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AGENCY FOR NUCLEAR PROJECTS

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June 4, 2007

Honorable Dale Klein  
Chairman  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Dear Mr. Chairman:

I am writing on behalf of the State of Nevada to ask the Commission to follow its rule and well-established practice to require the Department of Energy to file an application for a construction authorization ("LA") for the Yucca Mountain repository that is "complete in all material respects" and addresses all relevant safety issues rather than asking for them to be deferred until a later licensing stage. As explained below, Nevada makes this request to ensure that the Commission will conduct a fully independent review and fair adjudication of the proposed repository.

Nevada has been monitoring DOE's progress in developing the LA to the extent this is possible based on public meetings and information. In public statements, DOE remains determined to submit an LA by the end of June 2008. But that schedule appears increasingly ambitious given the quality assurance problems DOE must still address satisfactorily, the continued delays by EPA and NRC in promulgating final licensing standards, DOE's plans to make major changes in its Total System Performance Assessment and supporting documents, and other matters. DOE has recently confirmed that several of the major analyses required for licensing will simply not be complete by June 2008.

Several years ago, DOE's effort to certify the completeness of its document collection on NRC's Licensing Support Network met with failure because DOE had set an artificial and unrealistic schedule for itself. DOE certified its document collection

notwithstanding that millions of relevant documents were missing. The result was a three-year setback in DOE's actual certification schedule.

Because of DOE's determination to meet another artificial schedule – submitting an LA by June 30, 2008 – Nevada believes DOE is preparing to submit a materially incomplete LA, just like it submitted an incomplete LSN certification. This strategy is apparently based on DOE's expectation that NRC will allow DOE to defer addressing significant safety issues until the *operating* (receipt and possession) licensing stage, even though such issues are capable of being fully addressed in the LA for *construction* authorization, assuming a realistic LA filing schedule and, thus, a materially complete application.

As you know, DOE has already spent billions of dollars to characterize Yucca Mountain and prepare an LA. Nevada has long been concerned that such a huge financial investment in and institutional commitment to the project might prejudice (or at least create the appearance of prejudicing) NRC's independent safety review. NRC will no doubt promise that this huge investment and commitment will not in fact prejudice its LA safety review, and Nevada hopes NRC will fulfill that promise when the LA is filed. However, if DOE is allowed to proceed with repository construction prior to the resolution of significant licensing issues, the financial investment in and institutional commitment to the project will both increase to the point where a denial of the operating license would be almost like jumping on a railroad track to stop a speeding train.

NRC can minimize the potential prejudice to its operating license safety review by limiting the scope of its operating license review to those issues, such as construction adequacy, that cannot be or could not have been addressed and resolved before the construction authorization stage. In this way, NRC can defend against accusations of prejudice by proclaiming it did everything it could to minimize the problem in advance.

As the attached analysis shows, NRC confronted this precise regulatory issue when it developed its repository licensing regulations. After careful consideration of stakeholder comments, it firmly decided that the increased financial investment in and institutional commitment to Yucca Mountain that would result from repository construction should not be allowed to create either the appearance or the reality of prejudice to its operating license safety review. Accordingly, it decisively rejected a proposal to allow DOE to postpone the resolution of safety issues until after completion of a post-construction authorization research and development program, because project investment and institutional commitments would then be allowed to pile up and create the appearance or reality of prejudice to safety.

The attached analysis demonstrates that, in promulgating Part 63, NRC recognized the risk to fair adjudication posed by an incomplete LA that deferred resolution of significant safety issues until after issuance of the construction authorization, even though such issues were capable of resolution before that time.

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Nevada respectfully asks that you (1) reaffirm the Commission's commitment to an independent safety review and fair adjudication of Yucca Mountain that will avoid, to the maximum possible extent, the appearance that its safety judgment has been skewed by institutional and financial commitments to the project; and (2) confirm that the Commission will not docket any LA that asks NRC to allow significant safety issues to be deferred until the operating licensing stage, at least when those issues are capable of being fully addressed in the LA. Part 63 (§ 63.10) requires that an LA for Yucca Mountain be "complete and accurate in all material respects." Holding DOE to that precept, irrespective of any self-imposed LA submission deadline, will avoid major problems later on.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert R. Loux", with a stylized flourish at the end.

Robert R. Loux  
Executive Director

Attachment

cc (w/attach): TRB, ACNW, DOE (OCRWM)

### **ATTACHMENT: DEFERRAL OF SAFETY ISSUES IN LICENSING**

There is a long and illuminating history associated with the issue of deferral of safety issues in licensing. This history shows that, with respect to Yucca Mountain licensing specifically, NRC decisively concluded that it would *not* allow deferral of significant safety issues that could otherwise be addressed in the license application for repository construction authorization. It is important for NRC to ensure that DOE understands this history and regulatory conclusion, lest DOE undertake a licensing strategy that is inconsistent with Commission policy and precedent.

Decades ago, NRC (and its predecessor agency) licensed commercial nuclear power reactors using a two-step licensing process that allowed resolution of major reactor safety questions to be deferred until the operating license stage of review. A special regulation was promulgated by the old Atomic Energy Commission, and continued in effect by the NRC, that specifically permitted this to be done. This regulation, 10 C.F.R. § 50.35, provided that power reactor construction permits could be issued even when the applicant had not supplied the information necessary to resolve all significant safety issues, provided that “the applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any [unresolved] safety questions” and that there was “reasonable assurance that... such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction....”

This licensing approach led to the first important U.S. Supreme Court decision interpreting the Atomic Energy Act. In *Power Reactor Development Company v. Int’l Union of Electrical, Radio and Machine Workers*, 367 U.S. 396 (1961) (“*PRDC*”), the Court upheld the issuance of a construction permit for an experimental breeder reactor even though an important safety question, whether the reactor should be designed to accommodate a core melt accident, was deferred to the operating license stage of review, after consideration of the results from ongoing research and development. The Court’s decision in *PRDC* was based in important part on an assurance from the agency that the applicant’s investment in the reactor would be given no consideration whatsoever when it came time, at the operating license application stage, to decide finally whether the reactor was safe to operate. This assurance to the Court was necessary because if the decision to allow operation could be influenced by the investment that had been committed, deferral of safety issues while the investment piled up would have been prejudicial to safety. This would have been impossible to defend under the Atomic Energy Act.

The deferral practice remained extremely controversial, even after the Supreme Court sustained it. Many could not accept at face value the agency’s assurance that hundreds of millions of dollars of investment in a facility would be ignored when it came time to decide whether the completed facility should be allowed to operate. On the other hand, the nuclear industry came to believe that the practice was undesirable because the

deferral of safety questions often led to huge regulatory uncertainty and expensive retrofitting.

This practice and its significant criticisms were well-known to NRC when it first began to develop licensing procedures for a high-level waste repository in 10 C.F.R. Part 60. As explained below, after careful consideration of stakeholder comments, the NRC *specifically rejected* the two-step practice exemplified by the *PRDC* case as unsuitable for repository licensing.

Initially, NRC proposed repository licensing standards that included a provision like the one for nuclear power reactors in 10 C.F.R. § 50.35. A construction authorization could be issued for a repository even though the resolution of important safety issues was deferred to the operating (receipt and possession) license application stage. “Licensing Procedures for Geologic Repositories for High-Level Radioactive Wastes, Proposed General Statement of Policy,” 43 Fed. Reg. 53869, 53871 (Nov.17, 1978). However, when it came time to propose the actual rules, after consideration of stakeholder comments on the proposed policy statement, NRC changed its position. The Commission now wanted to be confident that “increased financial investments and institutional commitments do not thereby reduce the stringency of the subsequent safety reviews.” 44 Fed. Reg. 70408, 70410 (Dec. 6, 1979). Accordingly, the Commission devised a new repository licensing framework designed to avoid this problem to the maximum possible extent.

The Commission believed (in 1979) that commitments up to and including site characterization would not create the appearance that its safety reviews were being prejudiced, and therefore it was comfortable in deferring its formal licensing review until the construction authorization stage, after completion of site characterization. *Id.* However, the same could not be said for actual repository construction. Therefore, the new proposed Part 60 departed from the previous Proposed General Statement of Policy, and it included nothing like the provision in 10 C.F.R. § 50.35 allowing safety issues to be deferred until the operating (receipt and possession) phase of licensing. *See* proposed 10 C.F.R. § 60.31, 44 Fed. Reg. at 70418. Instead, an unqualified and definitive finding would need to be made before issuance of the construction authorization that (among other things) “the site and design comply with the criteria contained in Subparts E and F of this Part [which would contain the repository safety and security standards].” At the same time, proposed 10 C.F.R. § 60.24(b) was drafted carefully to describe post-authorization research programs as those intended “to *confirm* the adequacy of designs.” *Id.* (Emphasis added.)

After consideration of public comments, the final Part 60 licensing framework was published with no changes in the policies and provisions discussed above. 46 Fed. Reg. 13971 (Feb. 25, 1981). Also, no changes were made in these policies and provisions when the Commission adopted changes in Part 60 to conform to the Nuclear Waste Policy Act. 51 Fed. Reg. 27158 (July 30, 1986).

In 1999, when proposed 10 C.F.R. Part 63 was published for comment, the Commission explained that its provisions describing the content of applications, the need for a construction authorization, and the required findings for issuance of a construction authorization, were “similar to the licensing provisions of Part 60 with minor wording changes for simplification, clarification or to refer to the Yucca Mountain site.” 64 Fed. Reg. 8640, 8655 (Feb. 22, 1999). Indeed, the proposed wording was virtually identical. As was true for Part 60, proposed Part 63 contained no provision (like 10 C.F.R. § 50.35) allowing the resolution of safety issues to be deferred until the operating (receipt and possession phase) license stage.

The final Part 63 rule was similar to the proposed rule. NRC even rejected a DOE proposal to reduce the level of detail in the application regarding repository operating procedures by having NRC require only a proposed plan to develop those procedures, on the ground that “a proposed plan...is not sufficient to meet the requirement [for a construction authorization finding] at § 63.31(a)(6).” *Id.* DOE did not comment that a provision like 10 C.F.R. § 50.35 should be added to Part 63, and nothing like this provision was ever added.

In sum, for Yucca Mountain, the Commission adhered to its previous position that it was undesirable to defer safety issues while “financial investments and institutional commitments” increased, thereby creating the appearance that its later safety findings would be influenced by them. NRC carefully considered whether, for Yucca Mountain, the resolution of safety issues could be deferred from the construction authorization stage to the operating (receipt and possession) license stage, based on post-construction authorization research and development programs, and it firmly *rejected* such a licensing approach.

Contemporaneous NRC Staff interpretations of Part 63 support this conclusion. For example, in July 21, 1983 comments to DOE, the NRC Staff explained that “all issues related to Part 60 must be addressed and findings made before construction authorization,” that “no issues can remain for findings in later stages of the licensing process,” and that there may be some residual uncertainties at the construction authorization stage “so long as there is reasonable assurance that uncertainties have been bounded and can be accommodated.” *See* NRC 000016221 at p. 8.

Part 63 requires that an LA for Yucca Mountain be “complete and accurate in all material respects.” 10 C.F.R. § 63.10. The application must be “as complete as possible in the light of information that is reasonably available at the time of docketing.” 10 C.F.R. § 63.21. Nevada expects NRC’s review of DOE’s LA to conform to these well-understood precepts.

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