years, perhaps many decades more. Nevada recognized this fact in its Petition, and accordingly asked NRC to confirm that spent fuel could be stored safely and without any significant environmental impact at power reactor sites for at least several hundred years. Petition at 11-13.

NRC's promise to examine the 2025 date only later, and only if Yucca Mountain fails, ignores this critical spent fuel storage safety issue. If NRC were to deny the Yucca Mountain application and then, as promised, embark on a proceeding to extend the 2025 date, what would NRC do at that point if, hypothetically, it found no repository would be available until 2040 but that spent fuel could *not* be stored safely at reactor sites in the meantime? By rejecting Nevada's Petition and promising to change the 2025 date only later, if Yucca Mountain fails, NRC must be assuming it will avoid this dilemma.

NRC can avoid the dilemma only by committing to license Yucca Mountain. However, NRC insists it will be an impartial adjudicator, notwithstanding what the 2025 date logically implies. But NRC can remain impartial only by examining the safety of spent fuel storage in a rulemaking proceeding *now*, as Nevada requested in its Petition, and not later. If, as Nevada expects, the continued safety of spent fuel storage at reactor site is confirmed even if Yucca fails, the dilemma is avoided.

CONCLUSION

For the foregoing reasons, Petitioner respectfully requests that the Court declare that NRC's Denial of Nevada's petition is arbitrary, capricious and unlawful. The matter should be remanded to NRC with instructions to initiate the public rulemaking Nevada requested, so these critical safety and policy issues can be examined in a fair and open forum.

Respectfully submitted,

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A handwritten signature in black ink, consisting of two large loops followed by a long horizontal stroke extending to the right.

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CERTIFICATE OF COMPLIANCE

Pursuant to FRAP 32(a)(7)(C), I hereby certify that this brief complies with the type-volume limitation of FRAP 32(a)(7)(B) and Circuit Rule 32(a)(2), which authorizes Petitioners to file a brief of not greater than 14,000 words. In reliance on the word count of the word-processing system used to prepare this brief, I hereby certify that the portions of this brief subject to the type-volume limitation contain 5,433 words.



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April 6, 2006

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing Petitioner's Opening Brief was served this 6th day of April, 2006 via Federal Express, on the following individuals:

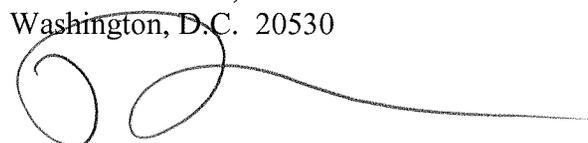
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Statutory/Regulatory Addendum

STATUTORY AND REGULATORY ADDENDUM

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NRC Yucca Mountain efforts. That is the basis of my personal knowledge of the matters stated in this Affidavit.

3. If constructed, the Yucca Mountain repository would rank among the largest and most irreversible public works projects in history. The expected cost of the project (which government sources currently estimate at over \$60 billion), the enormous risk to the State's environment and economy, and the potential risks to public health for many thousands of years make this project unique among those presently proposed for the State.

4. The construction and operation of a geologic repository at Yucca Mountain, Nevada for the disposal of nuclear reactor spent fuel and other high-level radioactive wastes will require the withdrawal of ground water. Moreover, the disposal of these wastes in Yucca Mountain will inevitably contaminate the ground water with radioactive materials. This directly harms Nevada's sovereign interests because, under Nevada law, all ground waters are owned by the people of Nevada and administered by the State. Nevada Revised Statutes 533.025.

5. Finally, even in the pre-licensing stage, DOE's efforts to advance its Yucca Mountain repository project are causing other concrete and immediate injuries to Nevada's governmental interests and to the interests of its citizens. Public lands in a corridor in Nevada over three hundred miles long have been withdrawn so that DOE will eventually be able to transport spent nuclear fuel and other high level radioactive waste to Yucca Mountain. See 70 Fed. Reg. 51029, August 29, 2005. As a result, these lands cannot now be used for public roads, bridges, and maintenance, other public infrastructure projects, or private ranching and farming.

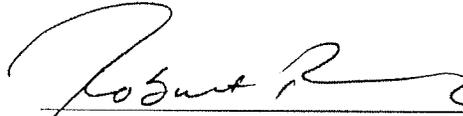
6. (a) The greatest threat to Nevada's economy and way of life from the repository stems from the intense negative perception and stigma associated by the public with a high-level radioactive waste repository, combined with the particular vulnerability of the Nevada

economy to changes in its public image, due to its reliance on the tourism and gaming industries;

(b) Each one-percent decline in spending in Clark County could produce an annual loss of 7,000 jobs and \$200 million in income (a conservative assumption in comparison to analogous cases);

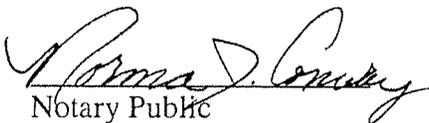
(c) Should just one hotel/casino decide not to locate in Nevada in the future, the immediate impact to Southern Nevada could be upwards of 14,200 jobs and almost \$500 million lost to the local economy;

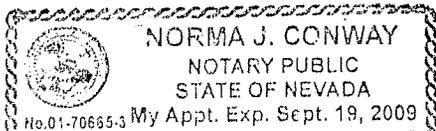
(d) The fiscal impact upon Nevada's state agencies, in year one of a decades-long Yucca Mountain project, has been calculated conservatively at \$486,485,229. (*Fiscal Impacts to the State of Nevada* [August 2000] by Urban Environmental Research, L.L.C.).


ROBERT R. LOUX

STATE OF NEVADA)
) S.S.
COUNTY OF)

SUBSCRIBED AND SWORN to before me, a Notary Public for the State of Nevada, appeared ROBERT R. LOUX and set his hand to the above document on this 4th day of NOVEMBER, 2005.


Notary Public



10 C.F.R. Provisions

§ 2.309 Hearing requests, petitions to intervene, requirements for standing, and contentions.

* * *

(d) Standing.

* * *

(2) State, local governmental body, and affected, Federally-recognized Indian Tribe.

(i) A State, local governmental body (county, municipality or other subdivision), and any affected Federally-recognized Indian Tribe that desires to participate as a party in the proceeding shall submit a request for hearing/petition to intervene. The request/petition must meet the requirements of this section (including the contention requirements in paragraph (f) of this section), except that a State, local governmental body or affected Federally-recognized Indian Tribe that wishes to be a party in a proceeding for a facility located within its boundaries need not address the standing requirements under this paragraph. The State, local governmental body, and affected Federally-recognized Indian Tribe shall, in its request/petition, each designate a single representative for the hearing.

* * *

(iii) In any proceeding on an application for a construction authorization for a high-level radioactive waste repository at a geologic repository operations area under parts 60 or 63 of this chapter, or an application for a license to receive and possess high-level radioactive waste at a geologic repository operations area under parts 60 or 63 of this chapter, the Commission shall permit intervention by the State and local governmental body (county, municipality or other subdivision) in which such an area is located and by any affected Federally-recognized Indian Tribe as defined in parts 60 or 63 of this chapter if the requirements of paragraph (f) of this section are satisfied with respect to at least one contention. All other petitions for intervention in any such proceeding must be reviewed under the provisions of paragraphs (a) through (f) of this section.

§ 2.700 Scope of subpart G.

The provisions of this subpart apply to and supplement the provisions set forth in subpart C of this part with respect to enforcement proceedings initiated under subpart B of this part unless otherwise agreed to by the parties, proceedings conducted with respect to the initial licensing of a uranium enrichment facility, proceedings for the grant, renewal, licensee-initiated amendment, or termination of licenses or permits for nuclear power reactors, where the presiding officer by order finds that resolution of the contention necessitates resolution of: issues of material fact relating to the occurrence of a past event, where the credibility of an eyewitness may reasonably be expected to be at issue, and/or issues of motive or intent of the party or eyewitness material to the resolution of

the contested matter, proceedings for initial applications for construction authorization for high-level radioactive waste repository noticed under § § 2.101(f)(8) or 2.105(a)(5), proceedings for initial applications for a license to receive and possess high-level radioactive waste at a geologic repository operations area, and any other proceeding as ordered by the Commission. If there is any conflict between the provisions of this subpart and those set forth in subpart C of this part, the provisions of this subpart control.

**§ 51.23 Temporary storage of spent fuel after cessation of reactor operation--
generic determination of no significant environmental impact.**

(a) The Commission has made a generic determination that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor at its spent fuel storage basin or at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for operation of any reactor to dispose of the commercial high-level waste and spent fuel originating in such reactor and generated up to that time.

(b) Accordingly, as provided in § § 51.30(b), 51.53, 51.61, 51.80(b), 51.95 and 51.97(a), and within the scope of the generic determination in paragraph (a) of this section, no discussion of any environmental impact of spent fuel storage in reactor facility storage pools or independent spent fuel storage installations (ISFSI) for the period following the term of the reactor operating license or amendment or initial ISFSI license or amendment for which application is made, is required in any environmental report, environmental impact statement, environmental assessment or other analysis prepared in connection with the issuance or amendment of an operating license for a nuclear reactor or in connection with the issuance of an initial license for storage of spent fuel at an ISFSI, or any amendment thereto.

(c) This section does not alter any requirements to consider the environmental impacts of spent fuel storage during the term of a reactor operating license or a license for an ISFSI in a licensing proceeding.

§ 63.21 Content of application.

(a) An application consists of general information and a Safety Analysis Report. An environmental impact statement must be prepared in accordance with the Nuclear Waste Policy Act of 1982, as amended, and must accompany the application. Any Restricted Data or National Security Information must be separated from unclassified information. The application must be as complete as possible in the light of information that is reasonably available at the time of docketing.

(b) The general information must include:

(1) A general description of the proposed geologic repository at the Yucca Mountain site, identifying the location of the geologic repository operations area, the general character of the proposed activities, and the basis for the exercise of the Commission's licensing authority.

(2) Proposed schedules for construction, receipt of waste, and emplacement of wastes at the proposed geologic repository operations area.

(3) A description of the detailed security measures for physical protection of high-level radioactive waste in accordance with § 73.51 of this chapter. This plan must include the design for physical protection, the licensee's safeguards contingency plan, and security organization personnel training and qualification plan. The plan must list tests, inspections, audits, and other means to be used to demonstrate compliance with such requirements.

(4) A description of the material control and accounting program to meet the requirements of § 63.78.

(5) A description of work conducted to characterize the Yucca Mountain site.

(c) The Safety Analysis Report must include:

(1) A description of the Yucca Mountain site, with appropriate attention to those features, events, and processes of the site that might affect design of the geologic repository operations area and performance of the geologic repository. The description of the site must include information regarding features, events, and processes outside of the site to the extent the information is relevant and material to safety or performance of the geologic repository. The information referred to in this paragraph must include:

(i) The location of the geologic repository operations area with respect to the boundary of the site;

(ii) Information regarding the geology, hydrology, and geochemistry of the site, including geomechanical properties and conditions of the host rock;

(iii) Information regarding surface water hydrology, climatology, and meteorology of the site; and

(iv) Information regarding the location of the reasonably maximally exposed individual, and regarding local human behaviors and characteristics, as needed to support selection of conceptual models and parameters used for the reference biosphere and reasonably maximally exposed individual.

(2) Information relative to materials of construction of the geologic repository operations area (including geologic media, general arrangement, and approximate

dimensions), and codes and standards that DOE proposes to apply to the design and construction of the geologic repository operations area.

(3) A description and discussion of the design of the various components of the geologic repository operations area and the engineered barrier system including:

(i) Dimensions, material properties, specifications, analytical and design methods used along with any applicable codes and standards;

(ii) The design criteria used and their relationships to the preclosure and postclosure performance objectives specified at § 63.111(b), § 63.113(b), and § 63.113(c); and

(iii) The design bases and their relation to the design criteria.

(4) A description of the kind, amount, and specifications of the radioactive material proposed to be received and possessed at the geologic repository operations area at the Yucca Mountain site.

(5) A preclosure safety analysis of the geologic repository operations area, for the period before permanent closure, to ensure compliance with § 63.111(a), as required by § 63.111(c). For the purposes of this analysis, it is assumed that operations at the geologic repository operations area will be carried out at the maximum capacity and rate of receipt of radioactive waste stated in the application.

(6) A description of the program for control and monitoring of radioactive effluents and occupational radiological exposures to maintain such effluents and exposures in accordance with the requirements of § 63.111.

(7) A description of plans for retrieval and alternate storage of the radioactive wastes, should retrieval be necessary.

(8) A description of design considerations that are intended to facilitate permanent closure and decontamination or decontamination and dismantlement of surface facilities.

(9) An assessment to determine the degree to which those features, events, and processes of the site that are expected to materially affect compliance with § 63.113--whether beneficial or potentially adverse to performance of the geologic repository--have been characterized, and the extent to which they affect waste isolation. Investigations must extend from the surface to a depth sufficient to determine principal pathways for radionuclide migration from the underground facility. Specific features, events, and processes of the geologic setting must be investigated outside of the site if they affect performance of the geologic repository.

(10) An assessment of the anticipated response of the geomechanical, hydrogeologic, and geochemical systems to the range of design thermal loadings under consideration,

given the pattern of fractures and other discontinuities and the heat transfer properties of the rock mass and water.

(11) An assessment of the ability of the proposed geologic repository to limit radiological exposures to the reasonably maximally exposed individual for the period after permanent closure, as required by § 63.113(b).

(12) An assessment of the ability of the proposed geologic repository to limit releases of radionuclides into the accessible environment as required by § 63.113(c).

(13) An assessment of the ability of the proposed geologic repository to limit radiological exposures to the reasonably maximally exposed individual for the period after permanent closure in the event of human intrusion into the engineered barrier system as required by § 63.113(d).

(14) An evaluation of the natural features of the geologic setting and design features of the engineered barrier system that are considered barriers important to waste isolation as required by § 63.115.

(15) An explanation of measures used to support the models used to provide the information required in paragraphs (c)(9) through (c)(14) of this section. Analyses and models that will be used to assess performance of the geologic repository must be supported by using an appropriate combination of such methods as field tests, in situ tests, laboratory tests that are representative of field conditions, monitoring data, and natural analog studies.

(16) An identification of those structures, systems, and components of the geologic repository, both surface and subsurface, that require research and development to confirm the adequacy of design. For structures, systems, and components important to safety and for the engineered and natural barriers important to waste isolation, DOE shall provide a detailed description of the programs designed to resolve safety questions, including a schedule indicating when these questions would be resolved.

(17) A description of the performance confirmation program that meets the requirements of subpart F of this part.

(18) An identification and justification for the selection of those variables, conditions, or other items that are determined to be probable subjects of license specifications. Special attention must be given to those items that may significantly influence the final design.

(19) An explanation of how expert elicitation was used.

(20) A description of the quality assurance program to be applied to the structures, systems, and components important to safety and to the engineered and natural barriers important to waste isolation. The description of the quality assurance

program must include a discussion of how the applicable requirements of § 63.142 will be satisfied.

(21) A description of the plan for responding to, and recovering from, radiological emergencies that may occur at any time before permanent closure and decontamination or decontamination and dismantlement of surface facilities, as required by § 63.161.

(22) The following information concerning activities at the geologic repository operations area:

(i) The organizational structure of DOE as it pertains to construction and operation of the geologic repository operations area, including a description of any delegations of authority and assignments of responsibilities, whether in the form of regulations, administrative directives, contract provisions, or otherwise.

(ii) Identification of key positions that are assigned responsibility for safety at and operation of the geologic repository operations area.

(iii) Personnel qualifications and training requirements.

(iv) Plans for startup activities and startup testing.

(v) Plans for conduct of normal activities, including maintenance, surveillance, and periodic testing of structures, systems, and components of the geologic repository operations area.

(vi) Plans for permanent closure and plans for the decontamination or decontamination and dismantlement of surface facilities.

(vii) Plans for any uses of the geologic repository operations area at the Yucca Mountain site for purposes other than disposal of radioactive wastes, with an analysis of the effects, if any, that such uses may have on the operation of the structures, systems, and components important to safety and the engineered and natural barriers important to waste isolation.

(23) A description of the program to be used to maintain the records described in §§ 63.71 and 63.72.

(24) A description of the controls that DOE will apply to restrict access and to regulate land use at the Yucca Mountain site and adjacent areas, including a conceptual design of monuments that would be used to identify the site after permanent closure.

United States Code Provisions

42 U.S.C. § 2239. Hearings and judicial review

(a)(1)(A) In any proceeding under this chapter, for the granting, suspending, revoking, or amending of any license or construction permit, or application to transfer control, and in any proceeding for the issuance or modification of rules and regulations dealing with the activities of licensees, and in any proceeding for the payment of compensation, an award or royalties under sections 2183, 2187, 2236(c) or 2238 of this title, the Commission shall grant a hearing upon the request of any person whose interest may be affected by the proceeding, and shall admit any such person as a party to such proceeding. The Commission shall hold a hearing after thirty days' notice and publication once in the Federal Register, on each application under section 2133 or 2134(b) of this title for a construction permit for a facility, and on any application under section 2134(c) of this title for a construction permit for a testing facility. In cases where such a construction permit has been issued following the holding of such a hearing, the Commission may, in the absence of a request therefor by any person whose interest may be affected, issue an operating license or an amendment to a construction permit or an amendment to an operating license without a hearing, but upon thirty days' notice and publication once in the Federal Register of its intent to do so. The Commission may dispense with such thirty days' notice and publication with respect to any application for an amendment to a construction permit or an amendment to an operating license upon a determination by the Commission that the amendment involves no significant hazards consideration.