NRC NEWS

U.S. NUCLEAR REGULATORY COMMISSION

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"Taking the Broad View"
Prepared Remarks for
The Honorable Gregory B. Jaczko
Chairman
U.S. Nuclear Regulatory Commission
at the
6th Annual Platts Nuclear Energy Conference
Bethesda, MD
February 17, 2010

Good afternoon. I would like to thank Platts for providing the opportunity to address their sixth annual conference on the potential growth in the nuclear industry. This issue is an important part of the ongoing debate about our nation's energy future, commanding significant attention from the public, private industry, and policymakers. This conference provides a forum to discuss the opportunities, challenges, and implications of the resurgence of interest in nuclear power. I should make clear from the beginning that I approach this issue strictly as a safety regulator. It is not the role of the Nuclear Regulatory Commission (NRC) to promote or discourage the use of nuclear power. The future of nuclear power—whether it expands or contracts—is one for the public to determine through the actions of the private sector, the Administration, and the Congress.

A decade ago, I doubt many people inside or outside the NRC would have foreseen any significant increase in new reactor applications. Even five years ago, the outlook for new applications remained uncertain. But once a flood of applications became a realistic possibility, the NRC took several steps to prepare for this development. These steps included a reform of our licensing procedures, budgeting enough resources to develop the needed infrastructure, the hiring and training of large numbers of new staff, and the creation of a new office to focus specifically on new reactor issues. With these steps, the NRC is well-prepared to continue completing licensing reviews in an efficient and predictable manner, while always focusing on protecting public health, safety, and security, and protecting the environment.

As some of you may recall, I discussed these issues in greater detail when I addressed your conference last year. These reactor and licensing issues certainly remain important, and I will be revisiting these issues in my annual address before the NRC's Regulatory Information Conference next month. In my remarks today, however, I'd like to take a step back and take a look at some of the regulatory issues outside of the reactor area that are raised by the potential

construction of new plants. It's fitting that this three-day conference directs its first day's focus to fuel cycle issues. I believe it's critical that we not lose sight of the fact that the renewed interest in nuclear power has regulatory impacts throughout the entire fuel cycle.

We can't miss the forest for the trees, even if the tree—as in the case of reactors—is the size of a Sequoia. A nuclear reactor is only part of the life-cycle of nuclear power—a cycle which begins with the mining, recovery, and enrichment of uranium and that ends with the storage or disposal of the remaining waste. Although reactor issues will probably always be high-profile, the NRC can't be a firm, decisive regulator unless it tackles all of the safety, security, and environmental issues raised by the renewed interest in nuclear power. And the NRC can't tackle these issues effectively unless our licensees, our stakeholders, and policymakers engage these issues—in forums just like this one—and are committed to working with the agency in addressing all the challenges we face.

Just like a car can't run without gas, a reactor can't operate without the necessary fuel. So it should be of little surprise that—as in the reactor area—we have seen far greater interest in recent years in uranium recovery and fuel cycle facilities. In the next few years, the agency anticipates as many as 24 applications for new uranium recovery facilities or requests to expand or restart existing uranium recovery facilities.

The agency has a strong regulatory framework in place for ensuring that uranium recovery facilities are constructed, operated, and decommissioned in a safe, secure, and environmentally sensitive manner. We always work closely with stakeholders, including Native American Tribal governments, to address possible concerns with the licensing of new facilities. In anticipation of new applications, the agency also has been working to strengthen our review process. For example, in the area of in situ recovery (ISR) facilities—the type of uranium recovery that has probably generated the most interest over the last few years—the agency has sought to make our environmental review more efficient and effective. Specifically, the agency has prepared a Generic Environmental Impact Statement (GEIS) to serve as a starting point for the site-specific review of these applications. By addressing common environmental issues associated with these facilities, the GEIS keeps the staff from having to reinvent the wheel on every application and allows the staff to stay focused on conducting thorough site-specific reviews.

The potential for new reactors means more uranium, and also means additional capacity to process that uranium into the nuclear fuel needed to power the reactors. I anticipate that the Commission will be taking an active interest in the policy issues in this area in the future. I am confident that the current regulatory efforts are adequate to ensure that the fuel cycle facilities that we license are operating safely and securely. But I also believe that this is an area that could benefit from a fresh regulatory approach. For all our focus on reactors, and the many constructive steps the agency has taken to strengthen the Reactor Oversight Process, I think there are significant additional steps that the agency can still take to improve and expand the fuel cycle oversight process.

In my view, we should first take the lessons we've learned from the Reactor Oversight Process—specifically the benefits of adopting a more structured, risk-informed approach—and integrate them into a Fuel Facility Oversight Process, or an even more comprehensive Materials Oversight Process. The agency is currently considering a revision that aims to incorporate the information provided by the independent safety assessments submitted by licensed facilities to

identify performance indicators and other risk factors that will allow the agency to better focus our oversight efforts. I recognize that you can't fit a square peg into a round hole—that reactor oversight and materials oversight will always be different to some extent. There are inherent differences between the two regulatory areas, for sure. But that doesn't mean that our experience in one area can't provide lessons that might be helpful in the other.

The fact that the regulatory frameworks for reactors and materials are currently so different also presents a real challenge for the agency's safety culture initiative. In recent months, we've made significant progress in incorporating the attributes of safety culture into our oversight of materials licensees. But we can do better. Make no mistake—safety culture is no less important for fuel cycle facilities and our other materials licensees than it is for reactors. Reactors draw far more attention, but the vast majority of instances in which individuals have suffered possibly harmful exposure to nuclear materials have occurred outside the reactor context. That is why the agency has been developing a safety culture policy statement—one that clarifies our expectations for all of our licensees, and one that helps the agency staff determine how best to promote safety culture in both the reactor and materials areas. With the public comment period on the draft policy having just closed earlier this month, I look forward to our upcoming Commission meeting on safety culture and working with my fellow Commissioners on developing a final statement over the coming months.

As I've said, the resurgence of interest in nuclear power has led to greater interest in uranium recovery and fuel cycle facilities, and if the potential for new reactor construction is realized, that also means that we will have to deal with more spent nuclear fuel. I do not believe that we should allow the ongoing discussion about long-term disposal to distract us from the important short-term management issues. The fact of the matter is that current sites likely will be active for many decades to come given license renewals and the potential for new plants to be built at existing reactor sites. That is not a problem. The last half-century of experience has clearly demonstrated that waste can be safely and securely maintained onsite at plants. But I believe that we should consider short-term management separately from the long-term disposal in order to ensure that our licensees don't miss potential opportunities to enhance their short-term strategies.

I also believe that there should be greater attention paid to developing disposal options for low-level waste. The existing framework simply doesn't provide a long-term solution. And that has been clear for quite a long time now. The Low-level Radioactive Waste Policy Acts of 1980 and 1985 sought to ensure a reliable and predicable means of disposing of low-level waste by encouraging states to enter into compacts that would provide for disposal at a common facility. Although most states have entered into compacts, only one new disposal facility has been licensed since the 1980 Act was passed. Only two sites are currently operating—Barnwell and Hanford. The Barnwell facility, which had been open to virtually all commercial low-level waste generators, was closed by South Carolina in 2008 to out-of-compact generators. That means that approximately 36 states no longer have access to disposal sites for Class B and C waste. The Barnwell development has created far more uncertainty about disposal options and further strains a system that requires greater flexibility.

To move forward on this issue, I believe that we need to involve the public, and do so at every step along the way. Without that public involvement, I think that any suggested improvement to low-level waste disposal will be like a train without an engine, it will go nowhere. I will work with my fellow Commissioners to engage the public, the industry, and

other stakeholders to ensure that any approach that we adopt has broad support. One potential solution that has been put forward is waste blending—the idea that a small quantity of more radioactive material can be combined with a large quantity of less hazardous material in order to make the resulting material overall less hazardous in concentration. It is long-standing policy of the Commission that mixing generally should not be done for the sake of changing the classification of the waste. The staff is currently looking at this issue, and the Commission will be receiving a public briefing from the staff on this issue next month. Neither blending nor any other alternative can be an acceptable and sustainable approach unless it meets the NRC health and safety standards and has the support and confidence of the public.

I hope that I have illustrated the wide range of regulatory issues raised by the resurgence of interest in nuclear power. Like I said earlier in my remarks, we can't miss the forest for the trees, even when the tree—as in the case of reactors—is the size of a Sequoia. We have to continue to make progress on the regulatory issues on both the front- and back-end of the fuel cycle, in addition to the reactor and licensing issues that typically garner the lion's share of attention.

Before I close my remarks, I would like to make one last point. For all the attention that new reactor issues receive, the NRC must always stay focused on ensuring that the existing fleet continues to operate in a safe, secure, and environmentally sensitive manner. That is our core mission, and I assure you that the agency has not lost sight of that. I'll share one example of our steady focus. It concerns an issue that has drawn a good bit of attention lately—leaking pipes and tritium. There is some concern as to whether tritium from the Vermont Yankee plant has leaked into the Connecticut River. Elected officials in that region have expressed considerable and very understandable concern, and not just about Vermont Yankee.

The headlines have not been pretty. As a scientist, I know the relative risk of tritium. In the grand scheme of radiation, it is well down the scale, but in the area of public perception, it takes on greater significance. People are asking legitimate questions— what's leaking, where's it leaking, how much is leaking, and—most importantly—what's being done to deal with the problem? The NRC always inspects licensees who have such leaks and in each case makes certain that licensees are taking the appropriate steps to find the source, and to protect the public and the environment. Inspections are ongoing at Vermont Yankee—once the source is identified, it will be fixed promptly and correctly. The situation was in many respects the same at the Oyster Creek plant in New Jersey last year. That episode told us a great deal about how buried pipe behaves over the years and the importance of ensuring that the right piping is installed in the first place. That situation is being dealt with as well.

We always have to ask ourselves at every turn whether we can we do more. That's why the agency is participating in a buried piping task force to evaluate the need for specific corrosion protection standards that could be implemented at nuclear power plant facilities. That's why, last fall, I asked the agency staff to take a look at our general approach for inspecting and dealing with aging pipes. While we feel that the program we now have in place is sound, I personally think that more can be done.

Following reports of leaks at a few plants, the NRC created a special task force in 2006 to conduct a lessons-learned review of these incidents. The task force made more than two dozen recommendations—a great many of those have been incorporated in the guidance we provide to plants. While there are NRC requirements for documenting releases into the groundwater and

soil and for ensuring that any releases offsite are below the regulatory limits, the NRC also has relied on licensees to adhere to certain measures as best practice. Guidance is one thing. A regulatory requirement is another. Therefore, I intend to ask the staff to relook at the 2006 lessons learned recommendations and determine whether any changes in this area might be advisable. I look at it this way: From time to time building codes are amended as civil engineers see areas that can be improved. This may be the time to take that step in the nuclear field.

And, because we want the public to fully understand all aspects of the tritium issue, the staff is exploring, at my request, conducting forums to discuss the tritium issue and to hear from the public on their thoughts. More specific information will be made available as soon as possible.

Be assured that on this issue and all others, the NRC will continue striving to be a strong, effective regulator. As Chairman, I will do my best to ensure that the NRC acts firmly and decisively and conducts itself openly and transparently in fulfilling our core mission and preparing for new issues and challenges. Again, thank you for the opportunity to share my thoughts with you today.