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“THE ROLE OF THE REGULATOR IN GAINING PUBLIC CONFIDENCE”

Remarks of
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at the
INTERNATIONAL CONFERENCE ON GEOLOGICAL REPOSITORIES
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Good afternoon. It's a pleasure to be here in Denver today and to participate with you in this Conference as we address common challenges affecting geological repository programs. My topic this afternoon, “**The Role of the Regulator in Gaining Public Confidence,**” is a particularly interesting and important one, for at least three reasons:

- **First.** 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. In this case, I'm referring to the proposed disposal of high-level radioactive waste in a geological repository at Yucca Mountain, Nevada.

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.

- **Second.** 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.**
- **And Third.** 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.

As a result, we in the U.S. are addressing both highly complex technical issues and public perception 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.

Based on the Nuclear Waste Policy Act of 1982, as amended, and the Energy Policy Act of 1992, before licensing a repository, the NRC must consult extensively with the DOE to develop a regulatory framework, to evaluate the DOE site characterization and proposed waste form, and ultimately, to determine whether the NRC can authorize repository construction and receipt of waste.

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 for public comment. In the coming year, we expect to complete this regulatory framework by issuing our final Part 63.

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.

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.

Such integration will include fire protection, radiation safety, criticality safety, and chemical safety measures and will ensure that the repository operator includes the following in the final ISA:

- ☞ Identification of safety significant potential hazards;
- ☞ Potential initiating events and event sequences;
- ☞ Potential consequences; and
- ☞ Identification of safety significant risk controls that are relied on to prevent and/or mitigate initiating events, such as:
 - ▶ Natural and engineered barriers;
 - ▶ Monitoring equipment; and
 - ▶ Surveillance equipment.

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.

With respect to our role as a regulator and responsibility to develop implementing regulations for the Yucca Mountain geological repository, the NRC has initiated a number of programs and used various modes of communication and public outreach to include our stakeholders.

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.

One of the most significant steps we took to increase public understanding and trust, and to ensure that all NRC employees understood the importance of that outcome, was to include a specific public confidence goal in our Strategic Plan. The goal specifically states:

“Provide the public, those we regulate, and other stakeholders in the national and international community, with clear and accurate information about, and a meaningful role in, NRC’s regulatory program so that there will be respect and confidence in that program.”

This statement endorses our belief that building and maintaining public trust is critical to carrying out our mission to protect public health, safety, and the environment, and insuring common defense and security. To be an effective steward for nuclear safety, our actions must be such that the public, those we regulate, and other stakeholders in the national and international community have respect for and confidence in the NRC.

With respect to early identification of public concerns and being responsive to those concerns, we extended the comment period on our Part 63 rulemaking by 51 days **(from May 10 to June**

30, 1999) in response to concerns raised by citizens of the State of Nevada in one of our public meetings. To date, the NRC has conducted five public meetings on the proposed Part 63 in the State of Nevada, and we have learned a great deal from this involvement. For example, in April, as a result of the first two meetings, we discovered that many members of the public did not understand the NRC's role in ensuring protection of public health, safety, and the environment and did not recognize NRC's independence from the DOE.

In preparation for the follow-on meetings, we actively sought improvements in our ability to communicate with, and address the concerns of the citizens of Nevada.

Additional training information and courses in certain focus areas were offered to our staff as part of our effort to improve the effectiveness of our public meetings. This training included the following areas:

- ☞ Guidelines for Conducting Public Meetings;
- ☞ Facilitating Public Meetings;
- ☞ Effective Communication;
- ☞ High-Risk Low Trust Communications;
- ☞ Fundamentals of Clear Writing; and
- ☞ Utilization of Plain Language.

As a result of our training and stakeholder feedback, we determined that the following messages had to be conveyed at the beginning of each public meeting and effectively factored into all agenda topics:

- ☞ What precisely the NRC's role is in regulating high-level waste geological disposal in the U.S.;
- ☞ That building and maintaining trust is critical to the NRC's role and to our overall regulatory effectiveness;
- ☞ That we the regulator, must not only accept doing the job right, but must also be perceived and accepted as doing it right; and
- ☞ We must instill regulatory oversight that is both visibly effective and effectively visible;

The feedback from these follow-on meetings was extremely positive as stated by our Nevada stakeholders, which included the local press.

To back-up these messages supporting the importance of keeping the public informed and involved, the NRC also put in place specific mechanisms for our Part 63 geological repository regulatory program, as explained in our Citizen's Guide to U.S. Nuclear Regulatory Commission Information and in our Public Involvement in the Nuclear Regulatory Process information booklet, such as:

- ☞ All NRC and DOE technical exchange sessions are open for public observation and are noticed in the Federal Register;
- ☞ On a biweekly basis, the NRC mails a schedule of meetings to more than 300 interested parties;
- ☞ Copies of documents are also mailed directly to those who have made their interest known, which include:
 - ✓ DOE Quality Assurance Documents;

- ✓ Site Visit Documentation;
 - ✓ Workshop Information;
 - ✓ Technical Positions;
 - ✓ Contractor Reports; and
 - ✓ Safety Evaluations.
- ☞ Availability of the NRC Phone Number for obtaining information on Future Meetings (301) 415-6632;
 - ☞ NRC World Wide Web Site <<http://www.nrc.gov>>; and
 - ☞ Local Public Document Rooms around the country.

As an agency, we have learned that establishing and maintaining an effective and efficient public communications program not only helped to increase our overall working relationship with our stakeholders, but helped to reduce our overall cost and resource burdens as well.

In addition to the procedural mechanisms I've described, I also believe that having a risk-informed performance-based regulatory program, and specifically, having technically sound performance indicator data available to the public, will help to increase public trust and confidence in what we are doing and further clarify our regulatory role. In other words, making our decisions and the basis for them **TRANSPARENT**. In order that our decisions relative to Yucca Mountain are transparent, we try to ensure that:

- ☞ The public has a clear understanding of NRC's Part 63 regulatory development process and how they can participate in its development;
- ☞ The NRC's risk-informed performance-based regulatory philosophy be clearly explained to our stakeholders;
- ☞ Public issues and concerns addressing our proposed health and safety-based standards are received, evaluated, and reconciled in a professional and timely manner;
- ☞ Changes incorporated into Part 63 as a result of public input are conveyed back to those stakeholders; and
- ☞ It is clearly understood, that the role of the regulator (NRC) is to ensure that the Yucca Mountain geological repository is designed, constructed, operated, and eventually closed in compliance with final Part 63 implementing regulations.

Our Part 63 transparency process relies on public involvement at all stages of development affording the opportunity for all interested stakeholders to be able to evaluate the data and judge for themselves.

I believe that in order to build and maintain public trust and confidence in what we do, the NRC has a responsibility to:

☞ ***“Give someone who really wants to know, who has a true interest in it, the opportunity to evaluate the data and judge for themselves.”***

As I previously discussed and with respect to the lessons learned from our public meeting sessions with the citizens of Nevada, I cannot emphasize enough the importance of being receptive and responsive to identified concerns.

Self-assessment and course correction are essential to understanding and improving public outreach. Internally, the NRC conducts self-assessments and implements approved recommendations on how to improve the quality, clarity, and credibility of the agency's communications with members of the general public. Yucca Mountain implementing regulations are included in this effort. In the spring of 1998, NRC staff presented the Commission with an extensive report containing more than 40 recommendations aimed at improving these communications.

The Commission approved most of the recommendations, and the staff is currently implementing them. These initiatives included:

- ☞ Developing an audio/visual library for photographs to be used in briefings and publications;
- ☞ Reviewing training programs to incorporate communications techniques;
- ☞ Continually updating NRC's World Wide Web page; and
- ☞ Developing a public involvement handbook as a staff reference and training tool.

We have found that conducting these public communication self-assessments has helped the NRC to improve its effectiveness in many public outreach areas. It has enabled us to be more effective in being able to:

- ☞ Identify public concerns earlier;
- ☞ Provide clearer oral and written communications;
- ☞ Allow earlier public involvement in NRC activities;
- ☞ Respond more effectively to public concerns; and
- ☞ Improve public access to information.

In concluding this session, I want to share with you what recent experience has taught us in working with our stakeholders regarding the overall Part 63 Yucca Mountain regulatory development process.

WHAT RECENT EXPERIENCE HAS TAUGHT US

- ☞ That Notice and Comment Rulemaking is more effective with greater public outreach;
- ☞ That in order to interact effectively and efficiently with the public, we the NRC, needed additional training and preparation;
- ☞ It is vital to effectively use **“Plain Language”** in communicating risk concepts and terminology, so that the public can understand risk-informed regulatory decision making;
- ☞ That we need to build an up-front solid foundation in order to have long-term constructive dialogue and a trusting relationship;
- ☞ That we need to provide complete, clear, and accurate information concerning NRC's roles and responsibilities, as well as, the interacting roles and responsibilities of other Federal agencies involved in the process;

- ☞ We must emphasize the message that the NRC is an **OBJECTIVE REGULATOR**, and be able to demonstrate this through fair and unbiased analysis of the facts;
- ☞ Within reason, we must be responsive and accommodating to the public's logistical needs;
- ☞ That people need to know how they can participate in the regulatory process; and
- ☞ Commitment to public involvement is time and resource intensive, but less costly in the long run.

As I hope my presentation has made clear, the regulator in today's environment must have more than a sound technical basis for its regulatory requirements. It must also ensure that these requirements are understood and are reasonably acceptable to the public whose safety is our first priority. Although we have more to learn as the Yucca Mountain review process continues, I hope that the insights and examples I've shared with you today will provide some important benchmarks that will be of benefit to you as you address similar issues on your respective internal repository concerns. Thank you.