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Remarks by
James R. Curtiss
Commissioner
United States Nuclear Regulatory Commission
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"EXCELLENCE VS. COST -- A REGULATOR'S PERSPECTIVE"

Thank you for that kind introduction. It is indeed a pleasure for me to be here today to address this year's Annual INPO CEO Conference.

I consider it not only a pleasure but a true honor to have been invited to speak to you this year, at what I consider to be the singlemost important annual gathering dealing with issues related to the operation of this country's nuclear power plants.

Indeed, this year's conference, in particular, comes at a crucial point in time for nuclear power and the nuclear power industry.

Beginning with the decision taken in February of this year by Yankee Atomic to discontinue operations at the Yankee Rowe plant, followed shortly thereafter by the decision of Southern California Edison to close down San Onofre 1 and the decision of Portland General Electric to close down Trojan -- all three before the end of their licensed 40-year life -- the industry now faces the unsettling prospect of where these developments might be heading

and what the implications are for other utilities with nuclear generating units.

Compounding the situation, the decision taken by Yankee Atomic occurred in the midst of that utility's active pursuit of a renewed license, leading to widespread concern about the potential risks associated with a decision to seek license renewal and, in particular, the perception that a utility may be placing its remaining operating life under its current license at risk with a decision to pursue license renewal.

The cumulative effect of these specific decisions and actions of the past year, together with the continuing concern over the issue of rising O&M expenses that we have seen in recent years, has led to a renewed focus on the regulatory process -- and, of course, as you have no doubt concluded from the title of my remarks, "Excellence vs. Cost -- A Regulator's Perspective," this focus on the regulatory process and its relationship to the growing concern within the industry over operating costs is the topic that I have been invited to address in my remarks here today.

At the risk of oversimplifying what I am sure is a much more complex issue -- and that many of you have no doubt given much more thought to than I -- I see two central questions emerging from the developments of the recent past, including the ongoing focus on O&M costs, that seem to me to be of principal interest to those of us who are regulators:

First, has the regulatory process contributed unnecessarily to the expense of building and operating a nuclear power plant, and, if so, to what extent? Are we a major contributor? Have our actions caused expenses to go up or to go down? Does it depend upon the individual utility and how they respond to our regulatory actions?

Second, what steps, if any, need to be taken to improve the efficacy and efficiency of the regulatory process?

With regard to the first issue -- the question of whether the regulatory process has contributed unnecessarily to nuclear power plant expenses and particularly to O&M expenses -- I will say that there has been a good deal of educated discussion and debate about this issue over the past ten years, roughly beginning at the time of, and coinciding with the development and imposition of, the post-TMI regulatory requirements, and continuing throughout the decade of the 1980s and now into the 1990s. Numerous studies of this question have been undertaken and indeed cottage industries have been spawned for the purpose of examining where nuclear operating expenses are heading and why. Indeed, I have spent a good deal of time myself looking at this very question, in an effort to understand the nature and magnitude of the problem, having heard from many of you about your concerns in this area.

Let me make a couple of observations about this question: Without diminishing the importance to you as an industry of knowing precisely where O&M expenses are today and where they are heading for you as individual companies engaged in producing electricity for a profit -- and specifically for the purpose of permitting you to make decisions about the operation of your existing plants, the renewal of licenses for those plants, as well as the issue of building new nuclear plants -- let me submit for your consideration that for our purposes as a regulator -- and specifically for the purpose of moving forward in our efforts to make the regulatory process more effective and more efficient -- I believe that it is unnecessary at this stage for us to endeavor to put a finer point on the issue of O&M expenses, to define with greater precision than we have already whether O&M expenses are going up and, if so, the extent to which the regulatory process is the cause of that.

I say this not because I believe that we as regulators have not contributed to the unnecessary imposition of operating costs, and hence to justify a conclusion that no further actions on our part need be taken to improve and streamline the regulatory process. Indeed, quite to the contrary, as I will turn to in a moment, I believe that there are significant and fundamental steps that we are in a position to take at this time to improve the efficiency and effectiveness of the regulatory process.

Instead, I would suggest that for our purposes as a regulator -- and, specifically, for the purpose of considering what steps we should pursue to improve the regulatory process -- the debate over exactly what O&M costs are doing, and exactly who is causing whatever increase might be occurring, is less important at this point in time for two reasons:

First, I personally am prepared to stipulate -- and I believe others will acknowledge as well -- that there have been instances where the regulatory process has contributed unnecessarily to operating expenses for nuclear power plants.

Indeed, we have a whole list of examples from our staff -- a list that we refer to by the somewhat bureaucratic term "Requirements Marginal to Safety." The list includes items such as leak rate testing procedures under Appendix J, fire protection measures under Appendix R, post-accident combustible gas control requirements under 50.44, and MSIV leak control requirements. More about those issues and what we're proposing to do with them in just a moment.

But second, and more important in my view, it seems to me that we now have sufficient information to move forward with an aggressive program to improve the efficiency and effectiveness of our regulatory process, driven in part by the recent focus on O&M costs, but with improvements that will lead to allocating our respective resources -- both yours and ours -- in the most

efficient and effective manner possible from a safety standpoint.

In this regard, I would offer just one cautionary note: This effort to improve the efficiency and effectiveness of our regulatory process is an important effort for the reason that I just mentioned -- to ensure that you and we are allocating our respective resources in the most efficient and effective manner possible from a safety standpoint.

And indeed, I believe that, for that reason, this effort, will invariably lead to the elimination or streamlining of requirements that are currently resulting in the imposition of unnecessary costs.

But I do believe that it will be difficult to sustain this effort if the overriding purpose and focus becomes the reduction or elimination of operating costs, with that being the sole criterion for defining the improvements that should be considered in the regulatory process. Not only does such an emphasis place the regulator in a difficult position -- the question will invariably arise, "Why is it the regulator's job to try to reduce or eliminate operating costs for its licensees?" -- but I also believe that an inordinate emphasis on reducing costs will lead to our missing important opportunities for both you as an industry and we as a regulatory agency to think creatively about how we might approach the regulatory process and, in so doing, to address some of the systemic shortcomings in the current process -- steps that may have limited short term benefits from the standpoint of reducing costs, but over the long term hold great potential for ensuring that our resources are allocated to the most important safety issues.

Here I would cite what I consider to be one important example: The recently-enacted maintenance rule, with its performance-based approach, has served to stimulate what I consider to be some of the most innovative and creative thinking on the potential applications of performance-based regulatory initiatives, both at the Commission level and within the staff, as well as within the industry. And that thinking is now beginning to bear fruit, as we look more aggressively for opportunities to employ performance-based approaches, not just in the context of imposing new regulatory requirements, but as we reexamine existing requirements to see if they can be replaced with a less prescriptive, performance based approach. Three of the examples that I cited, Appendix J leak rate testing, Appendix R Fire Protection, and hydrogen control, are all being examined with an eye toward replacing the existing prescriptive requirement with a performance-based approach.

Beyond that, the maintenance rule, including the "Verification and Validation" program currently underway, will, I believe, serve a most valuable role in enabling the agency to examine -- and hopefully streamline -- our current approach to license renewal.

All of this is not to say that these initiatives will not lead to important efficiencies from the standpoint of what it costs to comply with the relevant regulatory requirements. I believe that we will find that to be the case. But the essential point to be emphasized is that these initiatives make sense because they will permit a more efficient, more effective allocation of resources -- yours and ours -- on the higher priority safety issues. And that, it seems to me, is a "win-win" proposition for everyone.

That leads me to the second of the two questions that I posed at the outset -- What steps, if any, need to be taken to improve the efficacy and efficiency of the regulatory process? Here, as well, there has been a good deal of thoughtful attention devoted to the question of how we might best go about improving the way in which we regulate -- to improve the efficiency and effectiveness of the regulatory process.

While our efforts at the NRC have suffered various fits and starts, and in some respects may have appeared disjointed, it is my sense that over the past two to three years, this effort to improve the way in which we regulate has begun to take on a much sharper focus.

Prior to this time, there were efforts underway within the agency, but they lacked that sharp focus or sense of importance. In addition, they suffered from lack of senior level attention -- both from the Commission as well as from the staff.

My sense is that four things occurred that led to the renewed and reinvigorated effort currently underway at the agency: First, as I indicated earlier, the maintenance rule was promulgated in June of 1991, wherein the agency adopted its first comprehensive, performance-based regulatory initiative. Indeed, the activity that this effort spawned, both within and outside of the agency, has proven to be central to much of the current thinking on how we might expand our use of performance-based regulatory initiatives.

Second, in response to a request from President Bush, the Commission directed the staff to undertake a comprehensive study of whether there are cases where regulatory burdens on licensees can be reduced without in any way reducing the protection for the public health and safety.

This effort, together with the extensive comments that were filed by the industry and others, led to the third major step -- the reinstatement and refocusing of an effort to address requirements "marginal to safety", an initiative that is now at the heart of much of what we are doing to improve and streamline our regulatory process.

Because of the central role that this initiative is now playing in our effort to improve and streamline the regulatory process and, in

certain respects, to lay the groundwork for some important fundamental changes in the way we regulate, I would like to say a word or two about what this initiative entails.

First, as I mentioned earlier, this is the vehicle for actually entertaining recommendations on, and evaluating the merits of, proposals to eliminate or streamline existing regulatory requirements. Indeed, the staff has already identified several concrete initiatives on which they are currently moving forward, and has established a three-year cycle for carrying out a continuing review of such recommendations.

As part of this effort, and in response to the recommendations of many of the commenters that this initiative would provide an excellent context in which to make the transition from a programmatic and compliance-based approach to one that is performance-based and results-oriented, the staff is initiating rulemaking in several areas to modify and make less prescriptive our regulatory requirements.

Finally, the staff is currently examining ways in which to institutionalize this process, so as to give it a degree of permanence and priority.

The fourth and final development that I would mention is the recent attention and focus on "risk-based regulation." Growing out of a presentation to the Commission by officials from the New York Power Authority, the staff is now working closely with NUMARC to develop specific candidates for application of risk-based regulatory concepts. The consensus seems to be that we should not expect, nor would it be wise to pursue, a wholesale replacement of the existing deterministic regulations with risk-based requirements. But there are specific opportunities that appear to have considerable merit. Indeed, some of the thinking in this regard that Bill Vesely of SAIC and Herschel Specter of the New York Power Authority have given to this topic has served to point the way to what I consider to be some exciting opportunities.

Indeed, this very afternoon, the staff is presenting its thoughts on a proposed transition strategy for risk-based regulation to the ACRS, and will be coming to the Commission with its recommendations by the end of this year. Complementing this, NUMARC is developing a strategy and action plan that we understand should be available by the end of this year as well.

In my view, the foregoing initiatives constitute a pretty good first step forward in our efforts to streamline and improve the regulatory process. But I also think we've got a good deal of hard work ahead of us if we expect to realize the full potential of these initiatives. In addition to the specific initiatives that I have mentioned, there are other steps that we need to pursue, and

pursue aggressively, in our effort to streamline and improve the regulatory process.

In that regard, let me conclude my remarks with several suggestions for the actions that I believe we as an agency need to take, as well my thoughts on the steps that you in the industry may wish to consider, as we move forward with our respective initiatives:

First, I believe that we as an agency need to give this effort to streamline and improve our regulations higher priority and more immediate attention. The guidance and direction should come from the Commission itself, with high-level management attention devoted to this effort by our staff. Similarly, the effort deserves that kind of support and attention from the industry. Indeed, the approach that we took to the development of guidance for implementing the maintenance rule strikes me as a sensible approach to employ here, with the focus on integrating the various initiatives currently underway.

Second, as a specific initiative, I encourage you to provide us your thoughts and recommendations on how we might streamline and harmonize the maintenance and license renewal rules. Considerable thought is currently being given to that issue within the agency, and in fact I have a number of thoughts of my own on how we might proceed. In this regard, I would note that the Commission will be reviewing the status of license renewal with its staff at a meeting on this topic in early December, and with the completion of the V&V program on the maintenance rule at about that time, I believe we need to roll up our sleeves and get to work on that topic.

Third, I encourage you to participate actively in the agency's upcoming workshop on January 26 and 27 on eliminating requirements marginal to safety, and look forward to the suggestions and recommendations that you might have by this point.

Fourth, I encourage you to become involved in the work of NUMARC's Ad Hoc Advisory Committee on risk-based regulation, and to suggest concrete initiatives that you believe we should pursue in this area.

Fifth, I encourage you to expand your use of, and hence the effectiveness of, the NPRDS system. In particular, supplementing the NPRDS data for a limited set of components (perhaps on the order of a few hundred) would provide reliability data that could in turn support a

shift toward performance-based regulation using availability and risk considerations in lieu of the more prescriptive programmatic reviews.

Sixth and finally, I believe the time has come to examine whether the backfit rule, as it is currently written, is serving as an impediment to accomplishing some of the things that everyone believes make sense, but cannot be resolved within the context of the current backfit rule. In this regard, I would simply note that the Appendix J changes that I referred to earlier -- changes that would streamline and improve our current requirements -- have been pending before the Commission for over a year for action, with the agency hamstrung by the existing backfit rule. I urge you to consider the merits of addressing this problem.

Conclusion

Let me close with one cautionary note: I am pleased to see that over the past five or so years, we have seen steady improvement in the operating record of our existing nuclear plants. There are those within the agency, however, who are quite concerned that the move toward performance-based regulation, with the reduced prescriptiveness and increased flexibility that it affords our licensees, will invariably lead to problems. I don't personally share that view. But I would note that as we move in this direction -- and I think the agency will continue its move towards greater reliance on performance-based and risk-based regulatory approaches -- the burden on you, in some respects, will increase. Not a financial burden, but a burden to demonstrate that a high level of performance can be sustained in the context of a regulatory framework that is less prescriptive and more performance-oriented. Indeed, I would note that many are watching with great interest our experience in implementing the maintenance rule, viewing this as a seminal opportunity to evaluate the merits of performance-based regulation.

I would also be remiss if I failed to note that there is a growing concern in some quarters over the "plateauing" that we have seen in our performance indicators in 1991 and so far in 1992, as well as in the wide range of safety performance across the operating units that are reflected in these indicators. In 1991, for example, when the annual average engineered safety feature actuation rate was 5, 23 plants had one or fewer actuations while 24 plants had 10 or more, with a similar range for all of the indicators.

As I hope I have made clear in my remarks, I am personally enthusiastic about the opportunities before us to streamline and improve the regulatory process. But at the same time, your quest for excellence must continue in the same aggressive fashion that

you have demonstrated in the past -- hopefully more efficiently and, at least at this point, with a willingness on the part of the Commission to provide greater flexibility in achieving performance-based regulatory objectives.

But I would note in this regard that while the overall industry safety performance has come a long way in the past ten years, there remains an excessively wide range between the best and the poorest performers. And there is a concern that if the poorer performing plants invoke the median industry performance as a basis for initiating short-term cost reductions that, in turn, adversely affect safety, then we will all have failed.

We simply cannot afford a situation where complacency about nuclear safety, fostered by a combination of the substantial safety improvements that have occurred in the past and by the increased economic pressures facing the utility industry today, leads to an increase in safety concerns.

Our challenge is to ensure that regulation and productivity, and hence safety and productivity, not only co-exist, but are recognized as fully complementary objectives.

I thank you for your thoughtful attention.