



NRC NEWS

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S-12-012

“Focusing On The NRC Mission: Maintaining Our Commitment to Safety”

Remarks by:

NRC Chairman Allison M. Macfarlane

at the

Institute for Nuclear Power Operations CEO Conference

Atlanta, Ga.

November 6, 2012

Thank you for inviting me here today. I am pleased to address the Institute for Nuclear Power Operations' annual CEO Conference. Before I begin, let me take a moment to introduce and acknowledge my colleagues on the Commission; they are all talented professionals with a rich and diverse set of experiences and expertise.

- Kristine Svinicki
- George Apostolakis
- William Magwood; and
- William Ostendorff

As a Commission, we are charged by statute to work as a collegial body. We each bring different backgrounds to the table and our ability to collaborate enhances public trust and industry confidence in our work.

I value this opportunity to meet with leaders of the nuclear industry to discuss a number of important issues. I have met many of you when you stopped by the NRC to introduce yourselves and your companies to me. I have appreciated these meetings as an opportunity to better understand your concerns.

Together, we maintain an important yet complex relationship. The NRC exists to independently oversee your industry and we provide the country with the reassurance that you alone cannot provide: that nuclear facilities will operate in a manner that protects the public's health, safety, and security, as well as the environment.

The U.S. approach to nuclear regulation with its emphasis on the independence of the regulator serves as a model for many other countries. The importance of this was one of my key

messages during nearly 30 bilateral meetings I held at the International Atomic Energy Agency General Conference in September. A number of these meetings ended with the formal signing of memoranda of cooperation. Our efforts at the General Conference were reinforced by several U.S. industry leaders, who during the meeting encouraged me to strengthen the NRC's efforts to engage with other nations.

I would like to commend the new head of INPO, Admiral Robert Willard, for his leadership of an important industry organization. INPO is renowned internationally for effective peer oversight of the nation's reactors. Keep up the excellent work.

And I am pleased to follow WANO Chairman Laurent Stricker, as it provides me an opportunity to recognize the important work of INPO's international counterpart. I know many of our regulatory colleagues from other countries recognize WANO's growing importance in matters of international nuclear safety.

Since we are convening here in the South, home to the construction of four new nuclear reactors, I'd like to congratulate Southern Nuclear Operating Company and South Carolina Electric and Gas on their progress. We recognize the importance of these facilities for industry in financial, technical and symbolic terms. From our vantage point, these new plants challenged us to strengthen our regulatory framework and presented an opportunity to attract new talent.

Finally, I would be remiss if I did not note that one third of the 104 U.S. reactors were in Hurricane Sandy's path. Only four of the affected reactors had storm-related issues. In each instance, the plants responded as expected and the public's safety was never at risk. I would like to praise the operators and the NRC regulatory team for effectively managing this devastating storm. I believe I speak on behalf of everyone here in conveying our collective expression of support, sympathy, and very best wishes for those who have experienced the trauma and hardship caused by Hurricane Sandy.

I'm going to talk today about four primary issues that I believe are important: industry performance and trends; the status of post-Fukushima activities; regulatory challenges the NRC faces in the coming year; and initial observations from my first few months on the job.

Performance

I will begin by sharing some of the Agency's observations on recent industry performance. Most of the nuclear power plants in the United States have continued to perform well.

As of October and as reflected on this slide, 95 of the country's 104 plants are in the two highest performance categories, with 76 of those fully meeting all safety and security performance objectives. Nineteen have to resolve one or two items of lower safety significance to move into column one. Nine plants occupy the bottom three columns. The NRC will conduct additional inspections commensurate with the issues identified at those sites. We expect industry will be able to maintain or improve their overall level of performance in the coming year.

Industry Trends

The NRC has not observed any statistically significant adverse trends in our most recent annual assessment of industry performance. However, there have been an elevated number of events that meet the criteria of “significant events,” such as loss of offsite power or small fires. This spike began in 2010 and, based on our preliminary analysis, is continuing through FY2012. We recognize that natural phenomena, such as earthquakes and tornadoes, were at times responsible for this increase. This said, the upward slope of the curve has captured our attention and we will continue to monitor this issue.

Fukushima Accident

As a result of the March 2011 events at the Fukushima Dai-ichi power plant, the NRC has implemented actions that enhance the capability of U.S. nuclear power plants to mitigate beyond-design-basis external natural events. As a geologist, I have a strong interest in exploring the intersection of the earth sciences and effective nuclear regulation. Events such as the earthquake and resulting tsunami that caused the disaster at Fukushima and, more recently, Hurricane Sandy’s effects on the Northeast remind us of the importance of understanding the risks posed by Earth.

The Earth’s natural systems are not static, however. This is why I personally feel we need to regularly update the scientific data we use to inform our regulatory approach so that our nuclear facilities are adequately protected against unanticipated events. Hurricane Sandy only reinforces the importance of not letting our guard down on the Fukushima improvements.

Fukushima Recommendations

You are all aware of our approach to addressing the lessons learned as a result of the Fukushima accident. The NRC’s three-tiered construct has proven to be a useful framework for our response to the Fukushima event.

I will briefly touch on the status of each tier as well as some additional actions that have resulted from our lessons-learned analyses.

First, Tier One activities are our top priority and we recognize the workload to meet these requirements is substantial. However, I think both industry and regulators can agree that these upgrades are essential in guaranteeing that there will never be a similar event in the United States. We will continue to closely monitor industry progress and ensure that established schedules are adhered to.

Many of you operate boiling water reactors with Mark 1 and Mark 2 containments and may have seen recent media coverage of staff recommendations on filtered vents. The matter will ultimately come before the Commission later this month.

The second tier deals with spent fuel pool makeup capability and emergency preparedness, as well as evaluation of other external hazards. This work can commence once Tier One information and resources become available.

Finally, Tier Three consists of recommendations that require further study to support a regulatory action or are dependent on resolution of Tier One and Tier Two actions.

I need to be clear about one thing: the prioritization of post-Fukushima activities into multiple tiers does not suggest that the NRC considers those outside of Tier 1 to be of “low priority.” It means that we have taken into consideration the need to integrate these steps with other safety enhancement measures, such as fire protection, flooding issues, and sump clogging.

Power Plant Flooding

Prior to the Fukushima accident, the NRC was working to improve regulatory requirements to deal with power plant flooding and seismic activity. These two areas have now come under closer inspection due to lessons learned from the event in Japan.

Power Plant Flooding: A week ago many of you with plants in the Northeast were confronted by Hurricane Sandy. The storm was a stark reminder that the potential for power plant flooding, whether from dam failure, tsunami, storm surge, or general river flooding is a serious concern that will continue to receive considerable regulatory and public attention. The NRC began pursuing improvements in the mitigation of external flooding threats several years ago. Agency staff first identified upstream dam failures as an issue in 2010. After screening and coordination with other federal agencies, this was publicly announced as part of the NRC’s Generic Safety Issues program in March of this year. Licensees are being asked to re-evaluate the flood hazards at their sites and this issue is now being addressed as part of our Fukushima follow-up efforts.

Seismic Hazard and Risk Analysis

Seismic Hazard and Risk Analysis: You have also been asked to re-examine the seismic hazards facing your plants using more modern analysis techniques and updated seismic source data. If the new seismic analyses reveal that the ground motion spectrum exceeds the original design basis, plants will need to reevaluate the risks associated with the updated data. Plants in the eastern and central U.S. will complete their hazard analyses by late 2013 and plants west of the Rocky Mountains by early 2015.

Defense In Depth and Risk

There has been substantial interest in rethinking the overall approach to dealing with safety at nuclear facilities as a result of the events at Fukushima.

Balancing Defense In Depth and Risk Analysis: In response to the Near Term Task Force Recommendation No. 1, the NRC staff will produce a paper in early 2013 on NRC’s regulatory framework for the Commission to evaluate whether the NRC is appropriately balancing defense-in-depth and risk considerations.

Commissioner Apostolakis' Task Force: A related effort that was underway before the accident at Fukushima was an agency task force led by Commissioner George Apostolakis to develop a strategic vision and options for adopting a more risk-informed, performance-based regulatory approach. The staff is currently evaluating the task force report and will provide recommendations to the Commission next year.

The NRC is not the only organization rethinking the regulatory framework. ASME, for example, has established its own task force to look for a new “safety construct” using what it calls an “all-risk” approach.

Let me conclude my comments on Fukushima by noting that we have all learned a great deal from this event, but more work is ahead of us. As we continue to integrate the lessons-learned activities into NRC’s existing programs, we will make sure that important safety-related ongoing work is given appropriate attention.

Cumulative Effects of Regulation

I would like to transition now away from the conversation surrounding the lasting impacts on the nuclear industry since the Fukushima event and discuss other regulatory challenges the NRC is working on, beginning with the Cumulative Effects of Regulation.

The matter of cumulative effects describes the impacts for licensees of having to implement multiple, complex actions simultaneously over a limited time period. We recognize that you do not have unlimited resources and appreciate the constructive input received from licensees and others on our efforts to address this area.

About a year ago, the Commission approved the staff’s plans to update our rulemaking process to address this issue. We have directed the staff to provide its final strategy to implement the changes. The Commission is currently considering whether there are situations where we can be more strategic with implementation of new rules. Based on the direction provided last year, the Commission recently received a staff paper that seeks our approval to implement specific proposals.

We are actively looking at this issue with the intent to streamline the regulatory process to make it as efficient and effective as possible. The bottom line, however, is that we will not compromise safety.

Waste confidence

Moving onto a subject of personal importance to me as well as to the Commission and everyone in this room, I would like to discuss the Waste Confidence issue. The NRC recently assigned a dedicated group, the Waste Confidence Directorate, to focus on the effort to address the appeals court’s concerns regarding the NRC’s 2010 Update to the Waste Confidence Decision and Temporary Storage Rule. The Waste Confidence Decision would permit environmental reviews for new reactors or reactor license renewals to proceed without considering the site-specific effects of spent fuel storage beyond the licensed life of a facility in each applicant’s environmental analysis.

Part of our effort to resolve the Court's concerns will be to develop an environmental impact statement and a revised Waste Confidence decision and rule by 2014. We are confident this work will be completed within twenty-four months. The Commission has directed that licensing activities can continue while this work is under way, but that no licenses dependent on the Waste Confidence decision be issued until the Court's remand is appropriately addressed. The Court's decision could affect a number of applications for new reactors and license renewals for operating reactors. We recognize this introduces uncertainty for the industry, but I assure you that the Commission and the NRC staff are committed to resolving the issues as expeditiously as possible.

Back-End of the Fuel Cycle

Because I am a former member of the *Blue Ribbon Commission on America's Nuclear Future*, you will not be surprised to learn that I believe the nation needs a renewed focus on the back-end of the nuclear fuel cycle. Part of this renewed focus will be manifest in an updated Waste Confidence Rule. It is my hope that while we work through the Waste Confidence issues, Congress and the Executive Branch will update the national policy for the back-end of the fuel cycle.

Finally, I believe that as a country with a well established nuclear program, we should continue to work both domestically and with other nations to stress the importance of spent fuel storage and disposal. Globally, I see this as particularly important for those countries that have emerging nuclear power programs.

Generic Issue 191 and Appendix B

There are three final regulatory challenges I'd like to touch on.

First, is the sump clogging issue, which we commonly refer to as Generic Safety Issue 191. Industry has taken action and carried out necessary testing and in July the NRC staff proposed options to the Commission to resolve this generic issue. My fellow Commissioners and I are currently evaluating the staff's proposal and expect continued progress towards closure on this issue.

Next, issues associated with the AP-1000 new build and the replacement steam generators at the San Onofre Nuclear Generating Station have emphasized the importance of our quality assurance program. Appendix B to Part 50 of our regulations outlines the requirements for such a program that power plant licensees are responsible to execute. This obligation extends to the licensees' use of vendors and contractors. The licensee is ultimately responsible for the work done by their vendors and contractors to ensure they meet our quality assurance requirements. Compliance with Appendix B will continue to receive our close regulatory oversight.

Safety Culture

Last, I would like to raise “safety culture” as a cross-cutting regulatory issue. The importance of maintaining a safety culture is a key Fukushima-related lesson. Strengthening and sustaining safety culture remains a top priority at the NRC.

Yet, I’ve observed that this topic is understood differently in various communities. For instance, the NRC’s definition is one sentence long whereas the IAEA’s is seven pages long. For a matter that is fundamental to the domestic and international safety regime, we need to reach a common understanding of safety culture.

Assurance of an effective safety culture must underlie every operational and regulatory consideration at nuclear facilities in the U.S. and worldwide.

At the NRC

I would like to wind down my remarks by sharing some personal insights from my first few months on the job.

While the NRC’s safety philosophy remains unchanged and your responsibility to conduct your activities safely has not diminished, elected officials’ and the public’s interest in what we do has increased significantly as a result of the Fukushima accident; and we can anticipate some additional commentary following Hurricane Sandy. We need to be proactive in this area, or we will be led by external forces.

Local communities and elected officials have become more interested in their nearby plants. For example, constituents in Southern California have been vigilant in understanding the ongoing issues at the San Onofre Nuclear Generating Station. I believe it is incumbent upon us to communicate transparently with these groups and policy makers and listen to their concerns.

Effective communication at all levels, both internal and external, is essential. We need language that uses fewer acronyms and plain writing to succinctly convey NRC’s mission, regulations, and actions to both the public and those within the industry.

I believe that clearly explaining our actions and motivations to the public enhances the fulfillment of our safety mission. This is equally important to our licensees who are obligated to respond to our direction and need that direction to be conveyed with minimum ambiguity.

Complimentary to improving our communication methods is updating communication platforms. We recently updated our website and have begun engaging with the public through social media. Increased transparency means increased access to the NRC’s activities. The easiest way to share this information is through social and digital media.

I believe that the satisfaction of our employees and the health of our internal operations are central to successfully carrying out our Agency’s mission. While we must continue to make progress in this regard, I have come to better appreciate why the NRC has been consistently rated one of the best federal agencies in terms of employee morale and satisfaction.

Prior to starting at the NRC, I was aware of our employees' reputation for their commitment to their work. After a few months on the job, I have come to see just how driven and committed each employee is to the agency's mission. I have been impressed not only by the talented staff but also the work we do to ensure professional growth and personal satisfaction.

Conclusion

In closing, while the year ahead holds some big challenges, I look forward to tackling these issues in collaboration with my colleagues and am proud of the NRC's accomplishments. We will continue to confront obstacles as they arise and together we must maintain a clear focus on the full range of our safety and security responsibilities.

Your proactive engagement with these issues will ensure technical success and industry stability. Together, we can make certain that the United States maintains the safest operating fleet of nuclear facilities in the world.

Admiral Hyman G. Rickover said in a 1979 statement to the U.S. House of Representatives that "reactor safety requires adherence to a total concept wherein all elements are recognized as important and each is constantly reinforced." Through our various regulatory activities, the NRC strives to embody Admiral Rickover's assertion that nuclear oversight must be a comprehensive, integrated, and sustained effort.

I thank you for your recognition of the importance of our mission. I look forward to working with you to ensure our joint success in protecting the health and safety of the American people.

Thank you for the opportunity to speak to you today. At this time, I'd like to open up the discussion to the group and take any questions you may have.

Note: To access Chairman Macfarlane's slides click [here](#).