



NRC NEWS

U.S. NUCLEAR REGULATORY COMMISSION

Office of Public Affairs

Telephone: 301/415-8200

Washington, DC 20555-001

E-mail: opa@nrc.gov

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

No. S-00-08

March 30, 2000

**REMARKS OF
JEFFREY S. MERRIFIELD
COMMISSIONER
AT THE
REGULATORY INFORMATION CONFERENCE
WASHINGTON, D.C.
MARCH 29, 2000**

Good Morning. Thank you very much for the opportunity to speak to you today. This is the second Regulatory Information Conference that I have participated in since I became a Commissioner in 1998. This is not only a great opportunity for the NRC, the nuclear industry, and our stakeholders to share insights on the many safety and regulatory challenges we are facing, but it also provides an opportunity for the Commissioners to discuss their priorities as well as the course they would like to set for the agency. I will try to do just that. Today I would like to focus on 4 areas:

1. First, I'll look back at 1999 and give you my views on the state of the NRC.
2. Second, I'll share with you my priorities for 2000.
3. Third, I'll discuss the issue of organizational accidents.
4. And finally, I'll give you my perspective on the NRC's role as communicator and its challenge of enhancing public confidence.

State of the NRC

First, I'd like to share my views on the state of the NRC and look back at some of our most significant accomplishments of 1999.

The NRC is engaged in one of the most aggressive regulatory reform efforts ever undertaken within the federal government. During the fourteen years I have spent in Washington, I cannot think of a federal agency that has made more of a commitment to reinvention than the NRC has made during the last 18 months. We have become more risk-informed, we have reduced unnecessary regulatory burden, we have brought greater objectivity and predictability to our regulatory processes, we have held our managers and staff more accountable, and we have become more responsive to our external stakeholders. Some of our critics would have you believe our reform efforts amount to regulatory retreat. On the contrary, I would argue that these efforts are entirely consistent with our strong

commitment to safety, since the changes we are making will allow our licensees and our staff to focus more attention on truly risk-significant aspects of the plants and spend less time on regulatory burdens that contribute little or nothing to safety.

I would like to outline a few reasons why 1999 was a year the NRC can be very proud of.

- We met or beat every milestone we set for the Calvert Cliffs and Oconee license renewals. The fact that the overwhelming majority of licensees have expressed an interest in pursuing license renewal speaks volumes of our success in establishing a thorough, predictable, and timely process.
- We met or beat every milestone we set for license transfers, such as those associated with Three Mile Island Unit 1, Pilgrim, and Clinton.
- We successfully improved the timeliness of our spent fuel cask certifications.
- We successfully set the course for the long journey we call risk-informed regulation.
- We moved forward on changing Appendix K so that it would remove unnecessary restrictions on plant operations and allow many licensees to seek power uprates.
- We published a final rule allowing licensees to amend their design basis to use revised source terms in design basis accident radiological analysis.
- We issued the final design certification rule for the AP 600.
- We successfully piloted a new reactor oversight program, one which institutionalizes the objectivity, predictability, consistency, openness, and risk insights that were missing from our previous inspection and assessment programs.
- Finally, we improved our planning and review efforts associated with applications for extended power uprate. Remarkably, during the 90s, we approved power uprates that resulted in over 1400 megawatts of new electric generating capability in the United States. I am proud to say that we did so in a manner consistent with our mission to protect public health and safety.

I could go on, but I believe I have made my point that the NRC has served the American people very well. However, the dynamic nature of the electric industry dictates that we live in a “what have you done for me lately?” environment. While 1999 was a success, I am under no illusion that it is time to celebrate. So, now let me focus on 2000.

PRIORITIES FOR 2000

If David Letterman can have his top ten list, so can I. So, here are my top 10 priorities for 2000 in the reactor arena:

- **First** and foremost, we must carefully plan and budget our resources so that we don't fall victim to our own success in the areas of license renewals and license transfers. We must dedicate the resources necessary to build a robust and predictable regulatory infrastructure in these areas while at the same time providing the resources necessary to perform ongoing reviews in a thorough and even more timely manner.
- **Second**, we must go forward with the new reactor oversight process recognizing that it is very much a work in progress, but one which is far superior to the subjective and often unpredictable process we left behind. We cannot allow ourselves to be held hostage by those who demand perfection at the expense of improvement.
- **Third**, we must get our act together in the area of reactor decommissioning. We must get our arms around the numerous technical and regulatory issues associated with decommissioning, and bring realism, clarity, and consistency to our regulatory framework.
- **Fourth**, we must not fail in carrying out our regulatory responsibilities associated with dry cask storage of spent fuel. While we have been successful in improving the timeliness and predictability of our cask certification process, we need to achieve further process efficiencies and resolve the generic technical issues like credit for high burnup fuel.
- **Fifth**, we must bring realism to our physical security requirements without compromising on the protection of the plants. As a result of my plant visits this last year, it has become obvious to me that both we and our licensees are guilty of allowing regulatory creep to enter into the OSRE process. I have seen protective strategies that range from innovative to outlandish overkill. We must work to provide plant security requirements that respond to the realistic and clearly defined threats of modern society; nothing more, nothing less.
- **Sixth**, we **must** make the revised maintenance rule and 50.59 rule **work**. If our regulatory or inspection guidance is inadequate, or if inconsistency is allowed to find its way into either how licensees implement or how our inspectors regulate, the rules will fail. We cannot allow years of hard work on the rules be derailed by regulatory creep on the part of our inspectors or short cuts on the part of our licensees.
- **Seventh**, we must move forward swiftly, yet cautiously, in the area of risk-informed regulation. While I am optimistic that we can use risk insights to improve many aspects of Part 50, I am not convinced that there is sufficient industry support to justify the cost of making a wholesale change to Part 50. Although I am willing to provide the resources necessary to take the important initial steps, I will not support additional resources if there is not sufficient industry interest in using these alternative regulations.
- **Eighth**, we must reach **closure**, and I stress the word **closure**, on our fire protection initiatives. Clearly, none of our stakeholders - not the public, not our staff, not our licensees, and not Congress - feels good about where we stand in the area of fire protection. We must complete our work associated with both fire protection circuit analysis and our comprehensive regulatory guide, and reach closure on milestones that will ultimately lead us to a risk-informed NFPA standard.

- **Ninth**, we must improve the recruitment, the training, and the professional development of our staff. As our workforce ages, and as retirements continue, our corporate knowledge is threatened. At the same time, emerging technologies and new technical challenges associated with such things as plant aging, power uprates, and even the prospect of a new plant order, are on the horizon. It is essential that we have a staff that is capable of meeting these challenges.
- Finally, we, as an agency, must continue to make strides in the areas of fiscal responsibility and accountability. We have had great success in rightsizing our agency and in reducing our cost to licensees and the American taxpayers. Nonetheless, I believe we in the Commission have the obligation to scrutinize our budget line by line to ensure that we are utilizing only those resources necessary to effectively and efficiently carry out our mission; no more, no less. As stakeholders of the NRC, you should demand nothing less of the Commission.

Organizational Accidents

Now let me change gears and talk about the issue of organizational accidents.

Today, the outlook for nuclear power is arguably the brightest its been since the Three Mile Island accident. Competitive market forces have led to a resurgence of nuclear power by forcing dramatic improvements in the manner in which nuclear plants are managed and operated. Licensees have improved operator training, made significant process improvements, developed sound maintenance and corrective action programs, shortened refueling outages, and as a result, significantly increased generation. Plants today are operating better than ever before, with forced outage rates at an all time low and capacity factors at an all time high.

Despite this success, my message to the nuclear industry is the same one I frequently leave with the NRC staff - this is no time to celebrate. I recently read a book by Mr. James Reason entitled Managing the Risks of Organizational Accidents. I recommend this book as it is a stark reminder that success is fragile, and if not managed properly, can lead to the insidious buildup of latent conditions that could set the stage for organizational accidents.

I'll briefly try to capture the essence of Mr. Reason's message.

Our agency, the nuclear industry, and the public have been well served by the defense-in-depth principle. Successive layers of protection, one behind the other, each guarding against the possible breakdown of the one in front. However, no one defensive layer is entirely intact. Each one possesses gaps and holes created by combinations of active failures and what the author refers to as latent conditions.

Latent conditions include such things as poor design, gaps in supervision, undetected manufacturing defects and maintenance failures, unworkable procedures, shortfalls in training, and less than adequate equipment. They arise from decisions made by organizational managers, manufacturers, designers, and even regulators, and can lie dormant for many years. However, when the gaps produced by active failures line up with those created by latent conditions, successive defenses are compromised and a window of opportunity exists for a serious accident. While these windows of opportunity are rare,

Chernobyl, the Bhopal chemical accident, and the Challenger accident have reminded us that they are indeed possible.

Despite our most recent successes, as the NRC moves forward with our regulatory reform efforts, and as the nuclear industry transitions into a deregulated electric market, we and our licensees must continue to wage an aggressive campaign against the buildup of latent conditions and we simply must not forget to worry. As Mr. Reason states in his book, “If eternal vigilance is the price of liberty, then chronic unease is the price of safety.” The NRC and the nuclear industry simply must maintain a high level of unease. Let me now briefly touch on 3 aspects of plant operation I believe warrant chronic unease on the part of ourselves and on the part of our licensees.

First, licensees and the NRC must continue to challenge complacency. Now I’m not using the term complacency in the classic sense - it is clear to me that INPO and our licensees have their arms around that. Instead, I use it in terms of forgetting the past. As the industry reaps the benefits associated with improved performance, and as the NRC and the industry pursue greater efficiencies and regulatory reform, we must be careful not to roll back the safety improvements made over the last 20 years. We must ensure that lessons of the past do not get “reformed out” or ”budgeted out” of our programs.

While the industry is performing well, it was not that long ago that many plants were plagued with operational problems. We cannot allow ourselves to forget about the Davis-Besse feedwater event, the fire at Browns Ferry, the Millstone saga, and the extended shutdowns of the 80s and early 90s. We cannot allow ourselves to lose sight of the fact that the performance improvements the industry is enjoying today came at very high price -- a price that we cannot afford to repeat.

The **second** area I believe warrants chronic unease is insularity. As the electric industry proceeds down the road toward deregulation, we are likely to see a dramatic shift in the ownership of nuclear plants across the nation. It is clear that many nuclear plants will be sold, resulting in a significant reduction in the number of plant owners. Overall, I hope this consolidation will serve as an opportunity to further improve the operational performance of these plants. However, this opportunity will be lost if consolidation and competition breed insularity and provincialism.

My message to you is this: As consolidation in the ownership of nuclear plants continues, the few large companies operating these plants must not become insular, they must continue to recognize the value of looking outside of their organization for solutions, and of sharing information outside of their organization for the common good of the industry. Plant managers within these large companies must never become comfortable benchmarking themselves only against their organizational peers, mistakenly believing that rest of the U.S. nuclear fleet and the international nuclear community offer few operational insights that cannot be more readily acquired from within.

For those who are so bold as to believe that all of the nuclear industry’s solutions, all of its best practices, all of its operating experience, lie within your organization, I ask you this: “Are you bold enough to stake your assets on it?” I hope and expect the answer is no.

The **third** aspect of plant operation I believe warrants chronic unease is the relationship between the NRC’s new reactor oversight program and how licensees manage plant performance. By almost any

standard, the nuclear industry is performing better now than at any time in its history. This improved performance provided an opportunity for the NRC to rethink our approach to reactor oversight and led to what I believe are comprehensive and innovative changes to our oversight program.

As you know, the NRC's new oversight program will measure plant performance using a combination of objective performance indicators and a risk-informed inspection process. The strength of this new program lies in its emphasis on strong corrective action programs. I hope it clear to everyone that the purpose of the new oversight program is to measure and assess performance to assure the plants are being operated safely. Nobody should have any illusions that it is intended to assure operational excellence. Operational excellence is the responsibility of our licensees, not the NRC.

As we approach the final days before initially implementing the new oversight program, critics of the program and even the ACRS are voicing concerns that our licensees will manage their plants to the NRC's performance indicators, and that our indicator thresholds provide licensees little incentive to improve performance. I strongly disagree with the premise of these concerns, and have expressed so publicly on many occasions.

In contrast to some, I believe that the individuals that manage nuclear plants in the U.S. are sophisticated enough to realize that managing solely to the NRC's performance indicators is a recipe for failure. I believe it is clear to each of them that green is not good, and that the NRC's performance indicators are a mere subset of the indicators that must be monitored to ensure that plants are managed and operated efficiently and effectively. I believe that there is a common understanding in the industry that it is essential to identify performance trends early and to intervene long before a performance indicator threshold is reached.

I am not asking critics of the new oversight program to trust me, the NRC staff, or our licensees. I believe that its merits will speak for themselves. Clearly, I have a great deal of confidence that the objectivity and transparency of the new program will provide an even greater incentive to licensees to maintain the highest levels of performance. I also believe that we should not lose sight of the fact that our licensees have many other incentives to operate their plants well, including those associated with a deregulated electric market. How long do you think the market will tolerate multiple scrams, multiple unplanned shutdowns, or multiple safety system failures in a given year? I would argue that the market is just as punishing a regulator as the NRC. The market demands operational excellence, outstanding equipment reliability, and high capacity factors at all times. Those plants that are content to operate on the border between green and white will fail to satisfy the demands of the market. They will simply be too costly and too unreliable to survive. For those licensees that prove me wrong and do manage strictly to the NRC's indicators and are content to operate on the border between green and white, I refer you to SECY-99-168. That paper explains all of the wonderful work we are doing in the area of decommissioning.

COMMUNICATION AND PUBLIC CONFIDENCE

Let me close today by briefly touching on an area that the NRC continues to struggle with. It is an area directly linked to one of the agency's key performance goals, yet is very difficult to measure, and even more difficult to influence. It is an area in which the NRC is extremely vulnerable, and thus one for

which I believe the agency must rethink the way it is doing business. I am speaking about Enhancing Public Confidence.

In the past, the NRC approached public confidence in much the same way the Maytag repairman approaches his job. We were passive in our communications with the public. We allowed our critics to define what our agency was, what its actions meant, and how these actions should be perceived. As a result, the agency frequently found itself in the difficult position of playing catch-up. This approach had its roots with the old AEC. The AEC's organizational philosophy simply did not recognize a role for the agency in enhancing public confidence. The agency paid a very heavy price for this passive approach.

Many within the NRC believe that if they simply do their job well, public confidence will naturally follow. There is some merit to that approach. However, while I agree that the most effective way to improve public confidence is by **demonstrating** through our actions that the NRC is a credible regulator, I would argue that if we do not effectively convey to the public that we are a credible regulator, how are they to know? Who will carry that message for us?

I believe the NRC must become more proactive and forthright in its communications. We must be the first to communicate with the public about important regulatory decisions and must clearly articulate the reasoning behind them. We should change our organizational philosophy so that we no longer allow inaccurate assertions in the public arena to go unaddressed. When spent fuel casks are referred to as mobile Chernobyl's, I think we should rebut the assertion and clearly present the true basis for why we feel dry cask storage is safe. When opponents of the new oversight process or our decision on N+1 label them as regulatory retreat, we must accurately and promptly respond so that the public is not left with a mistaken understanding of our programs. When we are accused of wasting public monies in our pursuit of our international cooperation, we must explain why international involvement is vital to protecting public health and safety. How will the NRC ever enhance public confidence if we remain passive in the public arena? We simply won't. I sincerely believe that if we have a true and defensible story to tell, it is irresponsible for us not to tell it - a disservice to our licensees, our stakeholders, and our staff.

The NRC must also do a better job conveying to the public what we mean when we use the term "unnecessary regulatory burden". It has become the mantra for many of our regulatory reform efforts, yet few really understand its true meaning. It is a term that carries great weight, and one that also provokes great anxiety. Many in the NRC and the nuclear industry have reduced this important concept to a sound-bite, thereby losing a great deal of its meaning in the translation. If the word "unnecessary" is lost on our stakeholders, regulatory reform begins to look like regulatory retreat. How much public confidence do you think we engender with such a fatal flaw in our message? Very little!

The problem, as I see it, is that we inappropriately treat "reducing unnecessary regulatory burden" and "becoming more risk-informed" as two separate and unrelated goals. I would argue that the two goals are, in fact, closely linked. Think about it. The premise behind our efforts to risk inform our regulations and our efforts to reduce unnecessary regulatory burden is the same. It is that these efforts allow licensees and the NRC to spend less time on regulatory burdens that contribute little or nothing to safety so that more attention can be focused on truly risk-significant aspects of a plant. Very often, that premise is lost in the sound-bite. So, I encourage the NRC staff and the nuclear industry to ensure that

when they discuss risk-informing Part 50, or the new reactor oversight process, or any of our other regulatory reform efforts, they do so in an accurate and responsible manner that explains why these reforms were made. If we communicate honestly and responsibly, our stakeholders will understand the safety benefits associated with our efforts, and burden reduction will be secondary to the discussion. If we fail to do so, naysayers will use our own words against us to distort our message. At the very least, this will add a great deal of unnecessary burden to our own reform efforts. At the very worst, the groundswell resulting from a lack of public confidence will manifest itself in regulatory gridlock - derailing our reform efforts. I hope you're not willing to accept such a heavy price. I know I'm not.

In closing, I want to thank you again for giving me this opportunity to share some of my thoughts with you this morning. I hope this conference has met or exceeded your expectations and I hope my remarks are useful. If you have any questions, I intend to stay at the conference for a while and I'd be pleased to discuss them with you between sessions. Thank you.