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**Keynote Remarks of Chairman Allison M. Macfarlane
At the NRC Fuel Cycle Information Exchange (FCIX)
Wednesday, June 11, 2014 – Rockville, MD**

Good afternoon, and thank you, Marissa, for the introduction. It's a pleasure to see all of you here, and I'd like to thank the presenters and the NRC staff for making this year's Fuel Cycle Information Exchange another successful event.

This year's conference agenda reflects the NRC's broad range of oversight responsibilities in regulating the nuclear fuel cycle. To accomplish our mission in this area, we collaborate with a variety of other government agencies and international partners to share insights and experience. I'm pleased to see a number of government and international representatives here today; we appreciate your continued coordination. I hope you've found the past two days' discussions valuable.

Today, as we finish another information exchange, I want to reinforce the idea of collective responsibility. I strongly believe that the regulator and those we regulate share the important common obligation of protecting the public. As such, we need to keep the lines of communication open and make every effort to understand one another's perspectives, needs and challenges. With our licensees' role to maintain adequate protection and our oversight role of licensee performance in this regard, we're all in this together.

I'd like to provide perspectives on a few areas that the agency and the industry have focused on this past year and discussed here in the past two days. These include our oversight and licensing roles, post-Fukushima activities, emergency preparedness, managing the cumulative impacts of regulation, and ensuring the NRC is prepared for future challenges. I'll also touch on some issues of particular importance to me.

Yesterday, you heard from our Executive Director for Operations, Mark Satorius, about the concerted effort the NRC is making to ensure that we take into account the cumulative impacts of our regulations as we move forward with revisions to the fuel cycle oversight process. This conference has hopefully been a valuable opportunity for you to hear from our staff, and, where regulatory requirements intersect, other U.S. Government representatives, about plans to initiate or implement rulemakings. But, as I reinforce at many of these conferences, it's important that this dialogue continue throughout the year.

The global market for uranium and nuclear fuel continues to evolve. Since last year's conference, new opportunities and plans have emerged, some ventures continue to move forward, and

other activities may be scaling back for various reasons. I recognize that in some cases, the business challenges that impact you in this competitive environment may lead to concerns about the costs of cumulative effects of regulatory activities in cyber security, integrated safety analysis and other areas.

Let me reinforce that the NRC values the input we receive from industry with respect to cost estimates, implementation timelines and other issues. In developing the agency's cost-benefit analysis of proposed regulatory actions, the industry is best positioned to provide us with reliable information on the potential costs to industry and to propose a reasonable time for implementation. Accordingly, we encourage the regulated community to work closely with the NRC staff so that we have the best available information upon which to base our decisions. We're committed to providing meaningful opportunities for you to comment on our activities, and to transparently demonstrating how we've used your feedback to inform our work.

Nonetheless, the NRC will continue to focus on ensuring the safety and security of fuel cycle facilities. As you know, we're obligated to take actions that we deem appropriate to ensure the safety and security of the public from emergent safety issues or security threats. We strive to do so in the most effective and efficient manner possible.

Understanding and addressing the cumulative impacts of regulations is important to avoid disruptions in carrying out our respective, day-to-day responsibilities. If NRC regulations are not implemented effectively, they may not have the desired result of enhancing safety or security. This is our mutual obligation. As Mark said yesterday, it benefits all of us when fuel cycle facilities operate appropriately to protect the public and the environment while guarding against proliferation threats.

To that end, non-proliferation is an aspect of the NRC's work that's particularly important to me personally, and our staff takes their obligations in this area seriously. The U.S. Government as a whole is committed to ensuring that nuclear materials and facilities are effectively protected so that neither material nor technology falls into the hands of malicious actors.

In my view, non-proliferation obligations should also be a top industry priority for several reasons. Licensees must obviously meet regulatory requirements in security, material control and accounting, and other areas, but it may also be in their best interest to protect their technology for financial as well as security reasons. Further, I believe a commitment to safety and security also demonstrates corporate responsibility.

Recognizing that the Executive Branch has primary responsibility for assessing non-proliferation risks, the NRC plays a key role in upholding U.S. commitments through its import and export licensing mandate, as well as its fuel cycle facility oversight responsibility. The NRC works closely with the Departments of State, Energy, Commerce, and Defense on export control matters. We also ensure an adequate regulatory framework for material control and accounting, physical protection, cybersecurity, and information security for our licensees. Through these activities, we demonstrate that effective regulation is an essential aspect of a country's ability to benefit fully from peaceful uses of nuclear technology.

The NRC believes that staying abreast of changes in technology is one aspect of ensuring that we're able to continue meeting our non-proliferation obligations. Just over a year ago, the Commission directed the staff to periodically review NRC regulations and guidance to ensure that these documents take new proliferation challenges into account when evaluating enrichment or reprocessing

technologies the NRC hasn't previously licensed. We also acknowledged that the public, including our licensees, would benefit from clearer communication on how we address non-proliferation objectives in our licensing processes. In this regard, we welcome input from industry, our government colleagues, and our international partners on how we can improve.

Even with robust NRC regulations and a strong overall U.S. Government commitment, effective implementation of material control and information security requirements is essential if we are to succeed in protecting sensitive nuclear material, technology and information. Industry, across the fuel cycle, is on the front lines of this effort – and, as the Commission heard recently at the public briefing on the results of the Agency Action Review Meeting, the staff assesses that fuel cycle licensees are currently performing well in these areas.

As both threats and technologies continue to evolve, we should continue to seek appropriate opportunities to share information and lessons learned in order to meet our common objective of minimizing proliferation risks. It's also important to remain mindful of the interfaces among safety, security and safeguards. Over the years, the NRC has worked to address these interfaces in our regulations to help ensure that modifications in one area don't adversely impact another.

There are also important interfaces across the fuel cycle. When I spoke to you last year, one of the issues I raised was the need to holistically consider the entire nuclear fuel cycle to address nuclear fuel throughout its lifetime. This included consideration of issues like the potential impacts of fuel designs not only in terms of performance in the reactor, but also the long-term cladding behavior during storage and disposal. As reactors in the U.S. begin decommissioning and the population of storage casks continues to rise, the long-term behavior of spent fuel must be an important consideration – and it's one with significant public interest.

I was pleased to see some dialogue on this issue at our Regulatory Information Conference last March, and continuing discussions here at the FCIX. I particularly appreciate EPRI keeping us apprised of developments in its research on integrating the front and back ends of the fuel cycle, and I look forward to further interactions.

Since this time last year, the Commission has gleaned more information on the potential consequences of a beyond-design basis spent fuel pool accident and whether the expedited transfer of spent fuel is needed. As I considered the staff's work on the subject, it reinforced my personal view that fuel designers and fabricators have an important role to play in advising the Department of Energy and industry in their research on accident-tolerant fuel designs.

The Commission, in part of its decision on expedited fuel transfer, directed staff to remain cognizant of the ongoing DOE efforts to develop accident-tolerant fuels and engage with the Department as appropriate to facilitate potential future use of these technologies in U.S. commercial nuclear power plants.

In my view, this kind of cooperation between government and industry, and between government agencies, can help ensure that spent fuel remains safe for all conditions in reactors, and spent fuel pools, and dry casks.

Emergency preparedness and response is another area that exemplifies the NRC's collaboration with other U.S. Government agencies, and I was pleased to see it on this afternoon's agenda. It's also another important example of an area in which good communication between industry and government is essential, along with clear roles and responsibilities, to ensure that we're collectively well-prepared to swiftly and effectively address an emergency situation.

I hope you took advantage of the opportunity to tour our new Operations Center across the street either yesterday or earlier today. The new center provides enhanced emergency response capabilities that build upon the improvements we were already making in the prior center, and improvements that were captured in our corrective action program from our role during the Fukushima accident.

Sufficiently addressing the potential for a natural disaster is one important aspect of ensuring we're adequately prepared to mitigate the consequences of an emergency. In the past three years, the NRC has worked to analyze lessons learned from the Fukushima accident and enhance regulatory requirements as appropriate to strengthen safety. While much of the focus has understandably been on operating nuclear power plants, a natural disaster obviously can have a devastating impact on any facility. Unfortunately, we've seen this recently, with homes, schools and hospitals demolished or badly damaged by tornadoes, sometimes with tragic consequences.

Accordingly, the NRC has worked to ensure that all of our licensees, not just operating reactors, are included in our efforts to strengthen safety in light of Fukushima's lessons. Shortly after the accident, in May 2011, the NRC provided information to fuel cycle facilities on whatever was then known about the effects of the earthquake and tsunami in Japan.

The following September, the NRC conducted inspections at fuel cycle facilities to confirm that licensees were in compliance with current regulatory requirements and license conditions, and to evaluate their readiness to withstand a natural disaster within their licensing bases. In turn, our licensees are considering generic and facility-specific actions to resolve open issues associated with these inspections. Our staff will be following up with a Generic Letter to fuel cycle licensees in early 2015 to request additional information on these issues.

As we continue this work, in concert with our other fuel cycle oversight responsibilities, I'd like to recognize the important work that NRC staff here at Headquarters and in Region II perform in their oversight of fuel facility operations and construction. Both in post-Fukushima areas and in general, operating experience continues to play an important role in our approach to ensuring an effective, consistent regulatory posture.

In the Fukushima context, I'd note that the exchange of international operating experience has been invaluable in addressing lessons learned for reactors. I'd encourage these sorts of interactions among fuel cycle facilities as appropriate. I've also encouraged fuel cycle-related discussions among my foreign regulatory counterparts both on a bilateral and multilateral basis; these have been very valuable.

Quite a bit has changed across the nuclear landscape in the past five years, and the NRC is in a transition period. Of course, Fukushima is one example of an unexpected, but significant, impact on the agency's workload. Court decisions on Waste Confidence and Yucca Mountain have also impacted our work, as has a greater focus on decommissioning and fewer new reactor licensing applications than

previously anticipated. In many cases, technical staff resources have been shifted to emergent work, leading to delays in other areas.

I believe it remains appropriate for the NRC to maintain the technical capability needed to address future waste management challenges. We've budgeted for analysis, data collection, and modeling to respond to potential changes in the national high-level waste and spent fuel management strategy. For example, I'd point out that the Nuclear Waste Policy Act provided for disposal of 63,000 metric tons of high-level waste from civilian facilities, and we've already exceeded this amount. So, I believe this kind of long-term regulatory planning is essential.

As the NRC undergoes this transition, we're committed to ensuring continued regulatory excellence and stability. During the coming months, the EDO will lead an effort to assess our organizational needs between now and 2020. The objective of this effort is to ensure that we're using our resources efficiently and maintaining the critical skill sets necessary to accomplish our mission in the years ahead.

As I noted earlier, the NRC counts on accurate information from industry to effectively implement regulatory requirements and predict future workload – for example, forecasting of potential future licensing submittals. We're also working to reduce overhead costs and consolidate our Headquarters staff into a single campus to achieve further cost savings. We're taking these efforts seriously, and we view them as integral to our ability to meet our obligations to everyone whom our work affects.

With that in mind, let me reemphasize the important responsibilities that we share in protecting public health and safety and upholding non-proliferation obligations. This extends far beyond abstract words in a mission statement. I believe that the practical applications of our work to ensure that facilities operate safely and securely have a direct impact on ensuring that our country, and the world, can continue to get maximum benefit from the peaceful use of nuclear technology. Further, I believe that ensuring safety and security is also important from a business perspective, for demonstrating corporate responsibility and reliability and for protecting intellectual property.

As we continue to meet the challenges we each face, let's renew our commitment to safety and security as important mutual responsibilities. The NRC welcomes further dialogue with all of you on the issues I've discussed today and on other areas of our regulatory oversight. I appreciate the opportunity to speak to you this afternoon, and I'll be happy to answer your questions before Marissa [Bailey] concludes the conference.

Thank you.