



# NRC NEWS

**U.S. NUCLEAR REGULATORY COMMISSION**

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**“Risk Management and Security”  
Prepared Remarks for  
NRC Commissioner Dale Klein  
Raleigh Grand Challenge Summit 2010  
North Carolina State University  
Raleigh, North Carolina  
March 5, 2010**

Thank you, and good morning, everyone. I am pleased to have the opportunity to participate in the 2010 Grand Challenge Summit and this special session on nuclear security and safeguards. I am delighted to join Professors Charlton, Hall, and Allison on this panel – we share a common academic background. I am currently on leave from the University of Texas at Austin, but I bring to our topic of nuclear security and safeguards two additional perspectives. First is my background of having spent five years at the Pentagon as the Assistant to the Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, and second my current role as former Chairman and now Commissioner of the U.S. Nuclear Regulatory Commission.

The NRC is the independent federal regulatory agency responsible for overseeing the safety and security of the civilian uses of nuclear energy and materials. So my remarks today will focus on the regulatory aspects of nuclear security and safeguards. I also want to note that I am not the only participant on this panel with regulatory credentials – our distinguished moderator, Dr. John Ahearne, is also a former Chairman and Commissioner of the NRC, and it is a great pleasure for me to see you again, John, and to join you on this panel.

It may seem odd to some of you in this audience that nine years after the terrorist attacks of September 11, 2001, the subject of nuclear security and safeguards would still be considered a “grand challenge” for discussion at this summit. It is not because the nation has been idle in addressing nuclear security and safeguards over the last nine years. On the contrary, the U.S. Nuclear Regulatory Commission and the nuclear industry have done a great deal to strengthen security since 9/11. Even before the terrorist attacks, nuclear power plants and other nuclear facilities were some of the most fortified civilian facilities in the country. Nevertheless, our national level homeland security efforts have intensely focused on the nuclear industry, and I expect that this focus will continue.

In addition to power plants the NRC has played a key role in ensuring non-proliferation associated with the civilian uses of nuclear materials, including the application of International Atomic Energy Agency safeguards at NRC-licensed fuel cycle facilities and issuing export licenses for high-enriched uranium. We are also grappling with the safeguards side of security as it applies to nuclear materials. In particular, as the nation contemplates reprocessing of spent nuclear fuel, we must be able to meet the challenge of ensuring proper material control and accounting for new types and increased volumes of nuclear materials that will require protection against theft and diversion.

All these activities put NRC in the middle of an evolving balancing of safety and security and I believe the nexus is often confused by rhetoric. Therefore I believe that the time has come for a recalibration of our thinking about security in the nuclear industry by taking a more risk management approach to the subject. This recalibration will allow the federal government to increase its focus on risks associated with other critical U.S. infrastructure, such as the chemical and biological sectors, where the need for more intense focus may be greater.

The concept of managing risk to avoid adverse consequences has been with us since the first human beings appeared on the planet. But in the regulatory field, the concept of risk as a management tool is relatively recent. At the NRC, it was not until 1995 that the Commission issued a policy statement that encouraged the application of probabilistic risk assessment “as an extension and enhancement of traditional regulation.” As a regulator and based on the agency’s experience over the last two decades, I strongly support the use of risk analysis as a means to focus on the events and activities that pose the greatest risks to public health and safety and to ease unnecessary burdens on licensees. I believe we have come a long way since 1995. I also believe, however, that we can and should expand the systematic use of risk analysis to areas where, up to now, it has been used intermittently. I am referring here to the security arena. This will be a difficult task, however, and will require the concerted effort of the NRC and the industry to carry it out.

The NRC has made great strides in bringing a risk-informed approach to our safety regulations. One very important example of that risk-informed approach is the Reactor Oversight Process, or ROP. The ROP provides predictability of NRC actions at the same time that it recognizes the relative importance of inspection findings by taking into account their risk.

Considering the great progress we have made in risk-informing our safety regulations, I believe we have the experience and many tools to further risk-inform the security-related arena. I also believe that in most instances, the U.S. nuclear industry has reached a level of security such that additional requirements would not substantially improve overall security. Let me be clear: I strongly believe we need to remain vigilant but must also do a better job of risk-informing our security-related decisions. Simply put, I think we need to be better regulators in the security arena to ensure that our requirements are balanced.

Let me give you a specific example of what happens when we don’t carefully think about the consequences of new security requirements. After 9/11, nuclear power plants and other types of licensees were required to install multiple bullet resistant enclosures – also known as BREs – throughout plant protected areas to provide observational posts and fighting

positions from which to repel an attack in lieu of traditional security patrols. Although these BREs can be effective in protecting security guards while repelling an attack, I firmly believe that these BREs have contributed to the security guard attentiveness issues we have seen recently at some commercial nuclear power plants. Let's be honest, if you were isolated in a small room with little ventilation and only small slits to use to view the outside world, you would likely grow bored and inattentive too. I think in this case we may have set ourselves up for failure. As a regulator, we must ensure that any security upgrades and new requirements proposed in the future add real value. You don't necessarily want to use an axe instead of a scalpel, just because it is bigger and stronger.

The challenge for risk informing our security requirements is that security risks are often difficult to quantify. For example, whereas engineering calculations and related data can help us to determine what size pump or generator to use or what the chances are that it will fail when called upon, the same cannot be said for determining how many guards to have at a plant or what caliber weapons they should carry. Rather, we have to look at the overall security strategy and determine through more subjective means whether we have effectively managed risks associated with radiological sabotage.

In the absence of quantifiable data related to the risks of radiological sabotage, the NRC and industry continue to receive pressure to increase security as well as safety requirements to reach a "zero" risk level. But a zero risk level is not realistically attainable in any human activity and as a practical matter, we balance risk against benefit every day in our routine activities. The safest vaccine is never given, the safest airplane never flies, the safest car never moves, and the safest power plant is one that never operates. In effect, more may not be better.

Let me conclude my remarks today by returning to the place where I began – I fully support the concept behind this session of the 2010 Grand Challenge Summit - that nuclear security and safeguards, as well as the general terrorist threat, remains a critical challenge for our nation. But understanding and addressing these threats, requires a good understanding of what is *not* a threat. There are some people who think that the spent nuclear fuel pools of commercial nuclear reactors represent a nuclear proliferation risk. I strongly disagree. No nuclear weapon has ever been developed from high burn-up commercial spent fuel. Let me go so far as to say that I believe people who talk about the risks of spent fuel pools know this, but are being somewhat disingenuous in order to further their agenda. And that is unfortunate, because it distracts us from more meaningful issues and addressing more substantive threats.

Let me stop here and thank you again for your kind invitation to share some thoughts with you.

Thank you.