

United States Nuclear Regulatory Commission  
Office of Public Affairs  
Washington, DC 20555  
Phone 301-415-8200 Fax 301-415-2234  
Internet:opa@nrc.gov

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GRETA JOY DICUS, COMMISSIONER  
U.S. NUCLEAR REGULATORY COMMISSION

REGULATORY INFORMATION CONFERENCE  
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“DAYS OF FUTURE PASSED”

### **Introduction**

Good afternoon, and welcome to this year's Regulatory Information Conference. It's good to see so many veteran conferees here, as well as new participants. After a good lunch, as many of you have had, I'm sure you will all agree that there is nothing one would rather do than to attend a conference dealing with topics involving nuclear safety. I can feel the excitement in this room! I can feel your energy levels -- slowly oozing away to the point where you can only lower your head and nod involuntarily in agreement to everything I say. So let me be brief.

### **Discussion**

This conference has been, and continues to be of great value, I believe, to both the industry and the NRC. This forum facilitates open communication and discussion, both formally and informally, for a wide range of issues facing us. It is a place where one can share ideas, improve understanding of each other's views, problems or positions, and of course, see old friends and colleagues. With the changes that are taking place now, both internal and external to the NRC, it is especially important for these discussions to continue. More importantly, if this conference is to be productive, we must all be willing to listen - with an open mind.

Twenty years ago this month, March 28<sup>th</sup>, the accident at Three Mile Island occurred. No one wants to be reminded of it, but we also can not forget it. We remember that event, we remember the attention, and we remember the aftermath that followed. Did any of you see PBS' retrospective of the TMI accident that was broadcasted last week? That program, if it didn't do anything else, laid bare the fact that we lost the public's trust. The press didn't think they were getting straight answers from the nuclear experts. The Governor of Pennsylvania couldn't get through to the Chairman of the NRC. The Commission and the State couldn't be sure it was getting reliable information.

What surfaced during and after the event was both painful and embarrassing for the nuclear power industry and for the NRC. The roles of both the licensees and the regulator were scrutinized. Many new regulatory requirements were created and imposed as a result of investigations and Congressional hearings, prescriptive ones at that. One can look at the NUREG-0737 TMI Action Items to get a sense of the breadth and depth of the issues considered. Although we can look with 20-20 hindsight and question whether all were necessary, I think generally, we can agree that the changes resulting from that accident, on the whole, were reasonably well-intentioned and probably needed, and have contributed to much improvement in plant design and operation. However well-intentioned our actions were, as the nuclear power industry matured in the post-TMI era and became safer, unfortunately, the regulator did not change. Thus the regulatory structure remained prescriptive.

Today, the changes being proposed and implemented by the NRC and the nuclear power industry are no less sweeping, challenging, and significant as those since TMI. The changes will not only affect commercial nuclear power plants, but the fundamental changes in the NRC will affect all licensees. For example, for materials licensees, the first notable change will be Part 35. However, the focus of my comments today will be on those issues which have the greatest impact on power reactors.

This year's RIC agenda items are those which are currently commanding significant Commission attention. In the spirit of encouraging open communication, I urge you to engage in frank and spirited discussion on the issues. We will all benefit from your views.

The agency is transitioning to a more risk-informed and ultimately, performance-based regulatory framework because the focus of our activities and of yours should be risk-informed and performance-based. Note that I said risk-informed, not risk-based. Examples of risk-informed related activities which NRC has undertaken include changes to: 10 CFR 50.59, the maintenance rule; the reactor oversight and assessment process, use of an alternate source term, changes to NRC's Enforcement Policy, and eventually other sections of 10 CFR Part 50.

Where probabilistic risk analyses (PRAs) are used as part of the regulatory decision-making process, there is a need to ensure that PRAs are up to date and of good quality. This brings to discussion the issue of what constitutes a good PRA and how one can make that determination. It also calls into question the issue of the evaluation of PRAs. A risk-informed decision-making structure requires the use of risk assessments. Not exclusively numerical, however. Engineering judgment and operating experience together with defense-in-depth and margins of safety are all part of the process. However, because the use of PRAs is a vital part of the process, there must be some standard for them. They must have functionality and credibility. The American Society of Mechanical Engineers (ASME) is in the process of developing criteria for such a standard. I understand that the American Nuclear Society (ANS) may also be working on a standard. Perhaps a useful course of action would be an industry-supported PRA certification process. The primary point, however, is the need for an

evaluation methodology. I am less concerned about what form it may take. The fundamental point is that they are reasonably well done, meet some acceptable standard with consideration of updating as needed, and accurately reflect the design and operational basis of the plant.

Also, the concepts of margins of safety and defense in depth will continue to have a role in a risk-informed regulatory environment. As long as there are variabilities and uncertainties in elements such as human performance, human knowledge of physical processes, analytical methods and event frequencies, there will be a need for margins of safety and defense in depth. We should not deceive ourselves into thinking that we can quantify the demarcation between safe and not safe enough. Margins of safety and defense in depth both are components under the overall umbrella described as safety.

Will a risk-informed and/or performance-based approach to establishing and meeting regulatory requirements be less resource intensive than the regulatory approach of the past? It can, and it should be in the long-term. However, as with any endeavor, one has to make the up-front investment in order to reap future benefits. You know the saying of the health-minded - no pain, no gain. We, collectively, have got to properly invest the resources in establishing a reasonable and workable framework, develop the proper tools (such as quality PRAs and performance indicators), create good, sound processes (such as performance assessment), and provide appropriate training and time to learn. This effort will not be completed in a short time. It should not surprise us that it can take many years of continuous and diligent effort before this transition is complete. It is much easier to pronounce concepts and develop policy than it is to implement policy and develop supporting guidance and processes.

Will a risk-informed and/or performance-based approach reduce unnecessary regulatory burden? Will it also maintain safety, if not improve it? The answer to both questions is yes. If developed and implemented properly, unnecessary regulatory burden should be reduced by allowing licensees and the regulator to focus their attention and resources on higher priority issues. To an electrical generating business enterprise, reducing regulatory burden means saving expenses and resources, which in turn makes it more competitive. Economics is vitally important to a utility. So is safety. The regulator and licensee both are committed to safety. However, it is differences in the roles of the regulator and licensees that shape the different viewpoints of what is safety significant and when adequate safety is achieved. So please remember, the use of risk assessments and risk insights as a tool, can illuminate strengths and excesses as well as weaknesses and vulnerabilities; it is not a diode. To utilize the full benefits of the risk-informed approach, we must exercise the same diligence to uncover deficiencies and expend resources to correct them as one exercises to uncover excesses and reduce burden. Transition to a risk-informed structure will not be easy. NRC staff tasked with the day-to-day implementation of risk-informed decision-making have uncertainties about how to proceed. NRC managers must provide significant and effective guidance in order to ensure that we are successful. Finally, the Commission has policy issues it must decide upon to clarify uncertainties and establish the

framework within which we will proceed. However, the confidence I have in the outstanding staff at the NRC provides me the assurance that we will be successful.

This is the direction that the Commission has been, and is going. But what about the future? When Commissioner Merrifield and I visited the Millstone site a few weeks ago, among the things we did were to meet and talk with various stakeholders, not only with site personnel, but with several public citizens groups and local and State officials as well. Interestingly, many of those groups expressed a common concern. They were concerned whether the Commission is committed to the changes it has started or would it revert to the practices of the past - pre Millstone, pre Time Magazine. They were concerned whether the NRC would continue to hold licensees responsible and accountable for their actions; they were concerned whether the Commission would continue to hold the staff responsible and accountable for their actions. It is an interesting point that these public interest groups have expressed this concern - albeit for different reasons than you, the industry, have expressed. In fact, you harbor the same concerns as to whether the Commission will continue its emphasis on developing a risk-informed and ultimately, performance-based regulatory structure, and holding ourselves and the staff responsible and accountable.

The simple answer is yes. When I spoke at our recent Senate Committee oversight hearing, I reiterated my continuing support to do my part to move this agency forward, to improve our regulatory processes, and to improve our communications with, and responsiveness to, the industry and the public. I am committed to continuing the progress that has been made, and the Commission is as well. I have more than four more years to go until the end of my term. I have a vested interest in the success of the Commission's efforts. As I said then, as I say today, I am committed to the process before us.

## **Conclusion**

In conclusion, I would like to say that there are many other pressing issues that have the Commission's attention and are worthy of discussion at the RIC, but unfortunately, there is not enough time to include them in the program: the potential revision to the Commission's policy on Potassium Iodide, financial assurance, decommissioning funding, interim storage of spent fuel, fees, and medical regulations just to name a few. Nevertheless, I want to thank Bill Travers, Pat Norry and the staff for another fine effort in organizing and putting on this conference. It is never easy to decide which subjects get cut from the agenda; I think the staff has selected excellent discussion topics. Please enjoy yourselves these next few days. I wish you all a very successful conference.