



# NRC NEWS

**U.S. NUCLEAR REGULATORY COMMISSION**

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**Prepared Remarks of Commissioner Dale E. Klein  
Fuel Cycle Information Exchange  
Washington, DC  
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Thank you. I am pleased to be here.

What I would like to do today is mention some of the themes I touched on last year, then talk about what has changed over the last 12 months, and then offer some perspective on what lies ahead and what are the new challenges we face.

Those of you who were here last year obviously memorized my speech, so I don't need to repeat what I said. But for the handful of people who weren't here, let me summarize.

I mentioned that while the United States currently does not recycle spent fuel, we had received some indications from industry that there might be interest in submitting a license application for a reprocessing facility. So I laid out a broad outline of what it would mean from a regulatory standpoint to prepare for recycling. And I explained how it would be prudent for the agency to begin laying the technical and regulatory groundwork necessary to support a timely NRC licensing review.

The first step would be to identify what is missing from our current regulations; and I mentioned that a gap analysis of the existing regulations was, in fact, already underway by the NRC staff. The gap analysis was looking at regulatory changes that would be needed in order to establish an effective and efficient regulatory framework that adequately protects the public and the environment.

I also pointed out that if industry was truly interested in these facilities over the long term, it should look at forming technical working groups. I challenged them – or perhaps I should say, you – to begin the process of collecting documents and information that could at some point lead to a clearer picture of the specific needs for regulatory infrastructure development.

I am happy to say that there has been significant progress in both of these areas. In fact, within six months after I issued my challenge industry published a comprehensive white paper that presented a regulatory framework for an NRC-licensed recycling facility. I am pleased to say that we did our part, as well. NRC staff has also recently completed its regulatory gap analysis for developing the framework to license reprocessing and associated facilities. In all, 23 gaps of varying levels of complexity were identified.

In my opinion, these two initiatives complement each other very well, because the industry white paper contains many interesting and innovative concepts that can be used to successfully remediate the gaps identified by the staff. Based on these two significant work products, I believe that establishing the necessary regulatory framework is achievable within a reasonable timeframe. That is why I am pleased to note that the entire day tomorrow will be dedicated to the subject of closing the nuclear fuel cycle. This is a significant opportunity for NRC staff and public stakeholders to engage in detailed discussions, and carry forward the momentum for creating a licensing framework for potential recycling facilities.

When I advocated these efforts last year, I did so because I thought they would be good for the agency, as part of my belief that we need to prepare for moving beyond the mainly light-water reactor agency the NRC has traditionally been. But little did I realize how useful these initiatives would be a year later! As you know, the new administration has altered the nation's course on the back end of the fuel cycle. Specifically, the administration has made it clear that it does not support construction of a geologic repository at Yucca Mountain.

Energy Secretary Chu has stated that he will convene a blue-ribbon panel to study alternatives, so down the road we may see the development of an alternative repository site or technology. I have no opinion or inside knowledge on this question, so I would prefer not to speculate. I think one can say with reasonable confidence, however, that given the economic, political, and technical questions that would need to be asked, and answered, the NRC will not be receiving another application for a high-level waste site any time soon.

Therefore, I think that the decision to put Yucca Mountain on the back burner, so to speak, will serve as a forcing function, and make it more likely that we will see within our lifetimes centralized interim storage and recycling. I think this conclusion is supported by the Administration's budget submittal to the Congress, which provides substantial funding to the Advanced Fuel Cycle Initiative. Indeed, it is encouraging that one of the early sessions tomorrow will be devoted to a discussion of this initiative.

If longer-term interim storage and recycling become definitively established as major elements in handling the back end of the fuel cycle, we will need to move beyond white papers and gap analyses. In several recent speeches, I have discussed some of the changes I think will be necessary over the long term in the area of storage containers. And I will have more to say on the issue of packaging in the future. So for today, let me just say a few more words about spent fuel recycling.

At the NRC, the staff's next step will be to use the gap analysis to begin creating a technical basis for rulemaking. This effort is primarily directed toward licensing existing technology using a risk-informed, performance-based approach. However, I think there is a possibility that newer technologies could be deployed as well, or that multiple technologies could be deployed at a single site. Therefore, I would encourage the staff and stakeholders to use a risk-informed and performance-based approach in order to create a technology-neutral framework, to the extent feasible.

As many of you already know, it is likely that new waste streams will accompany any recycling project. The gap analysis recognizes the need to develop an incidental waste rule. While the long-lived actinides would obviously be high level waste, a significant portion of the waste stream is relatively low-hazard. So I would encourage addressing this matter in the comprehensive revision to Part 61 that the Commission recently directed the staff to undertake. This would also provide an opportunity to revisit the definition of high-level waste in Part 60 and update it into a risk-informed structure.

On a related note, there are issues of materials security that would arise... so there is one point I would like to clarify. A staff requirements memorandum issued earlier this year on material control and accounting, or MC&A, said that it was not appropriate to expand the MC&A requirements to elements such as neptunium and americium for current licensees and applicants. Since the MC&A requirements associated with closing the fuel cycle will necessarily be more complex, my view is that the staff should not feel constrained by this direction with regard to reprocessing facilities. MC&A capabilities and physical security attributes should be designed into new facilities from the start, and the regulatory framework should be established up front, in order to facilitate such a design approach.

Certainly there are other questions and technical challenges that would have to be addressed. But I think both the NRC staff and the industry can take pride in the momentum that has been built to address the relevant issues early, and lay the necessary groundwork to create a licensing framework for possible reprocessing facilities. If, in fact, longer-term interim storage and recycling prove to be major elements for how the U.S. chooses to handle the back end of the fuel cycle, there will be a lot more work to do. But I think we are off to a good start.

Let me conclude by thanking everyone who helped to organize this year's conference. The technical exchanges and information sharing provided by this event are especially important right now. I hope you find the remainder of the conference to be productive and enlightening.