NRC NEWS

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Remarks Prepared for NRC Chairman Dale E. Klein

Packaging and Transportation of Radioactive Materials (PATRAM) Conference
Miami, FL

"Global Cooperation in Nuclear Packaging and Transportation Issues"

October 22, 2007

Good morning. It is a pleasure for me to be with you today.

This conference offers all of us the opportunity to learn from each other and share our collective knowledge and experience regarding the transportation of radioactive materials. Let me, therefore, congratulate the hosts of the conference for organizing this event, and express my thanks to them for inviting me to speak to you today.

I would like to begin by making an observation that I don't think will shock any of you: I think it can be safely said that the Nuclear Renaissance has officially begun. I don't say that as an advocate for or against nuclear power. It is just a statement of fact, considering that a few weeks ago the NRC received the first application for a new reactor license in over thirty years. Over the next year and a half we expect about fifteen to twenty more license applications.

We knew this day was coming, and the NRC has invested a great deal of thought, planning, and effort into getting ready. And we are ready. I've assured both industry and Congress that the NRC will not be a bottleneck; and I am confident that the plan we have in place will allow to us to perform timely, quality reviews with no compromise of safety.

Now, when people talk about the Nuclear Renaissance, they tend to focus on power plants… for obvious reasons. But we all know that one of the key parts of a nuclear industry infrastructure is the packaging and transportation sector. And as this sector expands to meet the growing needs of an expanding industry, it will be challenged

in various ways. In fact, I would go so far as to say that, in the eyes of the public, transportation is among the most challenging aspects of the resurgence in nuclear power. In part, this is because the excellent safety record in this area is not always well appreciated by the general public. But that simply means we cannot afford to be complacent. All of us—regulators, government agencies, as well as industry—must be extra vigilant in demonstrating our commitment to safety and security.

Of course, we also need to do much more than that. The first license applications for new reactors are just starting to come in to the NRC, and we understand that DOE will submit an application for Yucca Mountain next year. It will probably be another ten years, therefore, before major upgrades and changes will have to be made to the current generation of packages, the transportation fleet, and other parts of the nuclear transport infrastructure. This is independent of whether the U.S. recycles spent fuel or uses a once-through fuel cycle.

We should not wait nine years, however, to start planning for these changes. We need to begin today. One of the challenges I would set out for you, therefore, during your discussions at this conference is to develop a clear plan for research and investment in developing the next generation of packages and transportation systems. In turn, I think those of us in the regulatory community need to begin developing new analytical tools that will help expedite and streamline the process of certification reviews.

I should confess here that I have a personal interest in this subject. As some of you may know, I am on leave of absence from the University of Texas at Austin. While I was there, one of my responsibilities was analyzing nuclear packaging. I was involved with reviewing the Tru-Pac, as well as conducting thermal analysis of spent fuel casks. But when I mention the need for developing the next generation of packages, I am not speaking as a professor contemplating my return to academia… I really do believe, as the NRC Chairman, that this is important!

I also believe that the challenges I have mentioned cannot be resolved by the United States on its own. We live in global economy, and the nuclear packaging and transportation business is clearly global in scope. The commerce of radioactive materials crosses national boundaries, linking separate regulatory institutions with a common purpose… and making it necessary for these institutions to work together in order to achieve common safety goals. Today, with the global nuclear resurgence, this spirit of cooperation is even more critical.

Last week I was in Berne, Switzerland to attend a major international conference on geologic waste repositories. One of the themes I raised in my talk was the possibility of greater international cooperation on waste form designs and disposal canisters. The IAEA already plays an important role in promulgating regulations and guidance documents for packaging and international transport of radioactive materials. It is my hope and belief that we can build on this work—as well as other efforts such at the Multinational Design Evaluation Program, or MDEP—to extend this international

cooperation to other parts of the fuel cycle… including transportation, aging, and disposal canisters, or TADS, as the Department of Energy has proposed.

Not every nation, of course, will choose to adopt identical waste forms and packages. We each have different requirements corresponding to our different storage approaches. But I think that there is ample opportunity for us to work toward a standard approach by which we evaluate waste forms and packages. Clearly, the prospects for an international repository program are too far off to be contemplated today. Nevertheless, it seems to me that we can begin laying the groundwork for more cooperation in the future, perhaps by our grandchildren… so that the possibility of such international repositories could eventually be developed, consistent with the laws and policies of each nation.

It also seems clear that international cooperation is important to help prevent safety problems and unnecessary burdens associated with incongruent or redundant regulatory requirements by the various countries through which radioactive material is transported. The lack of stability and predictability in transportation standards may have negative safety consequences due to incorrect interpretations and difficulty in keeping abreast of changes.

As a guiding principle, I submit that changes to existing standards should be made only if they are deemed necessary and have a significant positive impact on safety, security, or efficiency. It also seems sensible that risk considerations should be used as a guiding principle in our assessment of whether changes are needed to transportation standards and regulations. The NRC recognizes and supports the rights of individual countries to decide if and how to adopt international standards, in order to accommodate their specific economic, social, and national systems. However, transportation requires greater consistency across different nations, and I think care must be taken to avoid changes or differences in application of standards that can create unnecessary complications, and incompatible regulatory approaches.

Unfortunately, the perception that shipments of radioactive material pose tremendous risk may have resulted in unnecessary restrictions, denials, or delays. In some cases carriers may have imposed additional burdens for a shipment or required that a shipment be rerouted, when such actions were clearly unnecessary for safety or security. This should not be the case. Everyone here should work toward improving their methods for informing the public of the basic safety and security considerations for radioactive material shipments to ensure that these shipments are made in the most direct and expedient manner.

While this is important, I don't mean to suggest that it will be easy. In fact, the challenge we face here is all the more daunting in light of the increased security that is building up around the world in response to global terrorism. Certainly we have seen the increased use of radiation detectors at various places, including airports and especially ports. This clearly is having wide-ranging consequences for international commerce… if only in terms of the extra time and effort it takes to clear cargo.

Last year, I visited the Port of Seattle and toured the radiation detectors operated by U.S. Customs and Border Patrol at the Port. Their primary mission is to examine cargo entering the U.S. that may contain nuclear materials that could be used in weapons or dirty bombs. They have excellent equipment and well trained and motivated agents. Part of that training is to understand what is a real threat versus a naturally occurring source. They need to make decisions—at this one facility, they average 1,600 hits per month. In fact, while I was there one cargo container triggered the alarms. It was a shipment of Chinese fireworks and isotopic analysis showed the culprit was potassium 40.

The Customs agents told me about one particular port that receives nothing but bananas… and virtually every shipment sets off the detectors. That struck a chord with me, because some of my fellow Commissioners have joked for some time about creating the "standard banana" as a harmless unit of radioactivity.

It seems to me that this presents an educational opportunity for all of us… to help enhance the public understanding of nuclear and radiological issues. It would be helpful, for instance, for the public to better appreciate that we live in a radioactive environment… and that ordinary, background radiation can be found in everyday household products that we consume or are exposed to on a regular basis.

The public has come to expect an exemplary safety record for transportation, thanks in part to the very robust nature of the packaging and containers that are currently in use. But as the Nuclear Renaissance unfolds, and the transportation of nuclear spent fuel and waste increases, it will be more and more important to ensure that the public deliberation over these matters proceeds in a reasonable and risk-informed manner.

Ladies and gentlemen, let me close by reaffirming the goal we share as an international community: the safe and secure transport of radioactive material around the world. I am particularly pleased by the size of this meeting, and variety of the participants, which truly exemplify the spirit of international cooperation which is so vital to this part of the nuclear industry. In fact, the nuclear transportation sector probably depends, more than any other area, on international cooperation.

Working together, I believe that we can continue to address the challenges of the 21st century, while maintaining consistency and stability in our standards and regulations, to enhance the safe and secure transport of radioactive materials around the world.

Thank you.