

“Perspectives from Commissioner Baran”
2017 Regulatory Information Conference
March 15, 2017

Thanks, Mike. Good morning. It’s great to see everyone here.

This is my third RIC. I’ve done a couple of these speeches before. So I’ve been trying to come up with something new and different for this morning. That gets a little harder each time. I started thinking about some of the advice I got for my first RIC speech. Some people recommended going big picture and philosophical. So I thought about that for a while and then asked myself: why stop at philosophical? Maybe I should be thinking bigger ... more dramatic ... more exciting. I thought maybe I could include some poetry or movie quotes ... or a dramatic reading of risk-informed technical specifications. Perhaps a bit of interpretative dance. My daughter Mia does gymnastics and she has a nice arabesque pose. I thought I could try throwing one of those in. Is that something you guys would want to see? A little ... [begin moving to pose].

Yeah, well, I’ll be honest. It just isn’t me. So I decided to stick with the nerdy nuclear jokes. They’ve been reasonably successful in the past, and they don’t require me to be particularly limber. Of course, with Project Aim, our budget isn’t what it used to be. So we contract out our joke-making. Kristine uses comment cards from prior years. My preferred joke supplier is Darius Dixon from Politico, who once again came through with a joke this year. This is actually a Darius Dixon original. He wrote this joke. Are you guys ready? Okay, here it goes. This joke harkens back to an early NRC effort to get Werner Heisenberg to speak at an event. The conversation went something like this. “Hey boss, I’m sorry we couldn’t book Heisenberg.” “Oh, what happened?” “I don’t know. We put a lot of time and energy into it but couldn’t track him down.” “Well, you know, that may have been your problem.” Maybe you liked it. Maybe you didn’t. Either way, I’m pretty sure that went better than the interpretative dance would have gone.

You may have noticed that I have a new speaking slot this year. The last two years, I opened up Day 2 of the RIC, which I had to myself, in a Siberian exile kind of a way. This year’s a little different. Now I’m like the palate cleanser between our new Chairman and our prior Chairman.

Seriously though, it’s an honor to share the morning with Kristine and Steve. I spent some time perusing the deep recesses of NRC’s website, which has a page listing all of the former commissioners and their terms of service. And that page confirmed what I had already suspected, which is that Kristine has more experience as a commissioner than any of her predecessors as Chairman. So she brings a tremendous amount of knowledge to the position. Congratulations, Kristine, on your new role. And with 30 plus years of service at the agency, I’m confident that Steve has more overall NRC experience than anyone who has served on the commission over the last four decades. Thank you, Steve, for your hard work as Chairman and for your continued service on the Commission. And I want you to know that I would say that even if we weren’t dependent on your continued service for quorum.

I've been getting asked a lot lately about what the change of administration means for NRC. It's a question that matters for our staff, our stakeholders, and our international counterparts. So I thought I would take some time this morning to share my thoughts about what may change and what will stay the same.

I've already discussed one obvious change, which is that we have a new Chairman. But there is also continuity in the membership of the Commission. Kristine, Steve, and I have all served together on the Commission for more than two years.

The three of us work very well together. We don't always agree on policy, but we always have constructive, collegial discussions and debate. And I think that's how a commission is supposed to work. Bring together people with different backgrounds, perspectives, and experiences, and have them grapple with tough issues together. We learn from each other. We question each other. We help one another to see issues in a new light. And ultimately we make sure that important regulatory decisions are carefully and thoroughly considered. I think it's a very effective decisionmaking structure.

And that is something that does not change with administrations. For more than forty years, through eight administrations, both Democratic and Republican, collegial decisionmaking and independence have been at the core of NRC. Our independence ensures that regulatory decisions are made based on science and technical expertise and that our focus is on the agency's public health and safety mission. That's not going to change. Independence is a cornerstone of NRC's regulatory and oversight activities. And the Administration has been clear that the recent executive orders relating to regulatory decisionmaking do not apply to independent agencies like NRC.

Our commitment to increasing the agency's efficiency and agility while remaining focused on our health and safety mission is also unchanged. I've been very impressed by the willingness of the NRC staff to take a hard, questioning look at what work the agency is doing and how we're doing that work. Last year, as part of Project Aim, the NRC staff generated a list of 151 proposals to reduce costs. The Commission approved nearly all of those proposals. Some of the resulting savings have already been realized. Other cost-cutting measures are set to kick in during fiscal years 2018 and 2019. Declining workloads in particular areas, such as new reactor licensing, are generating additional savings. And the agency has essentially been under its own, self-imposed hiring freeze for the last two years.

The impacts of these Project Aim efforts have been dramatic. Our budget has gone down. Our fees are going down. And the number of full-time NRC employees has dropped by more than 11% in just two years. We now have fewer FTEs than we did back in 2007, when the agency was in the midst of ramping up for the expected wave of new reactor applications.

With these reductions, I believe we are close to achieving one of Project Aim's central goals, which is to align the agency's resources with our current and expected workload. There may be some further FTE reductions in corporate support or as a result of more efficient processes in others areas, but I think there's a strong case to be made that the agency will soon be correctly sized for our workload.

Project Aim has been valuable, but these steep reductions have created some significant challenges. To successfully meet our licensing and oversight responsibilities, NRC needs an engaged workforce with the right skills and strong morale. For that to happen and for the agency's long-term health, we need a stable pipeline of new talent. In order to align our resources with our workload, it made sense to set tight limits on external hiring. But that approach cannot be maintained indefinitely. In the medium-term, we're going to need to bring new resident inspectors and health physicists and probabilistic risk experts into the agency. A significant number of our employees are retirement eligible or will be soon. And that requires NRC to attract talented individuals to maintain the strong technical competence that has been a hallmark of NRC.

We also need to keep the talent we already have during this period of change. Each week, I get a list of new NRC employees who are arriving at the agency and current employees who are leaving the agency for one reason or another. And those lists are very lop-sided. There are virtually no new arrivals. A significant number of employees are retiring after many years of federal service. But some very talented individuals are leaving to pursue opportunities elsewhere. Some are heading to the Department of Energy or the national labs. Others are going to the private sector. I wish them all the best, but I want to make sure that NRC can retain our next generation of leaders who may be concerned that they won't have the advancement prospects at NRC that they likely would have had a few years ago. That's a challenge for us – in training, career development, mentoring, workforce planning, and succession planning. With more people leaving the agency, we also need to make sure that we're capturing all of that knowledge. Every organization has to manage these challenges, but it's harder during a period of downsizing.

With a reduced budget and workforce, one of our key priorities must be to ensure that core technical capabilities are maintained in the staff. This isn't an issue that just affects NRC. It also affects licensees, applicants, and other stakeholders. For example, we're seeing growing interest in Advanced Technology Fuel and risk-informed licensing submittals. In order to conduct effective and efficient reviews, we need to make sure that our staff retains the technical and regulatory expertise to handle complex and evolving areas of work like these.

There's broad agreement that it's important for NRC to align its resources with its workload. I think that's a reasonable goal we all share. But it does raise a question about how we make sure that we can handle new, unexpected work. Part of the answer is improved agility – the ability to redirect NRC staff with the needed skills to the new work. We talk about that piece a lot. We don't talk as much about the need to maintain a surge capacity for when significant unexpected work comes along, such as the potential construction of the Bellefonte reactors.

So what does all of this mean for the future of Project Aim? In terms of our budget and FTEs, the reductions that have already been set in motion by the Commission will continue the sharp downward trend of the past couple years. But ongoing reductions of that magnitude year after year are not realistic. Deeper and deeper cuts would prevent NRC from accomplishing its vital mission. In my view, our resource and FTE levels need to flatten out pretty soon.

On the other hand, the Project Aim mindset of striving for improved efficiency and agility is absolutely sustainable. We can and should internalize this as an enduring focus of our work.

I spent a fair bit of time talking about the organization and management of NRC. Let me turn to some of the safety and security issues we're working on.

This month marks six years since the nuclear accident at the Fukushima Daiichi plant in Japan. NRC remains focused on post-Fukushima safety enhancements and lessons learned. The Commission is currently considering the draft final rule on mitigating beyond design basis events. That rule addresses a number of recommendations of the Near-Term Task Force and is the culmination of years of work. Meanwhile, the staff's focus is shifting more and more to oversight and inspection of licensee implementation of several safety enhancements and natural hazard evaluations.

Recently, the NRC staff also provided the Commission with its proposed resolution of the three remaining Tier 2 and Tier 3 issues. I want to take a minute to highlight one of the staff's initiatives, the establishment of "a more routine, proactive, and systematic program for identifying and evaluating new information related to natural hazards." Under this approach, the staff would collect, aggregate, review, and assess new scientific information about a range of natural hazards on an ongoing basis. The staff would begin by compiling and organizing a knowledge base for each type of natural hazard consisting of all the information gathered through the agency's previous work. This would ensure that the data, models, documentation, and staff insights relied on in the past are readily retrievable in the future. Over time, the staff will expand this knowledge base through active and ongoing technical engagement with other federal agencies, academia, industry, international counterparts, professional societies, and consensus standards organizations. When the staff obtains new information about a natural hazard, the staff will assess its potential significance in the context of the accumulated hazard information, rather than in isolation. "The overall objective ... is to determine if the new information could have a potentially significant effect on plant safety."

I think the staff's plan to actively and routinely seek out the latest scientific information about the natural hazards facing nuclear power plants will significantly enhance safety. And it is necessary in light of the impacts of climate change on some hazards, such as flooding and drought, which are expected to exceed historical levels in the future. Our regulatory processes need to account for the changing frequency, intensity, and duration of these events. Successful implementation of the proposed process will require a sustained, long-term effort by the NRC staff. But deepening and refining our understanding of natural hazards will provide substantial benefits in the years to come.

Power plant decommissioning is another major area of focus for the agency. In the last few years, six U.S. reactors have permanently shut down and seven more have announced plans to close in the coming years. Despite the growing number of affected units, NRC does not currently have regulations specifically tailored for the transition from operations to

decommissioning. As a result, licensees with reactors transitioning to decommissioning routinely seek exemptions from many of the regulations applicable to operating reactors.

I see two main purposes for the decommissioning rulemaking effort that is now underway, and both are vital. First, the rulemaking will allow us to move away from regulating by exemption in this area. The exemption approach is not very efficient and does not provide for public participation. And second, the rulemaking provides a chance for NRC and all of our stakeholders to take a fresh look at our decommissioning process and requirements. There is a lot of interest in this aspect of the rulemaking. States, local governments, non-profit groups, and the communities around these plants are very engaged and want to share their views.

In response to NRC's advanced notice of proposed rulemaking, the agency received 162 comments, including comments on every regulatory area covered in the notice. Many of the comments were focused on the level of public involvement in the decommissioning process. Other hot topics in the comments were the 60-year time limit for decommissioning, whether NRC should approve post-shutdown decommissioning activities reports, emergency preparedness, and the use of decommissioning trust funds.

The staff considered these comments and released a draft regulatory basis last Friday. A 90-day public comment period officially opens today. I look forward to reviewing the staff's work and the comments we receive on it. I feel strongly that we need to thoughtfully consider the ideas presented by stakeholders with an open mind.

I'm keeping a close eye on the schedule for this rulemaking. The timing of this rule is crucial because of the plants that will be shutting down in the coming years. We need to complete this rulemaking in 2019 because all parties will benefit from having the rule in place for those plants. This poses a management challenge for the agency because many of the technical experts working on the rulemaking will also need to review the anticipated exemption requests for the plants that are closing. We need to make sure that we handle this licensing workload while keeping the rulemaking on track. Additional plants transitioning to decommissioning only increases the value of completing the comprehensive rulemaking in a timely way.

Another constant for NRC and our licensees is the need for robust physical and cyber security. The potential threats facing power plants, fuel cycle facilities, and radioactive materials licensees are constantly evolving. They require NRC to maintain effective physical security requirements, including the force-on-force inspections conducted by NRC. Performance-based cyber security standards are also essential and are being implemented.

Although distinct from physical security, source accountability and tracking play an important role in ensuring that radioactive sources do not fall into the wrong hands. For Category 1 and 2 sources, NRC and the Agreement States have web-based systems to inventory sources, validate materials licenses, verify that possession limits are not exceeded, and prevent unauthorized parties from obtaining radioactive materials. However, Category 3 sources are not included in the National Source Tracking System, and there is currently no regulatory requirement for a vendor to verify the authenticity of a license for Category 3 sources before

selling them. The Government Accountability Office highlighted this regulatory gap last year, when it found that a fictitious company established by GAO could produce counterfeit Category 3 possession licenses and obtain commitments from vendors to sell it a sufficient amount of material to reach Category 2 levels.

In response to GAO's audit, the Commission supported my proposal to direct the NRC staff to examine the options for closing this gap. One option is to include Category 3 sources in the National Source Tracking System, but there may be other approaches that would resolve the issue. I have an open mind about what the right answer is. We should look at the pros and cons of the potential solutions and then decide what makes sense.

Let me turn to a few areas of our work that could be impacted by the priorities of the new Administration. NRC is already preparing for advanced reactor licensing and Advanced Technology Fuel qualification. But the level of Department of Energy support for the development of these technologies may affect the volume and timing of our future workload.

Currently, we're seeing a lot of interest in advanced reactors – from vendors, utilities, and policymakers. One vendor has begun pre-application discussions with the staff and we anticipate three more vendors may reach that point next year. In response to this interest, NRC is ramping up its activities on advanced reactors. We want to make sure that we have an efficient and effective licensing process for non-light water reactors. At the end of last year, the staff released its vision and strategy for achieving this goal. The staff also is seeking public comment on draft implementation plans for the near-term, mid-term, and long term. Draft guidance for developing principal design criteria for advanced reactors just went out for public comment last month. For fiscal year 2017, NRC requested funding for advanced reactors off the fee base. In my view, that's the fairest way to fund our expanding activities in this area.

We are also seeing an acceleration of efforts to develop reactor fuels that can better withstand higher accident temperatures and provide longer coping periods during station blackout conditions. Fuel vendors and utilities are now aiming to deploy lead test assemblies for more evolutionary technologies in the next couple years. And some stakeholders are contemplating potential changes to NRC's regulatory process for qualifying and licensing new fuels. Given all of this activity, I think holding a public Commission meeting on this topic with a broad range of stakeholders later this year would be valuable. It would be a good opportunity to discuss the technologies, where they are in development, anticipated timelines for licensing submissions, resource implications for the agency, and any proposals for adjusting the existing regulatory process.

I often get asked what's going to happen on high-level waste. In fact, that question may already be floating around on a comment card or two. Well, NRC's role is to review license applications, and our process is premised on having engaged applicants. The Administration and Congress set the overall policy direction on high-level waste and make decisions about funding. The NRC staff recently docketed the Waste Control Specialists license application for a consolidated interim storage facility in Texas. The staff has begun its safety and environmental reviews, which will proceed concurrently. NRC anticipates that another license application for a consolidated interim storage facility in New Mexico may also be filed. Although there is still a

lot of uncertainty about fiscal year 2017 appropriations, NRC would likely have sufficient resources to review both applications.

I discussed several regulatory issues this morning. Each and every one of them requires NRC to remain focused on enhancing our openness and transparency. When we communicate clearly, hear from a diverse mix of stakeholders, and thoughtfully consider their ideas and comments, we make better decisions.

I'll close with one more thing that won't change. And that's my interest in visiting plants and other licensed facilities. I've had the chance to visit a number of sites during the past year. Those visits are always valuable because I get to see facilities and equipment first-hand, check in with NRC's resident inspectors, and talk with licensees about their concerns and areas of focus. So I want to thank those of you who have hosted me at your sites. I look forward to reconnecting with folks this week and getting out to additional sites during the coming year. With that, I'm happy to answer a few questions. I think we have about ten minutes.