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> Remarks by Ivan Selin Chairman, U.S. Nuclear Regulatory Commission before the U.S. Council for Energy Awareness Washington, D.C. June 17, 1993

Good Morning. I am pleased to be here today to address the U.S. Council for Energy Awareness. I would like to talk with you about some of the major issues presently facing the Nuclear Regulatory Commission and the impact some of these issues may have on the future of the nuclear power industry. At the end of my presentation I would be happy to address any questions you may have.

Let me talk first about one of the most important issues facing the Commission today: renewal of nuclear power plant operating licenses. The NRC's license renewal rule became effective in January of 1992. This rule is based on two basic principles. The first is that, with the exception of age-related degradation unique to license renewal, our regulatory process is adequate to ensure that the licensing bases of currently operating plants will maintain an acceptable level of safety into the extended period of operation. The second principle is that each plant's current licensing basis must be maintained during the renewal term, in part through a program of age-related degradation management. In addition we will not penalize a license renewal applicant's current licensing basis simply because he is applying for license renewal.

When the NRC first approached the license renewal process, industry and the Department of Energy (DOE) thought the idea of having lead plants was the best way to resolve issues associated with license renewal. As you all know, both lead plants, Monticello and Yankee Rowe, have decided to cancel or defer their license renewal plans for plant-specific reasons. The lesson we learned is that in order to work through the license renewal process for the first time, an approach to resolving generic issues was needed.

Industry efforts are now focused on a more generic approach to license renewal, as reflected in the submittals from the Babcock & Wilcox (B&W) Owners Group that we are now reviewing. It is the NRC's understanding that the other Owners Groups are also investigating the possibility of submitting generic documents to resolve key issues facing the Westinghouse, General Electric, and Combustion Engineering plants.

As I have stated many times before today, I firmly believe license renewal is key to the viability of the nuclear power industry over the next 20 - 30 years. Without the possibility of license renewal, there may not be enough time left in the plant's license to amortize some of the capital improvements needed to complete the first 40 years. Hence, without license renewal, not only will some reactors not outlive their original 40 years, but plants will close early when faced with costly capital projects.

Over the past year, the NRC staff has developed a process for implementing the license renewal rule which I believe is technically sound and balances the interests of both safety and economics. The staff is proposing to shift the focus away from the identification and evaluation of aging mechanisms themselves, and towards the detection and mitigation of the degradation effects of those aging mechanisms. Under this approach an applicant would not evaluate each aging mechanism for each system, structure, and component important to license renewal if he can describe a program that manages the effects of degradation such that each system can comply with its current licensing basis and perform its required function when called upon. This process would also give the applicant credit for work being performed in accordance with the maintenance rule.

The staff's proposed approach is currently before the Commission for action, however, it is clear that a consensus has not been reached between the staff and all affected parties as to whether the staff's approach is sufficient and whether a rule change would be necessary to support that process. The staff will continue to work with the Owners' Groups and any other interested parties to resolve key issues. I believe the next few months are crucial to both the NRC and industry as we try to resolve the problems associated with implementation of the license renewal rule.

Another important issue facing the Commission has been the design certification of the evolutionary and passive light water reactor designs and the implementation of 10 CFR Part 52. When Part 52 was promulgated, the NRC and the industry had many reservations regarding how easily the traditional two-step licensing process could be replaced by a combined construction permit/operating license. During the last several years, the NRC and the vendors have continued aggressively on the path to certifying designs; and although it hasn't always been easy, I believe we are finally seeing the light at the end of the tunnel.

The efforts taken over the last year have finally broken the logjam associated with the design certification process, and the

next steps will not be as difficult. Draft safety evaluation reports have been issued for the Advanced Boiling Water Reactor (ABWR) and the System 80+ evolutionary designs, and staff reviews of the AP600 and Simplified Boiling Water Reactor have begun.

One of the most complicated issues facing the staff and the vendors is the development of inspections, tests, analyses, and acceptance criteria (ITAAC). Extensive efforts by the NRC and the evolutionary reactor designers over the last year have resulted in specific ITAAC examples that will serve as a template for all advanced light water reactor designs. Although the development of this prototypical set of ITAAC was a more difficult and time consuming task than anticipated, its completion removes a major obstacle to finishing the evolutionary design reviews. Through the extensive work done on the lead plant, the ABWR, the remaining evolutionary and passive designs now have a much easier road to travel. We have confirmed, and the vendors have stated, that Part 52 is workable and it is a viable means to certifying standard designs in this country.

One of the major issues currently affecting the nuclear power plant industry is the maintenance rule and its implementation. Since the maintenance rule was promulgated, both NUMARC and the NRC staff have expended a great deal of effort to develop guidance for its implementation. The NRC solicited public and industry involvement by holding numerous public meetings to discuss implementation issues; the staff is currently reviewing public comments on its draft regulatory guide and we expect that final guidance will be issued sometime this summer.

Implementation of the maintenance rule has implications not only for current operating licenses, but also underlies the staff's intention to take full account of current actions for purposes of license renewal. The actions taken in support of the maintenance rule could, if planned with renewal in mind, be fundamental in ensuring the management of age-related degradation during both the current license term and the renewal term.

In addition to working on the implementation of new requirements, the agency has, over the past year, undertaken a number of initiatives to reduce the regulatory burden, where such burden has minimal safety benefit. The reason for this is to encourage licensees to focus their efforts on the most risk significant issues. In parallel, we have looked at ways of spending our own inspection resources in the most safety beneficial manner. These two apparently separate activities have the potential for a simultaneous double benefit -- both safety improvements <u>and</u> cost reductions for the utilities and the NRC.

In August of last year the Commission approved a plan to tackle a long list of proposals submitted by the industry to eliminate requirements marginal to safety, and to formalize the ongoing review effort. The marginal requirements program has identified a number of technical subject areas for regulatory action. Rulemaking activities have already been initiated for some of these activities. The NRC's Regulatory Review Group will extend this generic effort to plant-specific applications as part of a more complete examination of the current regulatory framework.

The NRC is also moving toward greater flexibility in the allocation of inspection resources. We have found inconsistencies in the allocation of direct inspection effort based on licensee performance; for example, a number of similarly performing plants receive disparate inspection hours. Two driving forces in the allocation of resources have been the N + 1 policy for resident inspectors, and the growth in special team inspections, for example the service water team inspections currently ongoing.

A closer look at team inspections proved instructive. In a number of cases we find that licensees perform a thorough selfinspection before our inspection team arrives. In such cases our inspection only serves to validate the licensee's effort, but results in the spending of large resources by both the NRC and the utility. In these situations, at least for the better performing plants, we are considering performing an audit of the licensee's self-inspection rather than conducting our own independent inspection. This will help reduce the licensee's efforts in support of major team inspections and the expenditure of agency resources. A pilot program is underway to test the feasibility of this approach.

A related area where the NRC has spent a great deal of effort, and which has a direct impact on operating plants in this country, is the revision to the Systematic Assessment of Licensee Performance (SALP). As far as the specifics of the SALP program are concerned, the NRC staff has done a tremendous job in identifying where the SALP program needs to be sharpened to serve both the NRC and industry better. The most fundamental change to the program reduces the number of functional areas to four, in order to provide more equity when weighing the safety significance of the various SALP areas. In this way SALP scores will be more closely related to the concept of good performers. This will support the staff's initiative to relate NRC inspection resource allocations more closely to licensee performance. In other words, we'll try to reward good performers by reducing the amount of inspection effort. The converse is that we'll apply additional inspection resources to help prod the poorer performers to do better. The Commission has recently acted to adopt the staff's recommended changes to the SALP program.

Through initiatives like the SALP program, the maintenance program, and the performance-based inspection program, the NRC has provided the impetus for safer operations at reduced regulatory burden. This is evident in the steady improvement of the majority of performance indicators tracked by the NRC. For instance, U.S. nuclear power plant availability has been increasing over the last five years where safety indicators have also been improving. A safer, well-maintained plant is an economic reward for utilities.

Our study of performance indicator trends has shown evidence of plateauing which indicates that current performance is well within expectations and the current overall level of performance is safe. More detailed evaluation suggests that many of the better performers are approaching the level of risk reduction inherent in their plants. However, added effort is warranted among the poorest performers. The best way to reduce the overall risk of nuclear power plant operation is to focus on the poorer While we have stated that we will lighten the performers. inspection effort on better performing plants, at the same time we will increase our attention to the poorer performers. This strategy is clearly in the best interests of the NRC because of our role as the protector of public health and safety. It is also in the best interests of the nuclear power industry itself for the better performers to help out the ones lagging behind.

Let me point out another area where I believe it is important for the NRC and industry to become more involved: whistleblowers. The industry and the NRC need to be responsive and supportive to whistleblowers whenever possible. Allegations were instrumental in bringing the Thermolag issue into the limelight. That has improved overall safety, and no matter how much pain they may cause you, whistleblowers have an important place in the nuclear arena. It is both the NRC's and industry's responsibility to ensure that employees feel free to express their concerns and that those concerns are addressed in a timely manner.

In conclusion, let me say that the NRC has done a tremendous amount of work over the past two or three years that will help to shape the future of the nuclear power industry, including the efforts associated with standardization, license renewal, and In addition, I believe that at the same time, plant maintenance. the industry has done a good job in making operations safer. Performance indicators have been steadily improving and SALP scores, for the most part, are looking better for a greater number of plants. The NRC is currently evaluating regulatory requirements to reduce their burden on utilities so long as there is no reduction in safety. All of these efforts and indicators are fine and good, but the safe operation and good decisions that are currently being made, need to be reproved day after day, and although a great deal has been accomplished to improve the credibility of the nuclear industry, there is still a long way to qo. The industry itself must take the major steps necessary, and so it is in our interest for me to have had the opportunity to

share my views with you today. Now I would be happy to answer any questions you may have.