NRC NEWS

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Remarks Prepared for NRC Chairman Dale E. Klein

"Life Beyond 60" Workshop
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Delivered by EDO Luis Reyes on behalf of the Chairman

Thank you.

Thank you all for attending this initial workshop on what I consider to be an important topic. One of the points I am always making in my speeches is that the excitement over new reactor license applications cannot distract us from our oversight responsibilities for the current fleet. The fact that so many of you are here today to think about how we can ensure the ongoing safety of the currently operating plants tells me that we have our priorities in place.

When we began this process the last time—to prepare for the first round of possible license renewals—I think it is fair to say that the NRC was somewhat ahead of industry, both in terms of thinking the issue through, and in making preparations. Many people today don't realize how much uncertainty there was regarding the possible future of the commercial nuclear industry in this country, when the NRC first commissioned studies on aging effects and possible degradation in the plants in the 1980s. Fortunately, the industry stayed the course and worked, both with the NRC and on its own, to resolve the technical questions for the initial renewal term. That commitment has led us to the circumstance we have now—with almost half the fleet licenses' extended for an additional twenty years of productive life. Of course, today everyone acknowledges that the process allows for a thorough safety review, and is working. But when the aging issues were first being considered, it was very much an open question whether—and how—it could succeed.

So to consider whether licenses could be extended again, for another 20 years, we are trying to have government and industry cooperate and communicate right from the beginning—which is, of course, the purpose of this workshop. The people who own and operate the plants, and the people who license, regulate, and inspect the plants, must work diligently to ensure that

nothing is missed or overlooked, and that all the right questions are asked—and answered—as early as possible. The sooner we have a sense of what issues might arise the sooner we can figure out what the process will need to be. It is ultimately the responsibility of the license holders to ensure that their plants are, and continue to be, safe to operate.

But both the licensees and the regulator need to work to ensure a high level of public confidence in the event of a second round of license renewal. We need to ensure that both the industry and the NRC prepare as carefully and comprehensively as possible to ensure that a second round of life extensions for nuclear power plants—if it occurs—maintains the very high standards of safety and security the American people expect and deserve.

As you know, nuclear power plants were not originally licensed to last 60, or 80 years; or for that matter, with any specific expiration date, like a carton of milk. They were, however, built to be highly robust. Like anything that is well-designed and well-maintained, they can last a long time and still function perfectly well. There are probably household items that you or your parents have at home that are still providing service after 40 or 50 years. The Capitol Building has been restored and expanded over time, but its basic structure has been intact for 150 years. With proper maintenance, it should last for many centuries. Going back even further, there are aqueducts built by the Romans that are still in use today.

Yet nuclear power plants are different, because the physics and chemistry of aging are different. How the aging process is different, and how it affects a plant's inherent robustness after 60 or more years, are the scientific questions we need to answer. We know that eventually there will be indicators telling us that a plant is reaching the end of its useful lifespan. We need to know what those indicators are. And we need to know whether a different mode of regulatory oversight may be appropriate for reactors as they begin to approach that point. It is possible that more frequent inspections may be an appropriate course for power plants beyond a certain age. Perhaps other options will be deemed appropriate. We won't know until we start looking.

To outsiders, this whole discussion may seem like an excess of pre-planning, since we are talking about a possible second round of life extensions, when about half the current fleet is still preparing for, or in the middle of, their first license renewal applications. But there are difficult technical questions to be addressed: about aging cables and concrete, about the effects of radiation on reactor vessels and vessel heads, about instrumentation and controls—including possible retrofitting—and many other areas. So having everything in place to review a possible second round of license renewals may require lead times of 10 to 15 years. Considering that all we are doing today is just figuring out what questions we need to address—well, I really don't think we are starting too early at all.

I know you have a very full agenda, and a lot of ground to cover. And I don't think it is necessary for me to start talking about all the specific details this workshop will address. Instead, I just want to offer my thanks for your participation, and my encouragement for a successful conference.

Allow me to conclude with one personal anecdote—which is relevant to this topic. You may not know that I still have the first bicycle I received as a birthday present when I was 8 years old. Of course, the wheels wore out long ago and I put on new ones, along with a new chain. And most of the frame had to replaced over the years. But I still consider it my childhood bicycle, because the bell on the handlebars is exactly the same one I had as a kid!

That's a joke, of course. But I tell it to make a serious point. People refer to these power plants as operating for 40, or 80, even 100 years, but in reality as the plants continue to function over the years, they rely on fewer and fewer of their original components. Like my so-called childhood bicycle, many of the essential parts have been replaced with new ones over the years. So in many cases, the only thing that is original is the name and the license.

It is for that reason that I say life extensions beyond 60 years may be possible, in theory, if we can successfully address all the practical issues that you will be discussing over the next three days. So rather than keep you from that work, let me stop here and say again, on behalf of the entire Commission how much we appreciate the time, effort, and expertise you are putting into this important question.

Thank you very much. Please enjoy a successful conference.