

United States Nuclear Regulatory Commission
Office of Public Affairs
Washington, DC 20555
Phone 301-415-8200 Fax 301-415-2234
Internet:opa@nrc.gov

S-99-28

“The Future of Nuclear Power Regulation: The ‘Right’ Regulation”

delivered by

Ellis W. Merschoff, Regional Administrator
Region IV

for

The Honorable Greta Joy Dicus

Chairman

U.S. Nuclear Regulatory Commission

ANS/NRC Utility-NRC Interface Workshop

Arlington, Texas

September 16, 1999

Introduction

Good morning, ladies and gentleman.

Some of you may know that although I am an Arkansas native, I have some deep roots in Texas. So I am very pleased to be here today for two reasons. First and foremost, I have the opportunity to discuss with you some of the important changes that are taking place in the way the NRC regulates power reactors. Secondly, I have the opportunity to reminisce about the days when I thought terms like “pilot program” were only related to someone who flew planes!

I would like to commend the hosts and organizers of this Utility/Nuclear Regulatory Commission Interface workshop. Workshops, like this, promote dialogue and discussion amongst stakeholders and are vital for the enduring success of both near-term and long-term initiatives to improve our regulatory framework.

The Environment for Change

As you know, the NRC has been going through a period of considerable transition, with sweeping changes to many of our regulatory processes. I can tell you that the Commission’s attention has, in fact, been focused on the future, but in this sense: We are seeking to make changes in a way that will endure, that will continue to ensure safety, and that will provide stability, clarity, and predictability in the regulatory process. The highest NRC priority remains to fulfill our mission of ensuring reasonable assurance of adequate protection of the public health and safety as well as the environment.

The Commission has demonstrated a willingness to openly re-examine our existing programs in a fundamental manner. We have developed new processes, revised old ones, and ensured that these processes consider the decades of industry and NRC experience. We continue to make better use of developments in risk assessment methodology and, while we have established a record of accomplishments, we can and will do more.

This does not mean bowing to stakeholder and political pressures, however. This means that we will seek to better understand the concerns of our stakeholders and be open to changes that make sense. When the dust settles, we will find the “right” regulation. The “right” regulation will be based on science, will be appropriately risk-informed, and will focus on maintaining safety, reducing unnecessary regulatory burden, enhancing public confidence, and improving our operational effectiveness and efficiency.

The Near Future

Our short term milestones for regulatory reform are not modest. They are, in fact, challenging and will require the resolve of the NRC staff, licensees and stakeholders to complete. But they are achievable, and in many respects, they are necessary.

Reactor Oversight Process

Over the next year, perhaps the most visible change that will take place is with the way the NRC oversees safety at power reactor facilities. The new Reactor Oversight Program is in the “pilot program” phase - no airplanes here - and is being implemented at nine reactor sites - at least two

in each of NRC's four Regions. The new program, now four months into the "pilot" phase, offers sweeping changes to our inspection, assessment, and enforcement processes. The assessment framework is built on the concept of "cornerstones" - key areas of licensee performance that must be monitored to ensure that unacceptable public risks do not arise from nuclear power reactor operations.

The Commission believes that these broad-scale changes will allow the NRC staff to make conclusions about licensee safety performance that are objective, predictable, defensible, and more easily communicated. We also expect the process to stimulate more timely NRC and licensee responses when there is declining safety performance. As an added benefit, this new approach will reduce unnecessary inspection and enforcement burden, so that licensees and the NRC can focus resources on those aspects of the plant that have the greatest effect on safety.

As I mentioned earlier, we began the pilot process in June 1999. We intend to make major process changes incrementally, to allow testing and adjustment during piloting and implementation. Much of the work that will remain in the upcoming year relates to bench-marking, pilot evaluation, procedure development, and NRC staff training. We plan to implement the revised process for all 103 operating reactors by mid-2000.

Reactor License Renewal

Another highly visible area is the area of Reactor License Renewal. I am pleased to tell you that the power reactor license renewal process is progressing well, -- extremely well by most measures. The first two applications, Calvert Cliffs and Oconee nuclear power plants, are scheduled to be completed on schedule - by May 2000 and August 2000, respectively. We had initially projected a 30 -36 month schedule to complete license renewal reviews and I am optimistic that the staff, industry, and Commission will be able to further streamline the license renewal process.

Perhaps the most important performance indicator that speaks to the initial success of the reactor license renewal program is interest and queuing that is taking place. Utilities are lining-up for staff resources to support license renewal for their facilities. Arkansas Nuclear One, Hatch Units 1 and 2, Catawba Units 1 and 2, McGuire Units 1 and 2, Peach Bottom Units 2 and 3, Surry Units 1 and 2, and North Anna Units 1 and 2 nuclear power plants, for example, have all indicated their plans to submit a license renewal application within the next two and one half years. The NRC will meet this challenge and ensure that resources are available to support the reviews, resolve technical issues, and continue to implement process improvements.

Deregulation of the Electric Power Industry

A utility's decision to seek license renewal considers many factors. Our efforts to provide stability, consistency, and predictability in the license renewal process, we believe, will minimize the impact of "regulatory uncertainty" in that decision-making process. Similarly, as the electric power industry moves toward deregulation, we are examining our processes to ensure that regulatory impacts are more fully understood and that our review processes are properly focused, stable, predictable and, where appropriate, made more effective and efficient.

Since 1995, the NRC has engaged in a comprehensive effort to address the implications of electric utility deregulation for the adequate protection of public health and safety. In 1996, the staff developed an action plan and, in 1997, the Commission issued a policy statement on restructuring and deregulation of the electric utility industry. We continue efforts to streamline the adjudicatory

process and, where appropriate, revise our requirements and have established review guidance for areas such as financial assurance and foreign ownership. We have also determined, in a far-reaching adjudicatory decision, that the Atomic Energy Act did not contemplate antitrust reviews following the issuance of an initial operating license and, therefore, we will no longer conduct antitrust reviews on license transfers.

The industry is being reshaped by deregulation. With the advent of increased competition in the electric power industry, the NRC has received an increasing number of requests to transfer power reactor operating licenses. Over the past 5 years, the NRC has reviewed almost 60 license transfer applications, including 21 in 1998. License transfer requests have tended to increase as the pace of deregulation has accelerated. For the first time, the NRC reviewed and approved applications for the sales of entire nuclear units, Three Mile Island Unit 1 and Pilgrim Station, from one owner to another, unrelated owner. In addition to other sales of nuclear power plants, we expect to continue to receive license transfer requests for mergers, holding companies, and operating companies involving current NRC power reactor licensees.

The Year 2000 Computer Problem

So far my discussions have focused on the near-term regulatory reforms. And while it would be a stretch to lump our regulatory actions associated with the Year 2000 (Y2K) computer issues into this category, I must share with you some of the insights that we have gained from dealing with this insidious problem.

Consistent with our goal of increasing public confidence, I would be remiss if I did not take this opportunity to mention the status of Y2K readiness at U.S. nuclear power facilities. Based upon our review of the responses from the nuclear power industry concerning Year 2000 readiness, our independent inspection efforts at all 103 operating units, and our ongoing regulatory oversight activities, we have concluded that the Y2K issue will not adversely affect the continued safe operation, or if necessary, the safe shut down of U.S. commercial nuclear power plants.

However, I would like to leave you with a slightly different perspective on the Y2K situation. It is an opinion that I shared at a recent NRC Y2K tabletop exercise. I'm sure that those of you who have been intimately involved with this issue, have found it to be a challenge. But, I believe, it is also an opportunity. On the Federal level, the coordination and cooperation between Federal agencies on the Y2K issue are a foundation upon which the Federal government is building for future cooperative efforts. Much of the effort being spent on the Y2K problem will help Federal agencies better respond to emerging unconventional threats to the United States, such as terrorist acts. The NRC has purchased satellite phones for all of our nuclear power plant sites as part of our Y2K contingency plan, and many utilities are also investing in upgraded communication systems. As a result, if a tornado were to destroy the commercial telephone lines into a site, as well as our own direct access lines, as it did last summer during a tornado at Davis Besse, we will still be assured of communications with the site. These are just a few examples of how the Y2K effort will pay off long after we stand down from staffing our operation centers on New Year's Day.

Tomorrow, I had planned to visit the Comanche Peak nuclear station. As part of the visit, I planned to observe a scenario on the facility simulator that models a potential Y2K problem. While the most likely Y2K scenario would result in continued power operations -- that is, no effect on plant operations -- there is additional confidence in knowing that licensees are training so that they will be prepared to handle the most unlikely worst case scenarios.

Not so Distant future

Risk-informing our regulations

On a recent visit to a nuclear power plant, senior utility management and I discussed some of the NRC's recent improvement initiatives. One of initiatives regarded as a success by the licensee was in the area of risk-informed inservice inspection requirements for piping. By implementing a risk-informed inservice inspection program, the licensee estimated that they avoided 0.06 sievert (6 REM) of potential exposure and instead focused on those sections of piping that were most important to safety. In my opinion, this is a win-win situation and a paradigm for risk-informed regulation.

Closer to home, the licensee for South Texas Project nuclear power plants was less than gratified with the results of the risk-informed pilot processes for graded quality assurance. During implementation of the graded quality assurance process, the licensee realized that the true benefits could not be realized because of the cascading and overlapping effect of other regulations. They recently met with the NRC staff to continue the dialogue on how to make use of risk insights to reduce unnecessary regulatory burden and improve their processes.

The point is that as we continue to make better use of risk information and endeavor to make aspects of our regulations more risk-informed and performance-based, we will have successes. Yes, I regard both these efforts as successful. We should not consider any attempt to improve the regulatory process a failure, if --we learn from our experiences and apply those lessons learned to the next endeavor. In the next several years, you will see continued improvements in how we regulate operating nuclear power facilities and decommissioned facilities. Under the guidance of the Commission and the Executive Director for Operations, the staff efforts to risk-inform 10 CFR Part 50 will continue to gain momentum. I am sure we will enjoy successes - of both kinds.

Continuing to Improve the Way We Communicate

The increased use of risk in our regulatory processes brings about more than just numerous technical and policy issues. The use of risk in our regulatory processes also brings about challenges in how we communicate with our stakeholders. It is not enough to say that "the delta CDF is 5×10^{-5} and that CCDF is 1×10^{-6} ". Who in the general public knows what this means? Similarly, we must do more than merely proclaim that we are improving our regulations because it is not always intuitive, from the stakeholders' point of view, that when we improve regulatory requirements we are also maintaining safety. We can all do better in explaining complex technical issues in a manner that is clear, understandable, and placed in the proper context. This is perhaps our biggest communications challenge-- to maintain stakeholder confidence as we change our regulatory processes.

We are meeting this challenge and have made great strides in improving the way we communicate with our stakeholders. We continue to react constructively to criticism and suggestions as to how we can improve our processes for interfacing with stakeholders. For example, the Commission and the staff are reexamining the way we handle 10 CFR 2.206 petitions and conduct hearings, and are increasingly involving the public in meetings, including Commission meetings. Vice President Gore's plain language initiative has been embraced by the Commission and staff and we have sought to make greater use of the electronic media and the world-wide web through informative and comprehensive webpages (located at www.nrc.gov). We have webpages for contemporary issues such as the new reactor oversight process, reactor license renewal, and the Year 2000

problem. In addition, some recent staff actions will help ensure that information will be made available to all members of the public at the same time.

Looking Ahead

As I mentioned before, the future of nuclear power regulation will converge on the “right” regulation -- regulations that are based on science, are appropriately risk-informed, and focus on maintaining safety, reducing unnecessary regulatory burden, enhancing public confidence and improving our operational effectiveness and efficiency.

The “right” regulation will consider all stakeholder concerns and will effectively integrate and balance all the elements associated with safety, burden, public confidence, and operational effectiveness and efficiency. Often, this will not be an easy task. The application of a revised source term, for example, may cause us to carefully balance these aspects of regulation as we apply that science and knowledge to emergency preparedness and reactor siting requirements -- two topic areas where the integration of science, safety, and public confidence may be particularly challenging.

As we consider and resolve these issues, we will not lose focus on other pressing issues that may ultimately affect our regulatory future. One such issue is high-level waste disposal.

Let me say that the Commission remains firmly convinced that a permanent geologic repository is the appropriate mechanism for the U.S. to ultimately manage spent fuel and other high-level radioactive waste. The NRC continues to progress in its reviews and pre-licensing consultation under existing law related to the DOE program to develop a high-level waste repository. Based on the Nuclear Waste Policy Act 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’s draft environmental impact statement (DEIS), and ultimately, to determine whether the NRC can authorize repository construction and receipt of waste.

In FY 2000, we expect to finalize this regulatory framework by issuing a final 10 CFR Part 63. As called for by the Energy Policy Act of 1992, Part 63 would implement health-based standards that apply solely to the proposed Yucca Mountain repository. The proposed Part 63, which we published for public comment in February 1999, would establish licensing criteria to evaluate the performance of the Yucca Mountain repository system. Upon issuance of a final Environmental Protection Agency (EPA) standard for Yucca Mountain, or in the event of new legislation affecting HLW management, we would amend Part 63, if necessary.

We are continuing to develop a Yucca Mountain review plan and to resolve key technical issues to prepare for reviewing the DOE license application expected in 2002. These activities aid in reviewing DOE’s DEIS and providing guidance to DOE on what is needed for a complete and high quality application. We expect to complete our review of DOE’s DEIS for the Yucca Mountain site in FY 2000. As with the other areas I have discussed, our progress in resolving high-level waste issues includes extensive consultation and interaction with the public and our other stakeholders.

Again, thank you for the opportunity to meet with you. I would be pleased to hear any comments you may have or address any questions.