NRC NEWS

U.S. NUCLEAR REGULATORY COMMISSION

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Prepared Remarks
by Chairman Dale Klein

at the
First Annual Nuclear Fuel Cycle Monitor
Global Nuclear Renaissance Summit
Washington, D.C.

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Good afternoon. I'm happy to be here with you, and it's always nice to participate in a session devoted to discussing "the nuclear renaissance."

As Chairman of the NRC, I cannot take a position either for or against the expansion of nuclear power. It is my job to ensure that those whom either run existing reactors or propose new ones design, build and operate them in a way that assures public health and safety, preserves the environment and promotes security.

Fortunately, the topic assigned for my remarks is within my purview. It's a long one – "Putting in Place the Regulatory Framework to Ensure Timely, Rigorous Decisionmaking on Licensing Newly Proposed Nuclear Facilities."

I checked the program, and there's only one longer title listed, and that one has two speakers assigned to it.

I was tempted to make my speech shorter than the title – just say, OK, we're doing that . . . and now I'll take your questions. We *are* putting that framework in place, but I'll offer you a few details before we go to the Q&A. I want to talk to you about what the NRC is doing to prepare for the applications that everyone is telling us will arrive any time now, on top of the slew of license renewals, and other business. That is a huge undertaking, and as I said, we're doing it.

I'd also like to offer a few thoughts that go beyond the immediate issues involved in licensing the next-generation light water reactors that will soon be in the queue. What about advanced technologies? Pebble bed, and the Generation IV nuclear energy systems? The basic answer to that question is that the NRC will be ready when all the other stakeholders are ready. I'll elaborate on that a little later.

First let's talk about the near future. Balancing all the optimism surrounding this nuclear renaissance is a considerable body of uncertainty. It is the uncertainty that surrounds the genesis of any new industry and despite the U.S. nuclear industry operating history of more than 40 years, the industry is new, by virtue of the long hiatus since the last nuclear orders and construction.

Some of the uncertainty concerns the regulatory treatment of the initial plant orders. I am making it a priority of my chairmanship to reduce that uncertainty by ensuring the clarity of regulatory requirements and the timeliness of NRC review. In my view, the most important contribution the NRC can make is to be a strong, credible regulator and ensure regulatory stability.

My vision for the NRC is that we will be a strong regulator. We will hold our licensees accountable. We will articulate our requirements clearly. We will be demanding and we will be responsive to their legitimate needs and concerns. All stakeholders – the nuclear industry, the financial community, and especially the public – must be made aware of the status and progress of issues of interest to them.

Both the NRC and the nuclear industry have a lot of work ahead of us in gearing up for new nuclear construction in the united states. For instance, the NRC is working to complete or update the design certifications on such advanced reactor designs as the ESBWR and the AP1000. Our program of license renewal is also working smoothly. About half of the nation's nuclear reactors have either received or applied for 20-year extensions of their licenses, and we expect to get dozens more in the future.

Also, the Browns Ferry 1 nuclear plant is seeking NRC approval to restart sometime early next year, after more than 20 idle years. That would raise the number of operating plants in the united states to 104. Assuming the NRC approves restart, the addition of Browns Ferry, along with power uprates at a number of existing plants, should put an additional 1680 megawatts of nuclear-generated power on the grid by next summer.

As you may know, the NRC's siting and licensing regulations have improved – and that is an understatement. It is fair to say that the advent of standardized design certification, early site permitting and the combined operating license has contributed significantly to the feasibility of new nuclear projects in the U.S. The NRC is continuing to improve our licensing regulations. The Commission is now considering changes to our Part 52 regulations that will further enhance their effectiveness and efficiency in all three facets of licensing. We expect that those changes will be finalized within the next few weeks.

The improved licensing processes are already proving themselves – the NRC expects to issue decisions in 2007 on applications for early site permits at three locations. Next year, we also expect that we will receive the first application for a new reactor, with applications for as many as 30 more reactors to follow.

In addition, the NRC is reviewing licensing applications for a mixed-oxide fuel facility and a new centrifuge uranium enrichment plant. Reviewing a license application for the Yucca Mountain waste repository would also represent a tremendous amount of work, assuming DOE submits its application in July 2008.

All that is on top of our "regular" workload of ensuring that existing reactors continue to operate safely. I have repeatedly warned nuclear industry executives that they cannot afford to become complacent, or let their future plans imperil the safety of their current operations. I assure you, as I have assured them, that the NRC will not let the press of new duties dilute our focus on our responsibilities. If anything, we will be increasing our vigilance if we see troubling signs because continued safe, efficient performance is so critical. This is also a key to maintaining public confidence in the very companies that are planning new construction.

In preparation for our expanded workload, the NRC is increasing staff by a net of about 200 positions a year through 2008, and is making organizational changes. We recently created an Office of New Reactors, separate from the Office of Nuclear Reactor Regulation. And since many of the announcements of new reactor activity have come from the Southeastern region, we are adding a new construction office in Atlanta, Georgia.

We also will look at some possible procedural changes in the review process in the future. I would like to see the review time required for early site permits and combined operating licenses reduced, with no compromise on safety. That is not an unrealistic goal, if industry does its job at the beginning of the process.

I have already made my expectations very clear to the U.S. nuclear industry. In my first meeting with a group of industry leaders, I told them and this is a direct quote: "It's a plain fact that a quality submission – Combined Operating License, license renewal, design certification, or anything else – takes less time to review than a bad one. Show me quality and clarity and the NRC should show you timeliness."

Rather than regulatory delays, I believe it is much more likely that the pinch points in the expansion of U.S. nuclear energy will be two factors: the global suppliers of high-quality components and materials and the pipeline for supplying highly-qualified nuclear professionals and a skilled workforce. I have spoken at some length at other forums about these problems – manufacturing infrastructure and personnel – as potential limiting factors in this nuclear renaissance. I remain deeply concerned about each, but I won't expand further on those topics today.

Instead, in keeping with the scope of this summit, I would like to look even further ahead. I note that you had a panel and two open discussions this morning about advanced reactor technologies, and that you have a number of wide-ranging sessions on GNEP and other future topics.

I think it is fair to say that, in contrast to our readiness to tackle the imminent license applications and other work we know is coming, we are not prepared – nor are we rushing to prepare – for regulatory issues involving advanced reactor technologies.

The NRC's Part 52 regulations are an effective and efficient framework for licensing and approval of light water reactors, but they do not lend themselves to any other technologies. We clearly need additional regulatory tools, and we clearly need additional staff technical skills in order to be able to evaluate license applications based on other technologies, if and when they come.

The NRC has looked at issues involving regulatory requirements for non-light water reactor designs. We have done research, examined policy issues, and produced policy papers on issues

specific to advanced reactors, and we are working through the International Atomic Energy Agency with countries that do have licensing procedures for advanced reactors. But that is as far as we have taken it, because there is simply no priority that we can see.

As I have detailed already, we have our hands full with license applications and other work we know – or have been told – are coming. Our staff and our office space are stretched to the limit. We are a 90 percent fee-based agency, and I do not believe it would be proper to fund regulatory development activities for advanced reactors out of the fee-based portion. We must make pragmatic decisions for the appropriated 10 percent portion of our budget. We can detect no sense of urgency on the part of industry with regard to advanced reactor licensing. Pragmatically, therefore, we do not see a sound basis to proceed with advanced reactor licensing regulatory development beyond the research and issue examination stage.

In order to proceed to more formal rulemaking activities, we require more clarity from the Department of Energy – some sense of the time frame over which licensing regulations for advanced reactors will be required, in order to provide for the timely commercialization of these advanced technologies. We could then go before the Congress to request funding. To date, there has been little consideration given to the regulatory aspects of licensing for advanced reactors.

That brings me to another point. Sometime within the next decade, DOE hopes to begin construction of one or more pilot plants to test Gen IV and/or GNEP reactor technology, and possibly also a pilot recycling facility. As you may know, the Atomic Energy Act generally permits DOE to build and operate its own facilities without NRC approval. In building the pilot plant or plants, we expect that DOE will raise and address to its satisfaction all of the safety and operational questions that would normally arise in a license proceeding for a commercial reactor. When completed, DOE may deem the facilities, and the technologies, to be "licensable."

However, this does not guarantee that a plant of this type would *actually* be licensable in the eyes of my successor and fellow commissioners at that time. Whatever commercial entity submits the first license application for a Very High Temperature Reactor (VHTR), sodium fuel reactor, or other advanced design will have to go through the NRC process. I would suggest to you that we could avoid licensing uncertainty for the initial advanced reactor technology to be commercialized and smooth the way for succeeding technologies if instead of self-licensing, DOE designed the project for submission of an actual license application to the NRC, so that the finished plant was not just licensable, but actually licensed, by NRC.

Although it is a matter of interest to the commercial industry and not a focus of the regulator, satisfying the actual licensing process rather than just the potential for licensability would further the progress of advanced reactor technology enormously, in terms of minimizing the uncertainties that can sometimes affect the ability of new technologies to gain financing. Participation in the actual licensing of a pilot plant would also make advanced reactor technology regulation a priority for the NRC.

Proving the realities, rather than just the concept, would clearly demonstrate the DOE's commitment to bring advanced nuclear technologies to market.

In summary, this is an exciting time to be at the NRC. We are talking about future plants, rather than just decommissioning. The NRC is responding to the current needs of the industry, but there needs

to be additional clarity on GNEP and Gen IV if we are to be successful in getting industry to participate.

And now I'd be pleased to take your questions.

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