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**Remarks**  
**By Stephen G. Burns, Chairman**  
**United States Nuclear Regulatory Commission**  
**To The**  
**U.S. Women in Nuclear 2015 Conference**  
**July 13, 2015**

### **General Remarks**

Good morning. I appreciate the opportunity to appear before you today at the 2015 U.S. Women in Nuclear Conference. I plan to touch on a few topics that I hope will be of interest to the audience here today and in keeping with the theme of the conference. First, I plan to talk about how “women in nuclear” are represented at the NRC. Next, I’ll talk about how the NRC is focusing on fundamentals and about some of the initiatives we’re taking to “get back to basics,” including how the agency is addressing what we call the “cumulative effects of regulation.” Finally, I’ll talk about the agency’s actions in response to the lessons learned from the accident at the Fukushima Dai-ichi nuclear power plant in Japan and how they demonstrate a focus on our core values.

To put in context how I am approaching these issues in my role as NRC Chairman, let me tell you a little bit about myself. I have now served for about six months as Chairman of the NRC. As some of you may know, I had earlier retired from the NRC in 2012 after a nearly thirty-four year career that culminated in my service as the agency’s General Counsel. For nearly three years I worked in Paris at the OECD Nuclear Energy Agency, where I supported NEA management on a number of issues including Generation IV reactors and medical isotope production, as well being the contact point for one of the major international nuclear liability conventions.

One of the most satisfying aspects of my job was conducting education programs focused on nuclear law, which were aimed in large part at the next generation of leaders in the nuclear field. Coming back to NRC after my tour in Paris, I have the unique opportunity to experience the agency from an entirely new vantage point. This new vantage point has given me a real appreciation for the importance of keeping focus on our core safety and security mission. It also has reinforced my longstanding belief that nuclear safety is best served when the regulator and the industry work together in a cooperative, albeit arms-length, manner, with appropriate recognition of the roles and responsibilities that each has.

## **Women in Nuclear at the NRC**

First, let me tell you a little about the NRC, for those who may not be familiar with our structure. The NRC is headed by five Commissioners, all nominated by the President and confirmed by the Senate for staggered five-year terms. No more than three can be from the same political party. The President designates one member of the Commission to serve as Chairman, as President Obama did when he designated me as Chairman effective January 1, 2015, upon the departure of our prior Chairman, Dr. Allison Macfarlane. The purpose of this multi-member structure is to bring a diversity of views to the table, and to minimize the influence of politics so that the agency's decision-making is focused primarily on the application of sound science and engineering in the legal framework established by our governing statutes. While it's not a perfect system – nothing is – it has been largely successful in keeping the agency's decision-making consistent with its mission.

The NRC presently employs about 3,700 people among its suburban Maryland headquarters and four regional offices in Pennsylvania, Georgia, Illinois and Texas. This includes at least two Resident Inspectors who work at each nuclear power plant site. Something that might interest this audience is the extent to which women are represented in all levels of the NRC's ranks. There are currently almost 1,500 women working at the NRC -- that's about 40% of the total workforce. In addition, women make up over 20% of our technical positions and represent nearly 30% of the supervisors at the agency. Women also make up almost one-third of our executive rank positions, known as the Senior Executive Service. It is the policy of the NRC to foster equal opportunity for all employees and to promote principles of diversity management that will enhance the effectiveness and efficiency of our programs. The agency has eight Equal Employment Opportunity Committees to assist agency management in accomplishing diversity objectives; this includes the Federal Women's Program Advisory Committee. I am very pleased with the strong representation of women at the NRC and support the advancement of women in all ranks at the agency. My personal staff, in case you're curious, consists of eight individuals. Six of them are women, including my legal counsel and both of my technical assistants.

## **Focus on Fundamentals**

The theme of your conference is "Focus on Fundamentals." Given the resource constraints we're all facing, I think it is a very timely message, both for the nuclear industry as a whole and for the NRC as regulator. These constraints compel us all – both industry and government -- to take a hard, honest look at ourselves to identify exactly what are the fundamentals, and whether we are properly focused on them. Identifying the "fundamentals," however, is not an easy process, in particular for the NRC because the regulation of nuclear technology is not a world of bright lines and simple formulas. As the United States Supreme Court noted long ago, the NRC "is making predictions within in its area of expertise at the frontiers of science..." and its decisions largely come down to those that require engineering and scientific judgment. So it is understandable that determining where the "fundamentals" lie within this spectrum is challenging. Difficult decisions have to be made. But our stakeholders demand that we do this, and we at the NRC have taken that charge very seriously.

At its heart, a focus on fundamentals starts with identifying and prioritizing activities that have the largest safety benefit and discontinuing or deferring those activities of little or no benefit to safety. At the NRC, we are attempting to focus on the fundamentals in a number of ways.

### **Project Aim 2020**

Some of you may have heard about the NRC's Project Aim 2020. I view this project as a major step towards focusing on fundamentals. Project Aim was initiated in mid-2014 by a small team of NRC staff experts, senior staff, and managers who sought input from stakeholders, other federal agencies, the National Academy of Public Administration, and the National Treasury Employees Union. The team conducted interviews with senior NRC managers and held 23 focus groups of staff members. The team received more than 2,000 suggestions and observations from these interviews and focus groups that were used in formulating its report. These suggestions and observations covered the range of our regulated activities from improving efficiency of processes, to organizational changes all to prepare the agency for the future.

The staff's final report on Project AIM identified a number of recommended strategies under the themes of people, planning, and process to prepare the NRC for the future. The report concluded the NRC needs to right-size its staffing levels while retaining appropriate skill sets to accomplish its mission. The report also recommended the agency streamline processes to use resources more wisely and improve the timeliness of regulatory decision making. The report's strategies also addressed the agency's need to be able to respond quickly to changing industry and workload conditions in the future. Sometimes we like to say we're improving the agency's agility and flexibility, but I've been told that sounds like an aerobics class. So let's just say we need to be more responsive to changes in the industry we regulate.

The Commission recently voted on the Project Aim recommendations and, among other things, directed the staff to conduct a meaningful reassessment of the agency's workload and to develop a prioritization of activities that could be shed as no longer needed or justified, or could be performed at a reduced level. The goal of this "re-baselining" is to make the NRC more efficient and ensure we are appropriately focused on our core safety and security mission. In other words, we are refocusing on the fundamentals of the NRC's mission.

In my own vote on the Project Aim recommendations, I noted that a large part of our success in improving how we do business must come from going "back to basics." I noted that it is worth recalling our statutory mandate under the Atomic Energy Act. Under the Act's broad authority, the NRC imposes requirements and takes regulatory action to ensure reasonable assurance of adequate protection of the public health and safety and common defense and security. The NRC has continually emphasized over the decades of its existence that its "adequate protection" authority does not require the agency to seek to achieve zero risk in its regulatory activities. I have frequently heard that one challenge the agency faces is a desire to always achieve the "gold standard," which can result in expending more effort than required. I believe the NRC should always seek to achieve the highest standards of performance, but it must do so with a balanced perspective of the significance of the activity in the overall context of our regulatory responsibility and with the overarching objective to be focused on the right things. As I said then, and continue to believe, the NRC should find ways to increase our use of risk insights to enhance our decision-making. We must ensure we are spending our resources on the most safety-significant issues.

It is the Commission's expectation that, when the Project Aim rebaselining effort is complete later this year, the Commission will be presented with a well-thought-out and objective look at the agency's work that will truly refocus us on our fundamentals. But to be successful, this will require everyone in the agency from top to bottom to pull together and make tough decisions about what is best for the NRC, and the public at large.

### **Cumulative Effects of Regulation**

This leads me to a discussion of some of the other agency initiatives directed at making sure both the NRC and the industry remain focused on fundamentals. The first is our ongoing effort to assess the cumulative effects of regulation. The NRC staff's efforts under this initiative – which has been going on since 2011 -- examine ways we may be able to enhance the efficiency with which we carry out regulatory actions, while mitigating any adverse impact caused by the cumulative effect of regulatory activities on both the NRC and licensees. Currently, this is done mainly through increased public input through all phases of the NRC's rulemaking process. This allows an opportunity for the regulated community to provide feedback about potential adverse impacts from the implementation of the proposed new requirements.

Our focus is on ensuring clarity in our regulations through the issuance of guidance documents in coordination with issuance of proposed new requirements and in seeking increased dialogue on proposed implementation dates for new requirements. We have also been taking a close look at how we estimate the costs of proposed new requirements and have engaged with the industry on ways to develop more accurate cost estimates, since these estimates feed directly into the agency's decision about whether and how to pursue new requirements.

The NRC is also looking at ways to expand these efforts beyond the rulemaking process. These efforts are aimed at helping us view the requirements we impose as a whole, rather than in a vacuum, to ensure that the totality of what we are requiring of our licensees isn't having a detrimental effect on safety. For example, if a new requirement is being contemplated at the same time that licensees are implementing one or more other requirements meant to improve safety, we would want to ensure the timing to implement the new requirement doesn't interfere with completion of the safety improvements already being implemented. This is another example of how nuclear safety is well served by the regulator and the industry working together while recognizing the responsibility each has in ensuring safety.

### **Fukushima Response**

No conversation about "focus on fundamentals" in the nuclear arena is complete without reference to the accident at the Fukushima Dai-ichi plant in Japan. This is definitely an area where I think both the NRC and the industry have demonstrated a joint commitment to safety as a core value. The nuclear power industry and the NRC have rightly focused first on the actions with the most safety significance. This includes implementing strategies to mitigate beyond-design-basis reactor accidents and re-evaluating seismic and flooding hazards at power plant sites using modern analysis methods and the latest scientific data. This has resulted in the best possible use of agency and licensee resources.

I have visited the North Anna, Watts Bar, and Braidwood sites this year specifically to look at Fukushima-related modifications, and I was very impressed by the work that has already been done to implement new requirements for additional mitigation strategies. At each plant I was able to see the significant stockpile of additional backup equipment that has been purchased to deal with accidents that go beyond what the plant was originally designed to handle. This includes things such as additional cooling water pumps and electrical generators, as well as miles of hoses and cable necessary to connect the backup equipment to the normal plant systems in an emergency. In addition, the sites have constructed one or more separate structures to house this additional equipment and keep it protected from hazards like floods and earthquakes.

I know that similar work has already been or is being done across the country at every operating nuclear power plant site, in combination with the work the industry has done to stand up the two regional response centers.

I traveled to Japan in April of this year and had the opportunity to visit the Fukushima Dai-ichi site, to talk to the Japanese regulator, and to see post-Fukushima modifications to another Japanese nuclear facility. Seeing first-hand the repercussions of not being prepared to handle conditions beyond those the plans was originally designed for and hearing first-hand about the challenges faced during the accident by the operators at Fukushima Dai-ichi, and by the nation of Japan as a whole, I am all the more assured of the importance of the work being done here in the United States and, in particular, that we have collectively been focused on the right things.

I believe we have made great strides in enhancing the safety of U.S. nuclear power plants through the implementation of the lessons learned from Fukushima, and this is due in large part because the Commission, the NRC staff, and the industry have all maintained their focus on the fundamentals when it set out to address these issues.

### **Closing**

In closing, I would like to re-emphasize my commitment to ensuring the NRC is doing all that it can to focus our resources on those activities directly tied to our safety and security mission and to maintaining confidence in the NRC as a competent, independent regulator. For my part, I pledge to hold the NRC staff responsible for ensuring the agency maintains its focus on its fundamentals by making sound technical judgments and doing all that we can to clearly communicate our decisions to our stakeholders. It is this focus that has maintained the NRC's position established over its four decades of existence as the premier nuclear regulator in the world. But we can never rest on our laurels, and must continually look to reassess our performance and maintain focus on our fundamentals.

Thank you once again for the opportunity to share some of my thoughts with you today.