



# NRC NEWS

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## **“First Steps into the New Century”**

**By**

**The Honorable Greta Joy Dicus  
Commissioner  
U.S. Nuclear Regulatory Commission**

**at the  
NARUC Winter Meeting  
Renaissance Washington Hotel**

**Washington, D. C.  
March 6, 2000**

Good Morning. Once again, I am very pleased to be joining you for this meeting. I recognize that this is the first meeting of the new century. Notwithstanding, this year finds the NRC as busy as ever with progress in several areas that affect you and the utilities you regulate. Today I want to address several of these items which will impact you in the coming months and years.

The first of these items that I know is of great interest to you all is the proposed disposal of high-level radioactive waste in a geological repository at Yucca Mountain, Nevada. There has been much discussion of individual issues associated with Yucca Mountain where views may vary, but I want to talk for just a moment about the overall framework which will be progressing significantly in the next year or two. For one of the few times in the history of the U.S. Nuclear Regulatory program, the development of regulatory requirements that will govern a nuclear-related activity is proceeding in parallel with the concept definition and feasibility phases rather than following along after a period of operational experience. The advantage of this parallel approach is that the regulator has the opportunity to participate “up front” in establishing implementing regulations from an anticipatory rather than retrospective viewpoint.

These regulatory requirements are more results oriented, requiring that the operator demonstrate total system performance to isolate and contain high-level waste for a 100 year operational and a

10,000 year post-closure period, which adequately protects public health, safety, and the environment. This is what we call risk-informed, performance-based regulation.

The effort to develop a geological repository program, unlike the early development of nuclear power, is taking place in the context of not only greater public scrutiny, but greater public involvement in the process. The specifics of how that public input will be handled is still under discussion and I will bring you up to date on those developments.

As a result, we are addressing both highly complex technical issues and public communication issues at the same time. Consequently, I want to share with you how the Nuclear Regulatory Commission is approaching its role and responsibilities as an independent regulator with respect to the proposed Yucca Mountain geological repository.

I want to make clear at the outset that the Commission remains firmly convinced that a permanent geological repository is the appropriate mechanism for the United States to ultimately manage spent nuclear fuel and other high-level radioactive waste. The NRC continues to progress in its review and pre-licensing consultation under existing law related to the Department of Energy (DOE) program to develop a high-level waste repository. We will work with DOE to make sure we have in place all necessary regulatory requirements and to assure DOE understands those requirements. Nevertheless, if DOE decides to submit the application for construction and operation of Yucca Mountain, it will be up to DOE to submit an application that demonstrates compliance with the NRC regulatory requirements and the acceptability of the site for licensing will be based on the merits of the site as demonstrated in the application.

Through the site characterization and suitability process, DOE must determine if the proposed Yucca Mountain site will be able to perform as designed and intended to contain and isolate spent nuclear fuel and high-level waste, and be able to provide adequate and reliable protection of public health, safety, and the environment. If the results of the site characterization and suitability process are positive and there is subsequent approval by the President of the U.S. and the U.S. Congress, DOE will commence preparation of a license application for a geological repository at the Yucca Mountain site.

To address the public confidence aspects of this process and to permit timely and significant public involvement in the development of repository implementing regulations, NRC determined that it had an obligation to make public as soon as possible how it would implement its risk-informed, performance-based health and safety standards. Proposed rule 10 CFR Part 63 is the NRC's proposed regulation for a geological repository at Yucca Mountain and contains specific technical criteria to which the repository's operator will be legally bound to adhere. This proposed regulation was noticed in the Federal Register (**64 FR 8640**) in February of 1999 for public comment. We expect to complete this regulatory framework by issuing our final Part 63 later this year.

Additionally, the Environmental Protection Agency (EPA) issued their proposed geological repository radiation protection standards in August. The main difference between the two standards being the 25 millirem/year all-pathways (Total Effective Dose Equivalent) proposed by the NRC and the 15 millirem/year Committed Effective Dose Equivalent plus 4 millirem/year separate groundwater proposed by the EPA. As legislation mandates (Energy Policy Act of 1992), the NRC is required to conform Part 63 health and safety standards to the EPA's final rule. This same legislation also designates the NRC as the agency responsible for the implementation of Part 63 standards and requirements, and for ensuring that the repository operator demonstrates adequate compliance in protecting public health, safety, and the environment.

There has been much discussion here and elsewhere about the differences between NRC and EPA as regards the appropriate standards to use for Yucca Mountain. I want to say at the outset that both NRC's proposed standard and EPA's standard do protect the public. While I know EPA has argued forcefully for their proposed standard, I do not believe a careful, objective scientific analysis can conclude that application of either standard would endanger public health and safety in any way. I do not intend to go into detail here as to the body of scientific study supporting the NRC standards. Rather, there is another issue affecting this decision that is related to basic principles of "good regulation" which should be considered once health and safety issues have been addressed. It is my understanding that EPA's position on the appropriate Yucca Mountain radiological standards is at least partially motivated by a desire to have consistency with other EPA standards for hazardous materials. Actually, it is this consistency issue that most prompts me to stand behind the NRC proposed radiation protection standards.

I firmly believe that we should not have a mix of radiation standards applying to different situations with similar risks. The health effects of radiation do not vary based on the particular source of the radiation dose. To that end I have strived since arriving at the Commission for opportunities to use good science to promote uniformity in radiological standards whenever the opportunity arises. International radiological standards applied around the world are consistent with the standards NRC has promulgated for Yucca Mountain. I find compelling the benefits of having consistent radiation standards as opposed to trying to have consistent standards for materials that do not have similar health effects. While EPA may have a history of using groundwater standards as a measure for a variety of hazardous materials with different health and safety concerns, I believe the uniformity of effects from radiation doses no matter what the source dictate that we begin moving towards using uniform criteria across the board for radiological risks.

Turning back to our discussion of NRC's overall framework for considering a repository application, as previously mentioned, Part 63 is a risk-informed, performance-based regulation that would implement health and safety-based standards that apply solely to the proposed Yucca Mountain repository. The NRC's philosophy addressing risk-informed, performance-based regulation is an approach in which risk insights, engineering analysis and judgement (i.e., Defense-in-Depth), and performance history are used to ensure that all relevant hazards that could result in unacceptable consequences have been adequately evaluated and appropriate protective measures have been demonstrated to protect against radiation exposures and inadvertent material releases. As used in Part 63, integrated safety analysis (ISA) means joint consideration of safety measures that, considered separately, may not achieve the overall level of required protection. Specific repository performance objectives will have to be systematically demonstrated through the ISA.

Clear communication and the enhancement of public confidence through stakeholder meetings, public workshops, and our general efforts to be more open to constructive criticism, are elements of this regulatory framework. The NRC believes that stakeholder interactions provide early signals of the need for change and that by remaining receptive and responsive to those signals, the NRC can continue to improve its credibility as an open minded, objective regulator, while at the same time, ensuring a predictable and stable regulatory framework as demanded by those same stakeholders.

Just recently the NRC heard from interested parties, including local governments and Indian tribes, on issues related to DOE's circulation of its draft environmental impact statement for Yucca Mountain. NRC submitted comments to DOE for improving the DEIS last month.

Further, although some details are still being discussed, there will be an opportunity for a hearing on the DOE application once received by NRC as a capstone to several years of other informal opportunities for receipt of public input on various issues associated with Yucca Mountain. To bring you up to date in this area, you should be aware that the Commission is currently reviewing a proposal for a comprehensive rewrite of our rules for hearings, both informal and formal. Our goals include improving the efficiency of the hearing process, assuring undue expense and burden are not placed on intervenors, state and local governments, Indian Tribes, and applicants who participate in our proceedings, and providing more consistency across the various types of hearings we conduct. This comprehensive set of improvements to the hearing process will be published for public comment in the near future and, after consideration of public comments on the rule, I expect any final revised procedures to be in effect for the Yucca Mountain licensing proceeding.

## **License Renewal**

Because of its potential impact on your activities I will turn now to a discussion of developments related to License Renewal. The Commission will shortly decide upon the first application for license renewal involving the Calvert Cliffs Nuclear Power Plant. We received the staff briefing recommending renewal of the Calvert Cliffs license just last Friday. While I am sure the important thing for Baltimore Gas & Electric was that the staff has recommended approval of the license renewal, of importance to the Commission was that we met our goal of reaching a decision, whether approval or disapproval, within the 30-36 month timeframe we set for ourselves. It also appears that we will meet that 30 month goal with respect to the second renewal application for Duke Power's Oconee Plant with no detriment to public health, safety and welfare. These proceedings did not have hearings since intervenors did not meet requirements for being entitled to a hearing. The intervenors have challenged in federal court certain procedural aspects of the hearing process, in particular certain aspects related to time limits for submittal of valid hearing issues. The D. C. Court of Appeals heard oral argument on that appeal last Thursday and the Commission is hopeful that the validity of its procedures will be affirmed by the court.

We expect to receive increasing numbers of license renewal applications. We have recently received the renewal application for Arkansas Nuclear One and Hatch Nuclear Power Plants. The licensee Turkey Point has also informed the NRC of their intent to submit a license renewal application in 2000. A number of other licensees have indicated interest in pursuing license renewal but have not committed formally to an application submittal date. We have every reason, however, to believe that the pace of applications will increase. NRC is already planning on resource adjustments necessary, and maximum use of lessons learned in the first few applications, to assure that all health and safety issues are reviewed and addressed in a timely manner as we consider these renewal applications.

NRC recognizes that long term planning by utilities, as well as PUC's, requires early decisions on whether plant licenses will be renewed or whether plans must be made for replacement power. For that reason NRC's regulations (10 CFR Part 54) allow utilities to apply for license renewal 20 years prior to the expiration of their current operating license. With our experience with the first two applications we have every reason to believe that these schedules will allow sufficient time for utilities and PUC's to plan for future power needs.

That concludes my prepared remarks and I would be happy to answer any questions you may have on these or other NRC activities.