# NRC NEWS

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**"The NRC on Main Street"**
**Remarks Prepared for**

**The Honorable Peter B. Lyons**

**Commissioner, U.S. Nuclear Regulatory Commission**

**at the**

**2008 American Nuclear Society Annual Meeting**
**Anaheim, California**

**June 9, 2008**

Good morning. I want to thank the American Nuclear Society for inviting me to speak at your opening Plenary today. I very much appreciate that you regularly seek the NRC's regulatory perspective at these meetings. As always, I must note that I am providing my personal views today as only one Commissioner.

The theme of your meeting, "Nuclear Science and Technology: Now Arriving on Main Street," is certainly well suited to your venue this year, at the Disneyland Hotel. It also conveys a sense of optimism, something that has always been a defining feature of the adjacent theme park. I am certainly seeing that optimism throughout the nuclear industry, both in the U.S. and abroad. Coming here also prompted me to think about the optimism of the designers and engineers who built Disneyland. Finally, I thought about how committed those designers and engineers were to creating something that the public not only would value, but would feel extremely safe in using.

What Disneyland and the nuclear energy enterprise have in common is that they both depend for their success and their existence on an unwavering commitment to safety. Such a commitment, resulting in an excellent performance record on safety, is what generates public trust. The Chairman of the NRC made this comparison about a year ago in this same hotel, when he addressed the WIN, or Women in Nuclear, conference. I think it is a useful analogy and bears repeated emphasis here today.

When I referred to the "nuclear energy enterprise," I specifically meant to include the regulatory component of that enterprise. As an independent and technically strong regulator, the NRC has been a long-time resident of "Main Street." We have a vital role in maintaining public trust in the nuclear energy enterprise and in other commercial nuclear technologies. I am encouraged that senior executives in industry understand the importance of the NRC's role. They know that tough questions will come from the NRC and that they and their organizations must be ready with technically sound and defensible answers. They recognize that when this dialog takes place in a public forum or is subject to oversight by elected representatives of the public, then public trust will be maintained.

The recent public concerns over the regulatory role of the Federal Aviation Administration in enforcing technical and maintenance requirements on commercial aircraft emphasize how important it is for a regulatory agency to have clear standards and to enforce them consistently. I'm not passing judgment on another federal regulatory agency, but my point is that the public trust is easily damaged if it perceives a regulator as weak or inconsistent. So although you may not appreciate being on the receiving end of tough NRC questions, I encourage you to appreciate the role of the NRC and the positive influence it adds to the public trust you generate through your own commitment to safety. I once again echo our Chairman, who recently stated that

> *"…the NRC's relationship with industry is neither friendly nor adversarial, but is characterized by mutual respect. …….this respect arises from the fact that both NRC and this industry share a common commitment to the safety and security of the nation's nuclear power plants."*

Of course, asking the tough questions isn't the endpoint. The NRC must often make the tough calls. This means the NRC must seek, listen to, and carefully evaluate all sides of a technical, regulatory, or policy issue. We must then render an objective, independent, and scientifically based decision. I've been impressed with the NRC's track record in this regard, and I am committed to maintaining and enhancing our questioning attitude and technical capability in rendering the tough calls. My main message here is that each of us, industry and the NRC, must continue to be constantly committed to safety as we perform our appropriate roles and meet our responsibilities to the public we all serve. If we do that, together we can achieve safe and secure nuclear energy in the U.S. and provide more energy options for our future. The NRC, the nuclear industries, and the public are all residents of "Main Street." Optimism in the arrival of a new generation of nuclear science and technology comes with the continued promise of safety that we must never forget and must always achieve.

So as we look ahead to the possibility of new reactor plant construction in the U.S., we must all recognize the challenges that lie ahead if we are to keep our promise and continue to earn the public's trust. Let me list a few of the important challenges with the hope that your discussions at this conference will help to illuminate the means to address them. But, I should note that although my focus for the rest of this talk is on possible new plants, the safety of the operating reactors remains paramount. The light of any nuclear renaissance will be quickly extinguished if we fail to constantly stress safety and achieve it for the 104 operating reactors.

First among these challenges is for industry to ensure that applications submitted to the NRC for design certifications and licenses for new plants are fully complete and of high quality. This should also help bring regulatory predictability to our technical review schedules.

Second, to the extent that new plants are standardized throughout their design, licensing, construction, and operation, this will bring improved regulatory consistency and effectiveness as well as life-cycle efficiencies for both the NRC and the licensees. This will be particularly true in the more technically complex areas such as digital I&C and safety systems.

Third is the challenge of building up the necessary quality workforce and the educational infrastructure to maintain it. Every facet of work related to the safety of a nuclear plant, from designing it to operating it, must be accomplished by people who are qualified and who understand the importance of a commitment to safety. This is an enormous challenge that industry, the NRC, and academia must all work to overcome, because we all depend on a good supply of quality people to accomplish our work.

Fourth, research will continue to be needed to benchmark the validity of computer simulation codes used to demonstrate that our safety requirements are met. Such research is often expensive and benefits greatly from international collaboration and cost-sharing. In addition, the NRC will continue our collaborative efforts with regulatory counterparts in other countries as multiple nations begin to license and construct globally standardized reactor plant designs. There are many "Main Streets" throughout the world, each with similarities and unique differences. There is much we can learn from each other, if we make the effort.

Last on this non-exhaustive list is the challenge that licensees will have to ensure oversight of their contractors and of the supply chain of components and parts for both new construction and currently operating plants. Let me give you two examples to put an exclamation point on this last issue.

Unfortunately, in the dark back alleys behind "Main Street" there are counterfeiters at work. Our recent NRC Information Notice 2008-04 on the reappearance of counterfeit valves and breakers is a testament to the adage that crime pays until the criminal is caught. These recent examples have not found their way into the safety systems of our nuclear plants, but I'm sure that you can appreciate the seriousness of the situation if that were to happen. The volume of the flow of parts and components will surge with new plant construction, and we all must remain vigilant.

Another possible pitfall in the supply chain is hiring inexperienced contractors who don't understand the importance of nuclear-grade quality standards. Examples of this have occurred in plants under construction overseas, but a recent example in the U.S. came from the NRC's oversight inspection of the construction of the mixed-oxide, or MOX, nuclear fuel facility being built in North Carolina for the Department of Energy. As background, since the late 1980s the NRC has endorsed a process by which off-the-shelf commercial grade components are thoroughly examined and tested to ensure that they meet the high quality standards necessary for safety-related use in a nuclear power plant. We call this process "commercial grade dedication." One reason for this is that the number of ASME Nuclear Certificates held worldwide fell from nearly 600 in 1980, to under 200 last year. More strikingly, the decline was due almost entirely to the loss of nuclear certificates among American companies. The number of certificates held by

other nations has remained about 100 since 1980, but the number of American certificate holders today is only one-fifth of what it was 27 years ago. We expect that commercial grade dedication will be utilized during the construction of new nuclear plants.

For the MOX facility construction, a contractor at MOX had been hired to perform commercial grade dedication on rebar, and we found significant inadequacies in its performance. Dedicating something like rebar seems to be a far simpler task than will be needed for more complicated components. The contractors, vendors, and licensees that will perform such dedication need to get it right the first time. Again, I would strongly urge you to remain vigilant.

In closing, I thank you once again for providing me the opportunity to offer a regulator's perspective. I am optimistic when industry and the NRC are each doing its part to ensure safety and security and to earn the public's trust. We are all residents of "Main Street" and we must all work together to sustain what we have accomplished and to create a safe and secure future for our children.

I look forward to interacting further with many of you at this conference and hope you have a very productive dialog while you are here.