



NRC NEWS

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U. S. Nuclear Regulatory Commission

at the

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TO LICENSE AND REGULATE
- SHARPENING THE EDGES -

It is indeed my distinct privilege to address the 24th INPO CEO Conference. INPO is almost as old as the NRC; I do appreciate how considerate INPO is of its elders.

It is almost 30 years since the Nuclear Regulatory Commission was established by the Energy Reorganization Act of 1974 ("Reorganization Act"). Much has changed during that time, yet the purpose of the Reorganization Act, and the foundation established by the Atomic Energy Act ("AEA"), are as clear, relevant, and important today as then, and so is the NRC mandate. In fact, their importance might be even more easily discerned in today's national and international political, economic and security environment when three decades of experiences, and the events of September 11, 2001, are brought into consideration.

I quote from the Reorganization Act's Declaration of Purpose:

Sec. 2 (a) The Congress hereby declares that the general welfare and the common defense and security require effective action to develop, and increase the efficiency and reliability of use of, all energy sources to meet the needs of present and future generations, to increase the productivity of the national economy and strengthen its position in regard to international trade, to make the Nation self-sufficient in energy, to advance the goals of restoring, protecting, and enhancing environmental quality, and to assure public health and safety.

Sec. 2 (c) The Congress finds that it is in the public interest that the licensing and related regulatory functions of the Atomic Energy Commission be separated from the performance of the other functions of the Commission, and that this separation be effected in an orderly manner, pursuant to this Act, assuring adequacy of technical and other resources necessary for the performance of each.

With regard to Section 2.(a), it is clear to me that nuclear power and the use of radiation technologies are today making vital contributions to the well-being and the national security of the United States of America. With regard to Section 2.(c), the NRC continues to perform its mission to license and regulate the Nation's civilian use of byproduct, source and special nuclear materials to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment.

I would like to deal this afternoon with those two interdependent functions and responsibilities assigned to the NRC by the Reorganization Act: licensing and regulation, with a focus on the near term. It is the obligation of the Commission to effectively discharge these coupled responsibilities. Yet there is a need to continue sharpening both edges, and furthermore, to ensure that their execution fulfills the requirements of the Nation, in accordance with the comprehensive set of checks and balances established by the AEA and the Reorganization Act.

I believe that the NRC licensing function is not given all the respect and credit it deserves in establishing the regulatory, technical, and safety bases that ensure safe use of nuclear energy and technology for civilian purposes, in a manner responsive to the nation's needs, and in accordance with our safety mandate. In this regard, the Commission is now using a terminology that I strongly endorse: our strategic goal is "to enable the use and management of radioactive materials and nuclear fuels for beneficial civilian uses..." subject to the provisions of ensuring safety, protecting the environment and national security.

Licensing lost some of its glamour when the licensing of new nuclear power plants ended, but licensing we do, day-in and day-out; licensing is indeed a forward-looking component of our mandate and deserves effectiveness, efficiency and predictability in its execution. Licenses also set in place specific requirements, responsibilities, and rights for licensees in a manner that allows implementation and oversight. Licensing embodies the technological and legal framework, including the adequate protection requirement, used to achieve the benefits for society; regulation and oversight ensure it is being done as licensed.

A brief summary of part of the licensing landscape is shown on the enclosed Table 1, underscoring the variety of licensing issues and the importance of the licensing function.

Licensing requires the expert resolution of the pertinent technical and legal issues, and, when appropriate, adjudication. There is no doubt that technical definition, clarity of analyses, and timeliness are essential to resolving the technical and legal issues always present at the leading edge of licensing. Everyone is served by crisp processes. And there is no doubt that the nation is served best when adjudication uses the same principles. The NRC adjudicatory processes are a true exercise of

democracy's checks and balances, and it is our obligation to make sure they are conducted in a manner that serves the nation's needs by achieving sound and timely decisions, without rushing them or delaying them.

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I believe it is also appropriate to consider adjudication within the framework of regulation. Regulation is a tool of society to implement what society needs, in an orderly, fair and equitable manner. The combination of a democratic society and a free market provides the most powerful combination for achieving fairness, equity, and the protection of rights, property, health and safety. I also believe that the free flow of information is crucial for a free market to operate for the benefit of all.

The ultimate purpose of adjudication is to reach a decision on a matter under dispute. I hear loudly and clearly the concerns of the industry and of stakeholders regarding fair and equitable adjudication processes, and I emphasize fair and equitable. I am committed, and I am certain my fellow Commissioners are also, to sharpening the edges of the processes for resolution of technical and legal regulatory issues, including adjudication, in a manner conducive to sound and timely decision-making, with the full protection our laws afford to the parties to the process. This is as true for the simple as it is for the more complicated matters, from a narrow license amendment to an adjudication of a potential license application for Yucca Mountain.

The licensing process, including all its technical support, is that function that precedes the conduct of the actual regulated activity. There is a "transfer of technology" that must take place between the licensing organizations -- regulator and regulated alike -- and those who will conduct and oversee the licensed activities. The only reason I mentioned this is because this transfer of technology is essential for the sound conduct of licensed activities; it needs to be thorough, comprehensive and tailored to the function to be performed, and it needs re-visiting often. In this regard, my regulatory perspective on the conduct of the licensed activities could be entitled "Safety Management".

Safety management is your responsibility. Assuring that you are adequately fulfilling your safety management responsibilities in a manner that protects public health and safety, the environment, and the common defense and security is our responsibility.

Notice I am emphasizing safety management and not safety culture. I accept the importance of a sound and pervasive safety culture, and I think it is good that INPO is focusing on it and on sharpening the concept. As a regulator, I do not like the vagueness of the concept of "safety culture" -- its loose association with what to do and when to do it -- nor do I endorse the ease by which so many problems or issues are blamed on it, particularly when the causes include more identifiable and fixable issues. One major feature of the expert and safety-focused nuclear business is that we know what to do and when to do it, or at least we should; it is those rare occasions when we don't that cause troubles. For example, I could run down the major power reactor accidents and incidents, as well as the non-power reactor and fuel facility accidents, and find an important common thread: lack of the application of technical expertise when it was needed. In fact, that is the precise reason for the birth and development of INPO.

I congratulate INPO and you for your contributions to the enhancement of safety and encourage the industry to ensure that the applications of the principles of a generation ago are fostered and tuned-

up for the present. INPO is an organization that understands and promotes excellence, through the “best practices” approach and other tools. I believe it is the appropriate forum to discuss excellence in safety management and its role in managing safety. Some claim we are getting old and need renewed vigilance. The term maturity comes to mind; maturity should reflect your experience and once you have it you should not lose it. For example, no accidents in U.S. power reactors have caused a radiation release adversely affecting the public health and safety, and we want to keep it that way.

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Maturity has a lot to do with this achievement. But too many reactors have been shut-down for long periods of time and there have been a few events of safety significance because the requisite technical expertise was not applied in a timely manner to the resolution of design, operational and maintenance problems. I believe there is little or no reason for the NRC, and for that matter, the industry to accept the recent ones. We know better and should be committed to avoiding all those that are avoidable. We have come a long way from the safety and reliability performance of the 70s and 80s, as shown by the Industry Trend Charts (available on the NRC website at: <http://www.nrc.gov/reactors/operating/oversight/industry-trends.html>). A very impressive “asymptotic” behavior has been achieved as a group; the issue is to keep performance there and to reduce the singularities of safety significance.

Everyone probably has their own definition of safety management; they all share very fundamental common elements. I will share mine.

Safety management is, at least, the collective product of three essential, interactive elements that are actively managed:

- A functional and executable commitment to operational, maintenance and engineering safety, imbedded in every activity of the organization,
- a technical expertise that is applied where and when it should be; able to receive, process, form and communicate technical issues, cognizant of safety functions and safety systems, with licensing and regulation as boundary conditions but taken beyond them by the pursuit of safety and reliability, and
- the people, programs, and processes to implement a safety program effectively.

Simply stated, safety management embodies using commitment, technical expertise and good management to achieve the requisite adequate protection we demand and the reliability you need. That’s all. And, the U.S. nuclear industry must do this with a demanding yet forgiving technology, one that is always in the public eye and subjected to public perception, in a still unforgiving environment.

“Sharpening the edge” on safety management, as part of the focus on safety culture, means striving for excellence by focusing on those three elements and doing them better -- not just well, but better. The reality is that there is a higher standard for the nuclear industry; you know it and you know how to achieve it.

Let me elaborate on these three essential elements of safety management. Commitment to Safety includes: the desire to do things right; a questioning attitude and a receptiveness to questioning attitudes; a willingness and ability to learn; and the experiential awareness of how indispensable safety is.

The application of technical expertise involves using: realistic conservatism in safety analysis; quality engineering based on state-of-the-art information; and, operational safety and maintenance ... founded in science, engineering, technology, and operating experience.

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Again, in this area, both the technical framework and the regulatory framework need to be understood utilizing state-of-the-art know-how, including systems engineering. Last but not least, is management ... that's you! It is my long-standing position that management is your prerogative and, therefore, I will refrain from elaborating on management. However, it is obvious that management is not only the everyday driving force to form the commitment to safety and the application of technical know-how into a consistent set of activities, but it is indispensable to keep and sharpen their edges.

I once said that problems are worthless without solutions. The problems and challenges of the new nuclear safety landscape, populated by life extensions, power uprates, materials degradation, risk-informed and performance-based approaches to safety management, and long term core cooling requirements, regardless of initiating event or systems pathology, have solutions. But solutions are worthless unless they are implemented. Both the industry and the NRC have responsibilities to address the safety landscape with a comprehensive safety management approach. It is your job to implement solutions.

Absent from my discussion today have been the issues of security and emergency preparedness. It seems at times that security has consumed much of our time and efforts the last two years, and that was needed. I believe our nuclear facilities are as secure as they should be, and will be even better as the required improvements are completed. I also want to acknowledge that most in the industry have gone beyond the regulatory requirements in securing their facilities. We are continuing our efforts to integrate safety, security and emergency preparedness. We will remain vigilant and will promptly act whenever needed to protect our people.

The main subject of my discussion today is safety, and the importance of focusing on safety engineering, operations and maintenance, driven by a safety management program. I encourage you to engage us, actively and consistently, on these issues.

I also need to be clear on another important issue. I believe safety and reliability are fully compatible as long as safety comes first. It is not only foolish but also short-sighted from all angles to place economic performance ahead of safety considerations.

In summary, I believe that the vast majority in the industry have well functioning safety management programs; but it may only take a few that do not to require more regulatory involvement

on our part. That is not our desire nor I assume yours, but I assure you that we will do what we must do to assure public health and safety.

It is worth remembering that, “When government decides to solve something, we have learned to be wary. The cure may not always be worse than the disease, but it is usually bigger and costs more” (Ronald Reagan).

The NRC’s technical and legal framework establishes high standards that ensure adequate protection of safety, but cannot require excellence in safety management. You can, and I believe you should.

Thank you.

(November 25, 2003 Copies of the slides for this speech are available from the NRC’s Office of Public Affairs; telephone 301-415-8200, or e-mail opa@nrc.gov.)

NRC LICENSING ACTIVITIES

Table 1

2003

REACTOR PROGRAM:

- License Renewals	6 completed
- Design Certifications	1 Under review
	5 Under pre-application review
- Power Uprates	17 completed
- License Amendments	1900 Completed
- Early Site Permits	3 pre-application reviews completed
- License Transfers	1 Completed

NRC LICENSING ACTIVITIES
Table 1 (Cont'd)
2003

FUEL CYCLE and WASTE PROGRAMS:

- Fuel Cycle Licensing Actions	141 Completed
- MOX Fuel Fabrication Facility	Draft SER
	Draft Environmental Impact
- Spent Fuel Storage + Transportation	3 Cask Certifications Completed
	81 Transportation Container Design Reviews Completed
	27 Storage Container Design Reviews Completed
- Yucca Mountain	Final Yucca Mt. Review Plan Completed