



NRC NEWS

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Office of Public Affairs

Telephone: 301/415-8200

Washington, DC 20555-001

E-mail: opa@nrc.gov

Web Site: <http://www.nrc.gov/OPA>

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“SHARING IDEAS AND INFORMATION FOR NEW REGULATIONS”

By

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

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Introduction

Good Morning! I am very happy to be here with you this morning in this beautiful resort and talk about sharing in this new competitive environment. When I was invited to this conference by Mr. Mellor and told about the theme, “Engaging and Exchanging for Safety: How to Share in a Competitive Environment,” it was at first glance hard to see how the NRC could fit into the overall theme. We have no problem with the first part of the theme, **Engaging and Exchanging for Safety**, since safety is the U. S. Nuclear Regulatory Commission’s main focus. I say this mainly because of the second part of the theme, **How to Share in a Competitive Environment**. The first thing that comes to mind in this second part of the theme is the commercial sector; the federal government, especially a regulator like the NRC, does not come to mind.

But it does not take long to determine that the NRC is completely involved in this new environment. In essence, the NRC is very involved in sharing - that is the sharing of ideas and the sharing of information. We share not only with the industry but with all our other stakeholders. By sharing, we make the regulations better, by sharing, we make our information easier to understand, and by sharing, we get the stakeholders involved. While the NRC has always shared information with its

stakeholders, in the last few years, we have made Public Involvement a priority. Due to our new performance goal of increasing public confidence in the NRC Strategic Plan, we have begun to increase and monitor our stakeholder involvement.

This morning, I want to talk about my thoughts on sharing, and provide some specific examples of how that sharing is producing good results in evolving regulatory issues that will ultimately lead to NRC Policy. It must be understood that the NRC by statute does not promote the nuclear industry, instead the NRC is charged with the responsibility to ensure public health and safety, and protection of the environment when nuclear materials are used and when nuclear power is generated. This is an important concept that needs to be remembered.

We are at a very exciting time for nuclear power in the world and in the United States. The energy crisis in California has perhaps had some influence in the way the nation thinks about nuclear power. The National Energy Policy published in May of this year calls for nuclear power to be a component in the mix of technologies that shape the national energy strategy. Congress has a strong interest in energy legislation, as reflected in several bills that are already pending. A resurgence in commercial nuclear power appears more and more a reality.

Sharing Ideas and Information

I believe that in order for our regulatory reform goals to be achieved, they must be goals that have been developed by the sharing of ideas and information. We will not be successful unless we work diligently to consider all relevant concerns.

The Commission has demonstrated a willingness to re-examine our existing programs in an open, fundamental manner; a re-examination transparent to all our stakeholders. In this new environment, we have developed new processes, revised existing ones, and ensured that these processes consider the decades of industry and NRC experience. We continue to make better use of development in risk assessment methodology to assist us to become more effective and efficient in our regulations.

We have enjoyed an improved relationship with the nuclear industry and other stakeholders, in part; because we are better at sharing information. We must continue to communicate and get the public involved in good faith. The proper sharing of information, elicits trust, confidence and support from all our stakeholders.

The NRC is an independent government agency, but independence does not mean isolation. It is in everyone's interest for all organizations to embrace a more open approach for dealing with issues and concerns.

This sharing extends to the international nuclear community. We must always remain open to new ideas, understand international challenges, and be supportive of international initiatives designed to improve nuclear safety. The NRC and the U.S. nuclear industry cannot turn inward. In order to be successful, we must remain open-minded, realize that we can learn, share our experiences and consider how to participate more effectively and efficiently in the international arena.

Revisions to Decommissioning Regulations

Let me talk more about specific work. In the 1990s, the NRC initiated an effort to revise the regulatory requirements for decommissioning nuclear power plants. The final rule for decommissioning

was issued in 1997. Now the decommissioning regulatory improvement effort has focused on revisions to requirements in the areas of insurance, emergency preparedness, and safeguards because existing regulations may present a regulatory burden to decommissioning without apparent commensurate safety benefits.

Today, of course, it appears that fewer stations will experience early or end-of-life shutdowns. License renewal has become a reality and representatives of the industry have suggested that most licensees if not all, will opt for renewal. That might suggest that the NRC should not expend resources on decommissioning regulations. However, the fact remains that we do have stations undergoing decommissioning and stakeholders have identified additional issues that must be addressed. Identification of these issues is the result of our ongoing efforts to involve all stakeholders in our decisionmaking process - - to effectively communicate.

It was last year, that the NRC staff briefed the Commission about ongoing efforts to improve decommissioning regulations. The staff proposed a risk-informed approach to use risk insights to guide the development of new regulations and for reviewing exemption requests.

Last month, the NRC staff submitted a paper to the Commission on decommissioning of nuclear power plants in which the staff defined several policy issues and recommended options. This paper has been made public prior to a Commission decision on the policy issues and options. Once these options are approved by the Commission, the staff can proceed with decommissioning rulemaking in three areas: safeguards, emergency preparedness, and insurance. The Commission has been reviewing the staff's paper on this decommissioning effort and has not yet made any decisions. But let me share some information on the issues.

The technical basis needed to support the decommissioning regulatory improvements effort has been difficult to develop. This has been partly due to an incomplete understanding of the zirconium fire risk in the spent fuel pools. In order, to get a better understanding of the zirconium fire risk, the staff conducted a detailed study on spent fuel pools.

The risk from a zirconium fire was examined in the study for a generic decommissioning plant. The study quantified the events and the frequency of those events that could lead to spent fuel uncover. The zirconium fire could be ignited upon fuel exposure which could occur when the pool loses both all its water and the multiple ways to supply the pool with water. This kind of fire can be a significant problem because it has the potential for a large radiological release. The initiating frequency for fuel uncover, however, was determined to be very low and dominated by the frequency of earthquakes. Therefore, a very significant finding coming out of the study was that even though the risk was very small, a zirconium fire in the spent fuel pool could not be ruled out. In short, a low probability but high consequence event.

The technical study of spent fuel pool accident risk represents an important advancement by establishing the level of risk associated with decommissioning plants. The study identified that the design and operational features necessary to ensure risks to the public from these shutdown facilities were sufficient and the risks were relatively small. The NRC staff considers the risk insights from this study to be generically valid and sufficiently robust that they may be used as the basis for a regulatory framework applicable to decommission plants. This validity and robustness exist even considering the large uncertainties inherent in estimating the earthquake hazards.

Let me point out that the focus on these proposed revisions to decommissioning regulations are in keeping with the NRC Strategic Plan, that is the performance goal to reduce unnecessary regulatory burden. This performance goal has developed as a result of the years of sharing opinions and ideas on the regulatory framework. Another issue that is embedded in the revisions to decommissioning, is the idea to concentrate more on the safety significant issues and less on the less significant issues. But once again, the idea of providing attention based on safety significance has come about through numerous sharing of ideas and opinions with our stakeholders.

Nuclear Waste Disposal

Let me talk to you about another issue of vital importance, radioactive waste disposal, including the disposal of spent nuclear fuel and other high-level radioactive waste as well as low-level radioactive waste. As you are aware, last month the Environmental Protection Agency (EPA) published its final generally applicable radiation protection standards for the proposed Yucca Mountain repository site. This finalization is a very important step in progressing toward a site suitability determination and the eventual decision of whether or not to recommend the Yucca Mountain site as a permanent geologic repository. This standard setting decision provides the NRC with the clarity needed to move forward in finalizing our site specific regulatory framework (10 CFR Part 63), as well as other related documents that are dependent upon a final implementing regulation. This decision is also of critical importance to the Department of Energy (DOE), which is responsible for generating and providing the necessary site characterization information and data, that will be relied upon to demonstrate compliance with the final radiation protection standards.

As mandated by Federal legislation, the NRC is responsible for conducting both pre-licensing and licensing activities, if such a decision is made. Within the context of NRC's pre-licensing responsibilities, a number of steps have been completed. For example, staff has completed review of the DOE Viability Assessment, the Draft Environmental Impact Statement (DEIS), and the Supplement to the DEIS. Additionally, staff is also in the process of finalizing its review of DOE's proposed final siting guidelines (10 CFR Part 963). In May of this year, DOE completed another step in the site characterization process when it released its Yucca Mountain Science and Engineering Report, which was developed in support of a site recommendation decision. The NRC was provided with a copy of the report and staff is currently reviewing its contents. In the report's Executive Summary, DOE states the following, "Before any public hearings, the DOE will make available for public review, additional information and analyses that would be part of the basis for any site recommendation decision, including the results of a preliminary evaluation of the site's performance against DOE's proposed site suitability guidelines (Part 963)." In order to maintain DOE's projected schedule for a site suitability determination and a possible site recommendation, the NRC would anticipate the availability of these documents by mid to late summer.

Under the Nuclear Waste Policy Act, the NRC's comments on the site suitability report are to accompany DOE's site recommendation when it is submitted to the President. Assuming that DOE's schedule holds, and the Secretary of Energy decides to move forward, DOE will submit its site recommendation to the President in the early part of 2002. If the President and the Congress approve the site recommendation, the Secretary of Energy would then submit a license application to the NRC for authorization to construct a repository. Additionally, DOE would also have to submit an amendment to the construction license and receive NRC approval and authorization to receive and possess any spent nuclear fuel or high-level waste.

Within the licensing context, and as mandated under the Energy Policy Act, the NRC is required to develop its own site specific technical requirements and criteria which conform to the promulgated radiation standards of the EPA. The NRC is in the final stage of its revision efforts for finalizing its Part 63 regulatory framework. In summary, the Part 63 regulatory requirements are specific to implementation and oversight at Yucca Mountain DOE must be able demonstrate compliance with the promulgated standards under a variety of assumptions and conditions, over a 10,000 year post-closure period. The development of Part 63 and the related Yucca Mountain Review Plan embody the transition from a largely deterministic to a more risk-informed and performance-based approach. If a license application is submitted, the public can be assured that the NRC will conduct an extremely thorough, objective, and independent review, and will premise its decision on sound science and engineering and ultimate protection of the public, the worker, and the environment.

As is evident, the potential licensing of the Yucca Mountain repository will present a variety of unique and difficult challenges. The NRC stands ready to face these challenges, and will conduct its business operations in an open, independent, and transparent manner, as we have consistently done for the pre-licensing portion of this very important process.

Let me turn now to low-level radioactive waste disposal. In my view, the Compact System in this country is not working. With the eventual closure of the Barnwell disposal facility to States outside the Atlantic Compact, the absence of progress in other Compacts to site low-level waste disposal facilities, and with few other options, accessibility to facilities for the disposal of low-level radioactive waste could become a determining factor in whether a site can be decommissioned economically and may also have a detrimental effect on operations. Even if Envirocare of Utah obtains State approval for disposal of Class B and C wastes in the near future, there is still the potential that the decommissioning process for many sites will be very limited and routine operations potentially affected.

Alternatives to disposal at a regional low-level waste disposal facility may be feasible, but all face considerable uncertainty. The costs for long-term maintenance can be significant and could become a factor in the economics of the alternatives to waste disposal at a low-level radioactive waste facility. Moreover, most of the alternatives have one significant weakness -- the need to provide for long-term institutional control. States or other governmental agencies may not be willing to accept the responsibility. In addition, the reliability of institutional controls and other stewardship measures over the long-term were challenged in a recent National Academy of Sciences report. Consequently, it is unclear whether these alternatives will, in the end, prove to be acceptable. Within the limits of its regulatory authority, the Commission is considering alternatives that may address, to an extent, the lack of disposal options, such as, "rubblization" and "entombment."

Conclusion

In conclusion, it is an exciting time to be a member of the Commission. I have mentioned only a few of the issues before us. If the use of nuclear energy increases as part of a National Energy Plan, we may well have additional policy and regulatory issues to address. The possible regulatory oversight of some DOE facilities is still of interest to some members of the Congress.

Whatever the future may hold, we will continue to share our ideas and information and reach our decisions in a transparent fashion with meaningful participation by our stakeholders.