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CHALLENGES FOR THE NUCLEAR POWER INDUSTRY  
AND ITS REGULATORS: THE NRC PERSPECTIVE

REMARKS BY

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BEFORE THE

REGULATORY INFORMATION CONFERENCE  
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Good morning, ladies and gentlemen. It is a pleasure for me to address this year's annual Regulatory Information Conference. I believe firmly in the importance of communication between the NRC, the regulated industry and the public. This annual conference is one significant way of helping to achieve that goal.

At last year's conference, I challenged the industry to work harder at resolving safety and administrative issues. My belief was, and continues to be, that while we may not always agree on every issue, we can ensure an open dialogue, so that difficult issues can be resolved in a spirit of cooperation. A good example of the effectiveness of working together has been the effort expended in the past year in developing guidelines for implementing the requirements of 10 CFR Part 54, the License Renewal Rule. Significant issues have been identified, debated, and resolved in a public forum, resulting in a significantly better understanding of the technical issues. What we need to do now is apply the same level of effort and cooperation to other issues confronting us.

I also stated last year that communication between the industry and the NRC needed to be increased, in light of industry concerns expressed in the Towers Perrin study and elsewhere. I have appreciated the industry's willingness, to share with me its concerns during site visits, conferences, and drop-in meetings

over the past year. I hope this effective interaction continues at all levels of our organizations.

Today, I would like to discuss three issues that apply, albeit in different ways, to both the nuclear power industry and NRC: performance, communication, and self-assessment. At the outset, however, I would like to comment briefly on a subject that I know has been on the minds of many connected with nuclear energy and its regulation, and of many members of the public as well. I am referring to the recent cover story in TIME Magazine on the conduct of the licensee and the NRC regarding the Millstone plant, and on spent fuel handling issues generally.

It is often the nature of the news business to focus on shortcomings and not on successes. That is just a fact of life. I do not propose to discuss today whether the article was well-balanced, we can leave that question for another day. My point is quite a different one, which is that the article -- or more precisely, the events that the article described -- can and should be considered a wake-up call to both the regulated industry and the NRC. The publication of the TIME magazine cover story provides a learning moment for us all.

For whatever else may be said about the article, it pointed to areas for improvement -- technical, managerial, and legal -- on the part of both the utility involved and the NRC. The fact that we already knew about the problems and were dealing with them is not a sufficient answer; they should not have occurred in the first place. I will have more to say about the specifics later, but in general, the problems identified in the article tend to fall in the very categories I just mentioned: performance, communication, and self-assessment.

#### PERFORMANCE

The first thing to be said about safety performance in the nuclear power industry is how much better it has become, on the whole. Available data indicates that the nuclear power industry's safety performance in the United States and Western Europe has improved steadily during the 1980's and 1990's. Overall safety performance, reliability, and availability for U.S. commercial reactors during the 1990's have been good and generally continue to improve.

This trend is demonstrated by the key operational safety indicators monitored by the NRC. A review of data over the 10-year period from 1985 to 1995 shows how the number of automatic scrams has dropped in that time. In 1985, the average exceeded 5 per reactor; in 1995, the number was less than one per reactor. The number of safety system actuations dropped by a similar degree during this period. In 1995, the average number of

actuations was less than 0.5 per reactor -- again, a significant milestone.

As can be expected with a reduction in reactor trips and safety system actuations, U.S. nuclear plant availability has generally increased from year to year. In 1995, it exceeded 80 percent for the first time. This gain is the result of many factors, but undoubtedly is a result of increased emphasis by both the NRC and the industry on the following three areas:

- 1) improved maintenance practices,
- 2) consideration of risk in the operation and maintenance of nuclear plants, and
- 3) self-assessment of events to identify root causes of problems and ensure effective corrective actions.

Positive results like these are the product of careful management attention, training, and attention to detail. The industry as a whole has a right to be proud of these successes.

However, success carries its own set of risks. Probably the greatest of these is the danger of complacency: of becoming lax in our attention to detail, too prone to assume that problems will not occur, and too quick to conclude that when issues are raised, they are of negligible significance. When we couple the risk of complacency with the economic pressures on utilities to reduce plant operating and maintenance costs, there is a potential for problems to go unnoticed or to be acted upon too slowly.

Let me emphasize that I do not exempt the NRC from this concern. Like the private sector, we face constant pressure to trim unnecessary expenditures; and like the private sector, we have to be vigilant that many years of a good safety record do not induce complacency in our own regulatory staff.

Before leaving the subject of performance, there is one thing I should add. I said a moment ago that performance has been good "on the whole." That is an important qualification. There are utilities and plants that continue, sometimes year after year, to be of concern to the NRC. I know that this is, and should be, a source of concern to the industry as well. In the real world, many members of the public may not make a distinction between one utility and another, and one plant and another. Rather, they may assume that anything negative they read about any plant is applicable to every plant. Therefore, it is important for the industry to maintain and reinforce its efforts, to improve the performance of problematic plants and licensees. One key avenue for doing this is through the sharing of information -- good performing plants sharing their techniques for success with the poorer performing plants. I know that this sharing has and does occur in the industry -- it also requires a receptivity on the part of those with the most to learn.

## COMMUNICATION

Communication is an issue of central importance at all levels: Among utilities, between utilities and the NRC, within both the NRC and individual utilities, and with the NRC and the public. I think we have made great strides in improving communication, but I also think we have a way to go. Let me offer some specifics.

In the summer of 1995, the Commission issued a policy statement designed to foster open, candid, uninhibited communication between licensees and the NRC. It did so in part to respond to a long-standing industry concern that criticizing the actions of NRC staff members could bring retaliation. The Commission wanted to make sure that if licensees had a grievance involving a claim of inappropriate regulatory action, the NRC would learn of it, review the facts and take appropriate action.

In accordance with that policy statement, a process has been established that senior utility officials may use to report perceived inappropriate regulatory actions to the Office of the Executive Director for Operations. Through this process the Commission has been informed of several instances in which a licensee believed that the NRC staff exceeded its regulatory authority by assuming operational control of recovery actions for plant events.

Although the actions by NRC staff members were found to be appropriate for each of the circumstances reported, I believe that they have brought to the forefront the importance of defining the responsibilities of both the NRC and the licensees during event response. The NRC and the licensees each have important roles to play in responding to plant events, and a central requirement of each of our roles is effective communication. Obviously, communication is a two-way street, and both sides need to start out with an understanding of each other's needs and limitations.

It is the utility's job to operate a safe plant and to respond to any event; the NRC must structure its actions so as to facilitate rather than hinder the utility in performing that job. At the same time, it is the NRC's task to ensure that the utility is performing as it should, and in order to fulfill that task, the NRC needs information that can only come from the licensee. Licensees cannot and should not be in the position of having to choose between achieving safe shutdown and keeping the NRC informed of developments. This calls for good sense and good training on both sides, so that communication is efficient and no more intrusive than the event requires.

From the NRC's standpoint, we need to make sure that our staff members have adequate guidance to enable them to request appropriate information from licensees during an event, and this

guidance needs to be shared with licensees. We need to be sure that our staff members are properly trained, and understand what NRC management expects from them in their interactions with licensees under these circumstances. To maximize the efficiency of communications during events, we need to make sure that technically qualified people who are familiar with the licensee and the facility are involved in information gathering and exchanges, thereby minimizing disruptions of licensee activities.

By the same token, licensees must recognize NRC's statutory duty to protect public health and safety and the staff's need to understand the safety implications of licensee actions. Each licensee has the responsibility to provide adequate staffing to respond to events, including designating an informed point of contact to communicate with NRC on a timely basis about what is occurring. Licensees also need to be aware that for less significant events, NRC still has a need for timely information in order to understand the safety implications and formulate an appropriate NRC response. Licensees should anticipate and plan for such situations if communications are to be effective.

Another type of communication concern is that illustrated in the case of Watts Bar. In February, the Commission issued a decision authorizing issuance of Watts Bar's full power operating license, as the nation's 110th operating nuclear plant, and the last of the current generation of reactors to be licensed. Its significance for our discussion today is that Watts Bar was essentially finished in 1985. The additional decade of delay, as recently summed up by the licensee's senior management, was largely attributable to poor communications and a lack of proper management controls. Employee mistakes were not reported to management, and management failed to listen to employees' concerns. Not only did this climate contribute to poor workmanship, it also created issues about TVA managements' handling of employee concerns -- issues that took the utility considerable time and effort to resolve. While much has been done to turn around this facility in the last 10 years, the cost -- economic and otherwise -- has been substantial.

This particular aspect of communication -- the question of how to deal appropriately with safety allegations raised by employees -- remains a troublesome issue. Both licensees and the NRC have to examine all allegations objectively. We must guard against the danger of assuming that those who raise safety issues are disgruntled employees, and that their concerns can be dismissed as unmeritorious. Some allegations are invalid, but others have been demonstrated to have safety importance. Management will never learn about issues and problems unless it creates a climate in which individuals feel free to bring them forward.

This problem, I believe, is endemic in large organizations, in both the private and the public sector. The NRC, in a 1994

report entitled "Reassessment of the NRC's Program for Protecting Allegers Against Retaliation," acknowledged that its own process for handling allegations was flawed, and it made 47 specific recommendations for improvements. Many of them are being implemented now, and we believe they will go a long way toward improving the process. Last year the staff published for public comment a draft policy statement containing general principles to guide licensees in maintaining a "quality-conscious workplace" and to encourage employees to identify and report safety concerns without having to fear retaliation. The Commission is currently considering approval of the final policy statement.

In general, the industry needs to continue to focus on this area. What is needed is a process that focuses on technical issues and addresses them in a manner that is sound, timely, and just. Whether the allexer agrees or disagrees with the ultimate outcome, what is important is ensuring that the process of dealing with the allegation and the allexer is comprehensive, fair and respectful.

## SELF-ASSESSMENT

For reactor licensees, self-assessment is not a new concept. From the creation of the Institute of Nuclear Power Operations following the Three Mile Island accident, to recent initiatives by individual utilities in performing engineering modification self-assessments, the industry has made substantial efforts, which the NRC has welcomed. I recognize that some of these programs spring in part from the hope that the more that industry shows itself able to police itself, the less intrusive NRC regulation will ultimately be. I share that hope. But regardless of whether it leads directly to regulatory relief, self-assessment is something that should be an ingrained part of every licensee's way of doing business. Licensees need to ensure that they are operating within their licensing basis, and when problems arise, that appropriate lessons-learned analyses are conducted. Though our interest at NRC is in ensuring safety, I might add parenthetically that a utility executive recently mentioned to me that the approach of rigorous self-assessment also makes excellent business sense. It can be costly, both in economic terms and for a licensee's reputation, when adequate self-assessment does not occur.

With respect to the NRC, the process of self-assessment takes place both on a case-by-case level -- learning from specific events -- and on a broader scale. I would like to talk briefly about each, and Millstone is a good example with which to start. As soon as I learned of the situation, I asked the staff to conduct an in-depth lessons learned assessment to make sure that we learn all that we should from the Millstone-specific events. In making this request, I also asked the staff to explore whether existing reactor oversight processes need improvement or whether new processes need to be developed which would have resulted in earlier NRC recognition of, and action on, issues such as noncompliance with the Final Safety Analysis Report (FSAR).

With respect to FSARs and spent fuel pools, a number of activities are underway. They include a complete review of spent fuel pool design, operating and licensing bases at each reactor site, revisions to inspection guidance to increase inspection of licensees' implementation of their FSAR, and recommendations to improve the quality and timeliness of regulatory response to discrepancies between the FSAR and its implementation, not just for spent fuel pools, but more broadly.

Other activities I have asked of the staff are intended to improve consistency in licensee implementation and NRC oversight of facility changes made under 10 CFR 50.59 -- which allow changes to be made without prior NRC approval.

Thus specific events may well have generic implications. In the case of Millstone, the implications go beyond the question of whether plants are being operated in full conformity with their

FSARs. As we move to more performance-oriented regulatory approaches, we especially need to have confidence in the adequacy of both licensees' administrative controls and NRC staff oversight. An example is Improved Standard Technical Specifications for nuclear reactors, where certain parts of existing technical specifications are relocated to procedures under the licensee's administrative controls. We must continue to verify that adequate and appropriate procedures exist to ensure that the increased use of administrative controls results in no diminution of safety. I have also asked the staff to improve the way it performs integrated assessments of information obtained from NRC inspections and licensing processes, so that problem plants will be identified earlier. These improvements will also help to improve consistency in regulation among headquarters and the regions.

On a broader scale, the NRC has been engaged in a comprehensive self-assessment of all of our programs and activities. We have made significant improvements to our own management processes from both organizational and fiscal perspectives. We have clarified the relative responsibilities of headquarters and the regions -- a subject that remains under continuing review -- and have eliminated a layer of management in both.

But a much more fundamental reexamination of our programs and processes is also under way. As you are probably aware, the NRC has for a number of years engaged in long-range planning for utilization of agency resources. The Clinton Administration, and the National Performance Review headed by the Vice President, have emphasized the need for efficiency in government, and for regulation to be no more intrusive -- and no more costly -- than it needs to be to serve the public interest. Accordingly, one of my first actions as Chairman of the NRC was to initiate a strategic assessment and rebaselining of the agency. This review is necessary to position the NRC to meet the challenges we face, to guide our activities and decision-making in the future, and to incorporate ongoing streamlining and efficiency initiatives systematically.

The first phase of the initiative, the "strategic assessment," involves a review and categorization of each agency activity to see how and if it ties into our statutory mission, Presidential Directives, or Commission policy. It is also designed to identify key strategic issues, questions and decision-making points to be addressed by the Commission. This phase is essentially complete. In the subsequent phases, decisions by the Commission on the key strategic issues will form the basis of a new NRC strategic plan, which is targeted to be in place by the end of calendar year 1996. This plan, and the activity assessments and Commission decisions which support it, will drive any rebaselining of the agency and will improve efficiency by reducing unnecessary regulatory burdens and improving NRC internal processes.

We expect the preliminary results of the strategic assessment and rebaselining to be available in early summer, allowing stakeholders to provide input into the decisionmaking process. The final results will influence the FY 1998 budget, and will form the basis for the FY 1999 budget submission.

The strategic assessment and rebaselining is bringing a comprehensive, agency-wide perspective to our decisionmaking process, building on the NRC's efforts in recent years to improve its regulatory programs. The NRC has conducted self-assessments and also encouraged active participation by the public and industry as we pursue regulatory reform. We have conducted surveys of our licensees, held conferences such as this one, expanded our use of public workshops, and instituted an enhanced participatory rulemaking. In the recent **RuleNet** project, we even have experimented with using the Internet to enhance and expedite communication between the NRC, industry, and the public.

In addition to these activities, other efforts are underway to improve what I term our "regulatory effectiveness." Let me highlight a few areas that may be of particular interest: exemptions, technical specifications, and notices of enforcement discretion.

Early in my tenure as Chairman, I became concerned that the NRC was repeatedly being asked for exemptions from the same relatively few regulations. This raised an obvious question: were the regulations so unduly onerous that exemptions were necessary -- in which case a rule change would be appropriate -- or were licensees not meeting their responsibility to comply with reasonable regulatory requirements? The answer was not self-evident, so I asked the staff to examine our exemption history, identify those regulations for which multiple exemptions had been granted, and evaluate whether we need to change the regulations.

The statistics indicate that approximately three quarters of the exemptions were associated with six rules (fire protection, containment testing, property insurance, emergency planning, general design criteria, and physical protection). We have already amended the regulation pertaining to containment leakage testing and plan to consider amending the other regulations as well.

I would like to take this opportunity, therefore, to clarify that I am not opposed to exemptions per se. They have their place in the NRC regulatory process -- there is no doubt about that. But if the problem is with the regulation itself, then it is far better policy to amend the regulation rather than routinely grant exemptions from it. Let me add a word of caution, however. Exemptions do not exist to permit laxity on the part of licensees. A licensee that seeks a schedular exemption, for example, not because of any flaw in the regulation or any unforeseen circumstance, but merely because of poor planning,

should not count on the NRC to come to its rescue with a hastily issued exemption.

For technical specifications, as I mentioned earlier, the NRC has implemented an improvement program designed to eliminate unnecessary license constraints, thereby substantially reducing the regulatory burden on licensees. Improved Standard Technical Specifications are available for adoption by licensees. What is left to be done is for licensees to apply to the NRC to make the conversion to them -- most power plant licensees have already committed themselves to doing so -- and for the NRC to review these submittals in a timely manner.

The Notice of Enforcement Discretion (NOED) process provides a mechanism for addressing very limited situations: where exercising enforcement discretion may avoid transients and challenges to safety systems, or prevent unnecessary delays in startup. However, whenever a regulatory agency serves notice that it does not intend to enforce a particular regulation in a particular circumstance, there is a potential for abuse. In addition, concerns have been voiced by members of the public about what some see as a de facto exemption process, occurring without public participation and sometimes without the knowledge of the public.

For these reasons, last November new guidance was issued to the NRC staff, stating that enforcement discretion is not justified if the licensee created the time urgency through poor planning, failed to take timely corrective action, repeatedly requested enforcement discretion for the same action, or failed to adopt NRC-approved improvements to license technical specifications that would have prevented the need for enforcement discretion. The NRC staff must also be satisfied that the licensee's situation is temporary and nonrecurring, and that the exercise of discretion is fully consistent with radiological health and safety. These revisions are intended to keep the focus on safety, and to make clear the necessity of operating within the normal regulatory framework except in highly limited and unusual circumstances.

## CONCLUSION

I have outlined this morning some of the parallels I see between the challenges facing the nuclear industry and the NRC, in our separate and at the same time, closely associated roles. As I have described, we can take pride in a record of good performance. But that record will be maintained only by continued vigilance. That means rigorous self-assessment, and constant and open communication. It is up to both the regulator and the regulated to make that happen.

In conclusion, I have every confidence that in the coming year, the industry and the NRC will continue to work together --

constructively, cooperatively, and respectful of each other's points of view when we differ. For as much as we may sometimes disagree on particular issues, what we share is more important by far, and that is a commitment to the safety of the American public.