

No: S-14-013

November 18, 2014

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“Shaping a Safe and Secure Future”
Prepared Remarks of Chairman Allison M. Macfarlane
Institute for Nuclear Power Operations (INPO) CEO Conference
November 18, 2014 – Atlanta, GA

Slide 1: Title Slide

Good afternoon, and thank you for the kind introduction. It’s my pleasure to be back at the INPO CEO Conference. I’d like to begin by acknowledging my Commission colleagues who are here today: Commissioner Kristine Svinicki, Commissioner William Ostendorff, and Commissioner Jeff Baran. Commissioner Stephen Burns was unable to attend due to a prior commitment. It’s been an honor to serve alongside Kristine and Bill for the past two and a half years, and we’re pleased to welcome our new colleagues.

I’d like to commend Admiral Willard for his leadership and thank him for our continued collaboration on both domestic and international issues. We’ve had a number of good discussions and I give him tremendous credit for overseeing an impressive list of INPO priority activities.

My upcoming departure from the NRC, like any impending transition, has led to a period of reflection. And, thanks to the significant breadth and depth of our work, there’s quite a bit upon which to reflect.

Slide 2: Fukushima: Keeping Up the Momentum

The past year has brought continued achievements in implementing post-Fukushima safety enhancements. Industry implementation of the Mitigating Strategies Order notably advanced with the opening of the two National Response Centers in Memphis and Phoenix. The NRC has been closely monitoring the progress of the Strategic Alliance for FLEX Emergency Response, or SAFER, as it coordinates with both public and private entities to ensure that the promise of a 24-hour response time will be a reality when it counts. Across the country, plants continue to position their on-site FLEX equipment.

Seismic safety remains an important area of focus for the NRC. We’re continuing to make progress in reviewing seismic hazard reports for plants in the central and eastern United States. We expect the seismic hazard evaluations for western plants by March 2015. In addition, earlier this year, we received the second set of flooding hazard reevaluation reports. The NRC staff is currently reviewing the reports received to date and began issuing assessments of the flood hazard reevaluations this past July. The third and final set of reports is due in March 2015. The NRC has issued guidance to

facilitate inspection of the interim actions licensees have taken to address a reevaluated flood hazard that exceeds a plant's existing design basis.

The NRC staff also continues to work on safety evaluations related to the Mitigating Strategies and Enhanced Spent Fuel Pool Instrumentation Orders, with licensees completing required actions according to their outage schedules. Following completion, the NRC will conduct post-compliance inspections at each site.

In addition, the NRC is reviewing integrated plans and conducting audits of licensee progress towards compliance with Phase 1 of the Order on reliable and severe accident-capable vents for BWRs with Mark I and II containments. By June 2015, the staff plans to issue interim staff evaluations to applicable licensees. We'll issue interim staff guidance for Phase 2 of the Order by 2015, and licensees will be required to submit their integrated plans for Phase 2 by the end of 2015.

On the rulemaking front, the NRC is scheduled to provide the proposed rule on Mitigation of Beyond-Design Basis Events for the Commission's consideration by the end of the year. At the same time, the staff is developing the regulatory basis for a potential rulemaking on containment protection and release reduction, otherwise known as filtration strategies. In keeping with our rulemaking process, we'll welcome public comments on these products.

I'm proud of the NRC staff for their tireless efforts to address lessons learned from the accident, from the moment it happened, and to recommend and oversee crucial plant enhancements that are improving the safety margins of the U.S. reactor fleet. And I commend the industry for the attention, time, and resources it has devoted to implementing these requirements during the past few years.

Completing the post-Fukushima safety enhancements was one of my top priorities as Chairman, and we have an impressive list of accomplishments. But more work is before us, and this is not the time to rest. It's our collective responsibility to maintain this momentum until we've worked through all three tiers of the Near-Term Task Force recommendations.

Slide 3: Plant Performance

I should also emphasize that a major accident shouldn't be the only time we turn to international operating experience for lessons that may benefit our domestic program. Through the IAEA/NEA Incident Reporting System and regulatory and industry exchanges with foreign counterparts, we each gain crucial information that may enhance U.S. plant performance.

While there remain some examples of declining individual performance that cause us concern, plant operating performance remains generally good. As I mentioned last year, one issue of concern is the fact that in a number of cases, a system problem becomes a significant performance issue because a licensee's corrective action program was insufficient or ill-informed by the plant's design and licensing basis.

Having confidence in a licensee's corrective action program – and in its ability to detect, evaluate, and correct problems in a timely and accurate way – is one of the underlying assumptions of the reactor oversight process. Several of the most significant plant events of the past few years are attributable in part to weaknesses in corrective action programs.

During our recent Reactor Oversight Process Enhancement Project, the NRC staff evaluated the baseline inspection program and identified potential improvements for evaluating corrective action programs. While we're currently evaluating specific improvements in this area, the staff is well aware that the industry's Cumulative Impacts Initiative may offer additional insights. We're closely engaging with industry in order to understand potential changes.

The NRC's Industry Trends Program monitors industry safety performance and identifies any statistically-significant adverse trends – both short and long-term. The staff has observed an elevated number of significant events since 2010. In 2011, and again in 2013, about half of these events were initiated by weather or other natural phenomena beyond licensees' control – for example, tornados impacting Browns Ferry and Surry, an earthquake at North Anna, a lightning strike at LaSalle, and a severe winter storm at Pilgrim. The staff concluded that, though the natural events were unanticipated, licensees had sufficiently reliable and available safety systems and adequate operator response. As a result, the staff didn't view these particular events as contributing to degradation in overall industry safety performance.

The remaining significant events our staff has identified during this time period resulted from equipment failure, inadequate flood mitigation strategies, and inadequate maintenance oversight. The staff will continue to monitor these events and conduct additional analysis to determine whether a long-term, statistically significant adverse trend exists.

But it's essential that licensees also continue communicating among themselves. As Admiral Willard mentioned, there are three important areas of focus for plant performance: first, identifying the root causes of poor performance, and in particular, identifying any trends or common issues across the fleet; second, resolving those issues quickly; and third, preventing similar problems from occurring elsewhere. As new performance challenges arise due to aging, or we identify other factors that weren't on our radar, INPO continues to have an important role to play in identifying areas of concern and facilitating improvements across the industry.

Slide 4: The NRC's Future

The NRC is taking its own hard look at how to identify and resolve issues more quickly to ensure that our agency is poised to tackle tomorrow's challenges. As you're well aware, the future doesn't always materialize as planned.

Where five years ago, the NRC and industry were both preparing for a potentially large increase in new reactor activities, we must now reposition ourselves for a different future. One outcome is that the Commission has directed staff to take a hard look at how to increase our flexibility and resiliency so that we can adapt more quickly to a changed environment and ably address tomorrow's unanticipated challenges.

Recognizing that it's difficult to turn a federal agency on a dime, the staff is working with internal and external organizations to identify a range of future scenarios for the next five years and make recommendations on how to boost our effectiveness, efficiency, agility, and performance. The staff's initiative, known as Project Aim 2020, seeks to enhance the NRC's ability to continue to meet its mission by analyzing what the nuclear industry may look like in the coming years and the corresponding skills the NRC staff will need. This will result in projections of the agency's workload and resource requirements in a variety of circumstances.

Our work in this area has lent itself well to ongoing collaboration with INPO, which is in the process of conducting its own Strategic Planning Initiative. Last month, our teams had a productive meeting to identify areas for continued dialogue on our respective initiatives. We were pleased to see the strong similarities between the NRC and INPO objectives for nuclear safety, radiation protection, and emergency preparedness.

Slide 5: New Reactor Developments

In discussing the future and the circumstances that have influenced the NRC's current path, I also want to emphasize the continued importance of our new reactor work. Initial "growing pains" associated with using the Part 52 licensing process at Vogtle and Summer provided valuable lessons learned, which the staff built upon to develop an efficient, risk-informed, focused approach to reviewing combined license applications. This includes small modular reactor designs, which we may see in 2015 and beyond. We've also fine-tuned our approach to preparing for mandatory hearings on license applications. The Commission just received an update on Watts Bar Unit 2, and the NRC expects to be able to make a determination on an operating license for that unit in 2015.

The construction at Vogtle and Summer is moving along well. There have been some delays, however, and it's important that we not minimize the reasons they've occurred. In the past year, the NRC has had to address quality control challenges with vendors supplying components to the new units. This experience has revealed a broader observation that the international nature of nuclear-grade manufacturing raises unique considerations that may not already be addressed in general safety culture practices. In this regard, I must emphasize the licensees' important role in maintaining rigorous vendor oversight programs – as well as their responsibility for overall construction quality.

In other new reactor news, I'd like to commend our staff for their completion of the ESBWR design certification earlier this year. The staff also published draft Design-Specific Review Standards for the mPower small modular reactor design and completed the safety evaluations for both the Levy and Fermi combined license applications. Additionally, within the next few months, the Commission expects to conduct the mandatory hearing on the Fermi 3 application.

Slide 6: Continued Storage and Decommissioning

In terms of radioactive waste management, one of the NRC's most notable accomplishments this year was the completion of the Continued Storage Rule. As you'll recall, the DC Circuit Court of Appeals remanded and vacated the NRC's previous Waste Confidence Decision and Temporary Storage Rule in 2012. This action required the NRC to undertake an extensive rulemaking and put certain licensing actions on hold. With the publication of this Rule, the NRC was able to resume certain licensing activities that had been on hold since 2012. At the Commission's direction, the staff maximized opportunities for public comment during this rulemaking. Public engagement has been a high priority for me throughout my tenure, and I believe this model should inform future high-profile NRC rulemakings.

I think that meaningful public involvement is critical for plants undergoing decommissioning as well. In my personal view, licensees should work with local communities and state and local government in the early stages of the planning process. Communication is key to understanding and addressing areas of concern and creating successful, enduring solutions. Some plants have already

successfully undertaken decommissioning informed by public input, and I believe these good models should serve as references to others.

Slide 7: Plant Management, Plant Performance, and Public Trust

Now let me turn to what lies ahead, and offer some thoughts. Obviously, the NRC's top priority is, and will remain, the safe and secure operation of all of the nuclear facilities we regulate. Strong plant performance must be a shared objective, both for safety and business reasons. Throughout my time as Chairman, I've observed a connection between effective plant management and good performance. Though this isn't an area the NRC explicitly regulates, nor one for which scientific data is necessarily available, I strongly believe that there is a relationship.

Simply put, safety culture starts at the top. A strong commitment to safety on the part of senior management promotes an environment where this commitment is shared at all levels. Equally important is how plant management engages with the local community – including the public, law enforcement, local government, and interest groups. I believe there's a credible business case for licensees to focus on developing relationships with a commitment to open communication and engagement. Licensees who develop strong relationships with the communities they serve reap the benefits of those efforts in many ways, and licensees should view that public trust as a valued asset. Here I might call out Palo Verde as an operator with an impressive program to promote safety culture and one that is willing to share its experience.

Several months ago, I heard an anecdote that illustrates just how valuable an asset trust proves to be in the rare event that something goes wrong. In the days immediately following the devastating earthquake and tsunami in Japan in 2011, people near the Onagawa Nuclear Power Plant – the plant closest to the epicenter of the earthquake – were forced to evacuate. With their homes and possessions destroyed and temporary shelters not yet complete, about 300 people sought refuge at the Onagawa site.

Consider that – at the same moment that fear was growing about radiation exposure from the Fukushima accident, a large group of people fled to a nuclear power plant. As it turns out, the Onagawa operator had established a close relationship with the local community long before the natural disasters struck. The result was that that plant was viewed as a safe haven, rather than an unsafe place.

To me, this is a powerful example of how industry and the public working together can foster trust that can be called upon in both normal and extenuating circumstances. And while we work every day to prevent those extreme circumstances from occurring, I believe this is a far better approach than assuming the trust will simply materialize in a crisis.

For the past few months, I've been discussing public engagement with industry representatives. I've been pleased to see that some licensees are already engaging in developing or maintaining the kind of relationships that will best serve all interests. I view DC Cook as an example of a licensee doing this well. More recently, the Tennessee Valley Authority established a community action panel that has been successfully interfacing with the local community, including elected officials, local business representatives, and public interest action groups. I'd like to acknowledge the leadership of Larry Weber and Mike Skaggs in this effort. Certainly, there's a broad array of best practices from which the industry as a whole can benefit.

Unfortunately, it's also clear that industry's commitment to public engagement activities remains variable, with some licensees performing well and others not. I think that by hearing from the public regularly, and acknowledging the public's concerns through open dialogue and viewing the plant as part of a community, plant management will, by extension, place more emphasis on safety culture – in turn positively impacting operations.

I therefore appreciate INPO's focus on effective plant management as well as its commitment to the importance of public engagement. I believe these areas are very much related and will each be critical to the future of the nuclear industry.

Slide 8: International Engagement

Let me also say a few words about international engagement, another area in which the NRC and INPO have some shared objectives that I'd like to see carry forward for both organizations. I read INPO's international strategy document with interest. Here again, your timing is synchronous with the NRC's, as our staff has recently developed a proposed agency-wide international strategy that will shortly come before the Commission for consideration.

One important aspect of the NRC's work is the assistance we provide to countries seeking to develop a regulatory infrastructure, or expand an existing regulatory body to accommodate a new nuclear power program. My understanding is that INPO is making a similar commitment, with U.S. industry sharing its substantial expertise with counterparts around the world.

In the past year, we've also had several opportunities to collaborate in support of strengthened nuclear safety worldwide. In particular, the U.S. Government received great support from Admiral Willard and his team during the Sixth Review Meeting of the Convention on Nuclear Safety. It's clear that there will be continued leadership opportunities for INPO and U.S. plant management internationally.

Slide 9: Looking to the Future

The NRC continues to appreciate INPO and industry's commitment to safety excellence and the work that each of you do to ensure that your facilities are performing well. As you look to the future, I encourage each of you to lead by example – both here and internationally. Carry forward the concept of excellence by promoting and enabling a strong safety culture. Make good use of operating experience and share your experience and lessons learned with others. Communicate across the industry about good practices – when something's working, pass it on. Work with your local communities. Be transparent about your commitment to safety and be open to a variety of viewpoints.

Perhaps most importantly, keep the lessons of Fukushima alive in your daily operations, and continue the work that's still ahead. I recently heard a presentation from a scholar who studied the history of the Chernobyl accident, and I was struck by how long ago that accident seems. Back in 1986, despite the severity of the disaster, many people felt protected from a similar accident elsewhere in the world because their countries didn't employ that reactor design. That, of course, wasn't the case after Fukushima.

But regardless of what reactor designs are operating in the world 30 years from now – the approximate amount of time that's passed since Chernobyl – we should never view Fukushima as a

relic of the distant past that's no longer relevant. We've each devoted considerable time and resources to ensuring that this isn't the case. We need to keep that focus, make it sustainable for the long term, and – for those of us who have been there – we need to continue to tell others what we saw and why it matters.

It's been an honor to lead the U.S. Nuclear Regulatory Commission for the past two and a half years, and a distinct privilege to work with the agency's extraordinary staff. It's also been my pleasure to work with Admiral Willard and the INPO team, and I'm leaving confident that the relationship between our organizations will remain strong and effective. Likewise, I know that my fellow Commissioners will continue their work to ensure that the NRC remains an efficient, responsive, agile, and trusted regulator in the years ahead.

I thank you for all of our fruitful collaboration during my tenure, and for the opportunity to speak to you today.