



NRC NEWS

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**REMARKS AS PREPARED FOR DELIVERY
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NUCLEAR REGULATORY COMMISSION
TO THE
NUCLEAR ENERGY INSTITUTE NSIAC DINNER**

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Good evening everyone. I've been in my new position at NRC for a little over six weeks, and I'm nearly past the stage where I can get away with saying that I'm new and don't know the answers yet. So I've been giving a lot of thought to my vision for the NRC.

Most of the metaphors related to vision have to do with the vastness of the skies, and limitless horizons. Mine has more to do with my roots. More than a century ago, an educator and politician named Willard Duncan Vandiver coined the saying that has defined my home state of Missouri for all time.

Speaking to an audience in blue-blooded Philadelphia, he said, "I came from a state that raises corn and cotton and cockleburs and Democrats, and frothy eloquence neither convinces nor satisfies me. I am from Missouri. You have got to show me."

We've grown a bit in Missouri since then – we have some Republicans, and we even have a nuclear plant. But some things don't change.

When I hear it said we're going to build 50 nuclear plants in the next 20 years, I say, show me – show me the designs, and then show me the hardware and the construction, and then show me you have the people and procedures in place to run those new facilities in a way that will ensure public safety and security. And by the way, show me that you're maintaining the highest standards of safety performance for the plants already in operation.

In other words, my vision is that first and foremost NRC needs to continue to be a strong

regulator. We will hold our licensees accountable. My vision also is that we, the NRC, articulate our requirements clearly, and that in addition to being demanding, we are responsive.

As you know, it's become an article of faith that just about every currently operating nuclear facility will have its license extended. The process has been operating smoothly and the licenses for half the nation's reactors already have either been renewed or are under review.

But you have undoubtedly heard that the NRC rejected the license renewal application for Beaver Valley, because it was not up to standard. We'll look at it again next year, and we'll see if it passes muster then.

That action preceded my tenure at NRC, but I agree wholeheartedly, and I'm telling you here and now that you'll see more of the same unless we see submissions of consistently high quality. We all have a lot of work before us, and the NRC is prepared to hold up our end. But the industry must do the same.

NRC is gearing up – adding personnel and reorganizing. We will increase staff by a net of about 200 positions a year through 2008. 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 South, we are adding a new construction office in Atlanta, with its own Deputy Regional Administrator for Construction.

We'll also look at some possible procedural changes in the review process in the future. And we're battling for a greater share of the finite resources of government to get our expanded staff adequate office space and resources to do their jobs. 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 on the front end. It's a plain fact that a quality submission – COL, 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.

We will ask hard questions, but not in a vacuum. I am a great believer in milestones – back on the farm in Missouri, we called them “chores” – and in metrics. We will do our utmost to set out our requirements, and to let the industry know – collectively and individually – where it stands at all times.

The bulk of our questions and metrics will concern technical issues – design, construction, safety, and security. But we are also very concerned about a much more basic – human – dimension. Where is the industry going to get all of the talented people to run these advanced new plants safely while shepherding today's fleet of plants through the balance of their extended lives?

I don't think I need to run the numbers for you – NEI's own surveys chronicle the tens of thousands of professional and skilled craft workers needed to keep the current fleet in operation,

including the replacements for the operators, engineers, health physicists and others who are taking their invaluable knowledge with them into retirement.

And how many more professionals and craft workers will be needed for the new plants whose applications are starting to arrive at NRC?

I know that the industry is working on many fronts to address this critical need – scholarships, training programs, recruitment, and so on. But I have the sense that we're all just nibbling around the edges of an enormous obstacle to success. You know that my background is in academia, running a university nuclear engineering program, and therefore you must know that during my time in the University of Texas program I fought constantly against budget erosion and declining interest both by students and school administration.

Many of my nuclear colleagues at other universities fought the same fight – and some lost. The number of four-year nuclear engineering programs now stands at about 25, nationwide – down from 38 in the 1970s. The number of students at those and other programs is on the rise. But even the larger numbers of nuclear-trained students will, in my judgment, fall far short of needs. We need to further increase the numbers of students in the pipeline, and preserve the remaining university research and training reactors.

I would suggest to you that a major industry effort is necessary, and that it must address every level of education in this country, starting with a commitment to fostering the interest in science and engineering of elementary and middle school children.

Scholarships, training centers and recruitment efforts are commendable ways to steer the technically-inclined toward careers in the nuclear industry. So are beefed-up internship programs with meaningful work. And once they're on board, mentoring programs will help to augment training as we engage in generational knowledge transfer.

We all need to work to increase the talent pool, though, so that we are not competing for a small number of candidates. If we all spend the next 20 years waving money and benefits at the same people, there will be winners and losers. And if the industry wins and the NRC loses, or the industry wins and the A/E's lose, we all lose. This is an issue that should be addressed, urgently, at the CEO level. For instance, we ought to be talking to the University of Cincinnati right now, to head off the closure of their nuclear engineering program.

I mentioned accountability, largely in the context of new reactor licensing and license extension, but I also expect to see evidence of an even greater emphasis on accountability in existing plant operations during my tenure. I would call it self-discipline.

And the future could well be riding on the degree of self-discipline the industry can muster. A major incident or close call is not acceptable.

I know that the industry's response to the Davis-Besse reactor vessel head degradation has been far-reaching and effective – as has the response to concurrent findings of deterioration of metal components and welds in other plants. And I have been following the very effective response to the Braidwood tritium finding. But the key word here is response.

Where is the next Davis-Besse? Where is the next Braidwood? Find it, and head it off.

On the tritium issue, the industry needs to look at educating the public. I expect more reactor sites to find tritium in the ground. You need to get ahead of the curve. You need an action plan to head off unnecessary fears.

As many of you might recall, there was a tritium issue at Brookhaven in the mid-'90s that resulted in a DOE contractor getting replaced. The NRC will continue to look at the risk-based decisions, but the industry needs to be proactive to prevent negative headlines.

I've spent the last five years working for Donald Rumsfeld at the Department of Defense, and I have learned a lot from him – you'd better learn, or you won't last long. Rumsfeld used to tell us that there are things we know, and things we know we don't know, and then there are unknown unknowns. The industry has learned a lot in 40 years of running commercial reactors, but those latter two categories still exist, and we need to take a harder look at them. None of us – not the industry, and not DOE, and not NRC – has in my view put enough money in the last decade into research issues associated with operating power plants. We need to rethink that and accord that kind of research its proper priority. We need to get ahead of the unknown unknowns.

In closing, I would like to make a few more brief points:

- First, in my brief time at the NRC, I have been very impressed by both the competence and the dedication of the staff. I have been pleased with the quality of the work I have seen. They come early, stay late and focus on the job to be done.
- That said, the NRC itself places too much emphasis on process. I would like to see us concentrate more on progress, with no compromise on safety.
- We need to develop more milestones and deliverables, and articulate them clearly to those we regulate.
- I also would like to see the NRC focus more on real risk and less on risk that is simply perceptual. The tritium issue is an example of the latter.
- I want the NRC to be a strong regulator and one that merits public confidence. We should also be predictable, giving clear guidance, receiving in return quality products from the industry and responding in a timely manner.

In closing, let me just say that I have spent my career in the nuclear field, and I'm exhilarated by the possibilities ahead of us. But the possibilities will remain only possibilities unless we all work together.

Thank you, and now I'd be happy to take your questions.

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