



NRC NEWS

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“Who Are We”

Prepared Remarks of Commissioner William D. Magwood, IV

at the 2013 NRC Regulatory Information Conference (RIC)

Wednesday, March 13, 2013

If you had the opportunity to join us for last year’s Regulatory Information Conference, you might have noticed that the keynote speeches launching that gathering made little note of the first anniversary of the accident at the Fukushima Daiichi nuclear power plant. This was, obviously, intentional.

With so much attention having been focused on the Fukushima disaster, with so many speeches and comments made by Commissioners in so many venues, and with so many other important issues facing us, the agency decided that the first RIC after Fukushima should not become the “Fukushima RIC.”

But Fukushima was, of course, very much on our minds. In last year’s conference, while I discussed the complex issues associated with our nuclear waste legacies, I was at the same time recalling that on March 10, 2011, I had a very informative meeting with a member of the old Nuclear Safety Commission detailing Japan’s efforts to improve the analysis of and protection against seismic events.

The developments of the next day transcended irony and plunged into tragedy.

As the global nuclear community continues to deal with the lessons emerging from Fukushima Daiichi, some appear to forget that the true catastrophe was the devastation caused by the unprecedented tsunami that swept across northeastern Japan. The Great East Japan Earthquake and Tsunami was a disaster of vast proportion and impact. Beyond the nuclear accident, beyond all the economic losses, beyond the damage done to cultural resources, we must always remember the nearly 19,000 people who lost their lives or are still missing.

Still, the nuclear crisis precipitated by the tsunami has left a deep and enduring scar. Those of us at NRC remember that anxious first week of the nuclear crisis as we, with many others around the world sought to support Japan as events unfolded in a fog of uncertainty and fear. For many people of our agency, Fukushima will be a defining moment of their professional careers.

Commissioner Ostendorff and I visited the Fukushima site in January 2012. We saw first-hand the innumerable evacuated homes and businesses on the long drive to the reactors.

Upon reaching the plant, we saw the damage caused by the tsunami and obtained a clear sense of the significant challenge that faces Japan to remediate the Fukushima site. It will be decades before the damaged reactor cores, spent fuel, and contaminated water and debris are safely recovered and disposed.

But the good news is that the site is stable and detailed plans are being established to deal with this massive task. Work is underway, and our Japanese colleagues should be commended for their efforts to date.

We have many Japanese participants with us today, including senior representatives of the new Nuclear Regulatory Authority. I thank you for attending our conference and bid you special welcome. We know you have much hard work before you. We wish you the best of success in your efforts and we will stand with you as you carry out the difficult work ahead.

In the many months since Fukushima, nuclear safety regulators around the world have wrestled with the aftermath of this event. In the face of a disaster of such magnitude, we have all been faced with complex questions.

What must we do to assure nuclear safety after the Fukushima experience? How do we now allay public fears regarding the safety of spent fuel pools, after sometimes hysterical statements that the pools were dry and fuel was burning? What do we say about the operation of older Mark I and Mark II BWRs? What becomes of the future for new nuclear power plants?

For the U.S. and most other countries, many of these issues are on a clear path toward resolution. While much work remains, most countries have identified changes to nuclear power plant equipment and operations to guard against extreme natural events. Importantly, the answers found by most countries have much in common.

As we have searched for answers, many people—including me—have drawn parallels between Fukushima and the accident at the Three Mile Island nuclear plant. There are important and instructive similarities—most particularly, both incidents revealed flaws in nuclear power plant operations, training, and regulation that needed to be addressed.

Both incidents have led to significant changes in regulation and both have altered public perceptions of nuclear safety. But I think these parallels are somewhat superficial.

I think Chernobyl is a closer parallel. Not because of the quantity of radioactive materials released, but because of the impact the accident had on the larger society. Consider the true legacy of Chernobyl. This accident displayed for all to see the actions of a closed, totalitarian, socialist system as it systematically failed to take the actions necessary to protect its own people. Along with other challenges facing the Soviet Union in the mid-1980s, Chernobyl brought popular discontent with the Soviet system boiling to the surface with historic effect.

If you seek a closer American parallel, it wouldn't be TMI; it would be the September 11, 2001 terrorist attacks. This was an event that changed the way many Americans view the world and the way they think of matters such as privacy and personal security. 9/11 prompted many Americans to ask, "Who are we such that others would hate us so?" How were we so blind to a threat that, in hindsight, appeared so obvious?

More than a decade later, the intensity of emotion has cooled, but the changed perceptions endure. When Americans speak of "pre-9/11 thinking," it communicates volumes in a few simple syllables.

In Japan, mentioning "3/11" has the same kind of resonance and has led to same brand of questions.

The National Diet of Japan launched a special group to investigate the Fukushima accident. This group, the "Fukushima Nuclear Accident Independent Investigation Commission," which was chaired by Dr. Kiyoshi Kurokawa, issued what has become the most authoritative and widely-cited report on the accident.

I met with Dr. Kurokawa, members of the Commission, and Commission staff both in Japan and in the United States as they worked to understand the issues that led to the Fukushima accident and its immediate aftermath.

I appreciated this group's independence of thought, attention to detail, and fresh perspective. But I was still quite surprised by their final conclusions about the accident. Many people in the U.S. expected official Japanese reports on Fukushima to focus on technical and procedural problems and avoid much discussion about cultural issues in the Japanese nuclear system. Far from avoiding these issues, the Kurokawa Report made them a central theme.

One line from the report was very widely quoted around the world:

What must be admitted – very painfully – is that this was a disaster "Made in Japan." Its fundamental causes are to be found in the ingrained conventions of Japanese culture: our reflexive obedience; our reluctance to question authority; our devotion to 'sticking with the program'; our groupism; and our insularity.

These are very hard-hitting observations. Many people take issue with these comments; some have accused the Commission of simply reinforcing stereotypes. Others believe the report to be overly critical and say that it raises unfounded questions about technical issues. Whatever you think of the report, it will take its place on the shelves of future leaders alongside The Kemeny Commission Report and the 9/11 Commission Report.

I had the opportunity to meet with Dr. Kurokawa this past December. He has returned to his office at Japan's National Graduate Institute for Policy Studies. We discussed the factors that led to the development of the "nuclear village" in Japan, the weaknesses of the former regulatory system, and the issues of safety culture. I found that he views the Fukushima accident to be only a symptom of larger issues facing the Japanese people. I'll leave it to Dr. Kurokawa to detail his thoughts in other fora, but the discussion prompted me to consider that there is perhaps a larger message for us all.

When very bad things happen, be it Fukushima, 9/11, or Chernobyl, institutions and even countries look inward and ask: What went wrong? Who was responsible? And, if the issues demand it, they may even ask: Who are we that this could have happened?

Asking "Who are we" means stripping away myth and illusion and taking a hard, cold look at what lay beneath the veneer. But why must we wait for a catastrophe to engage in such critical introspection? This is a missed opportunity; such introspection can be preventative as well as retrospective.

Asking that question now can force us to ask if our organizations live up to their claims and reputations. It can force us to ask if we are doing all that we can to live up to the values and principles we promote, to assure we are meeting the standards we set for ourselves. Talk is cheap. Glossy brochures are only a bit more expensive. It is the reality behind the words that matters.

We in this room—representing regulators, power companies, vendors, NGOs, and others—we all play a role in the nuclear enterprise. Our roles, whether we are in the industry, serve as observers and critics of the industry, or work as regulators require us to act with a special responsibility.

With this responsibility in mind, I ask each of you here today: Who are you?

Nuclear vendors, suppliers, and constructors – you need to ask this question. Your organizations provide the technologies and products that have maintained a safe nuclear fleet in the US for many decades. Many of you have developed new technologies that will make future nuclear plants even safer.

Early in my career, I worked on a lot of proposals. When we put these documents together, we had boilerplate sections about the company's background and experience. We

usually added in descriptions and photos of projects from the 1950s and 1960s, and while we few people around who had worked on those projects, it still seemed to make sense to highlight that experience. After all, there was a long lineage of engineers and projects that connected us to those 1950s success stories.

I don't think we can say that with as much confidence today. Many of the people responsible for your old success stories have long since retired and the long hiatus in nuclear projects in the United States made it difficult to pass on their knowledge and skills. In recent years, I have seen many of you struggle with nuclear projects, engineering analyses, and other activities across the industry. Utilities rely on your capabilities, but I question whether those capabilities are living up to the expectations of your customers. I believe this to be a source of significant concern.

I know you are rebuilding your capabilities. As you do so and as you pursue new projects, a dose of realism would serve us all well. Your efforts will be far more effective if you accept and acknowledge your weaknesses.

Utilities—who are you? The current fleet of nuclear plants in this country represents a tremendous success story. Over the last 30 years, capacity factors have increased from around 75% to consistently over 90% while at the same time showing tremendous advances in safety by every measure.

However, while you have grown strong in operations—due in no small part to the success of INPO—I believe your engineering capabilities are another story. Many of the power companies present today once maintained large engineering and project management teams that oversaw and often managed the construction of nuclear power plants. Early in my career, I worked with electric utility research managers; how many companies still have senior people on their staffs with this title? Most companies reduced significantly their engineering capabilities as deregulation came into vogue.

To be entirely honest, I am skeptical that most of you could successfully oversee the construction of a new nuclear power plant today—even among those companies that currently have new plant applications before the agency. This isn't simply an issue about new plants. These reduced capabilities also affect your ability to maintain the current fleet. As your plants age, your ability to analyze and manage change will face important and unpredictable challenges.

Are you certain you are ready for this? Are you the companies you think you are, or are some of you falsely confident in your reputations for engineering and management excellence when much of your past expertise is sitting by a pool in Florida? Or are some of you expecting that you will be able to call your favorite vendor to deal with complex emerging issues? Even under the best circumstances, vendors will require close, expert oversight. These are your plants and you are responsible to your ratepayers and the public for all the work done at your sites. Blaming the vendor if things go wrong will buy you little sympathy.

Now to the NRC staff. You have a global reputation for excellence that is richly deserved. I believe that the NRC has the finest, most dedicated group of nuclear safety regulators in the world and set a “gold standard” to which others should aspire. The training, processes, research, and experience available to the NRC staff has allowed the agency to establish a regulatory framework that has assured a high level of safety for many years.

Nevertheless, I sometimes worry that this success itself can lead to future problems. We warn licensees to avoid the trap of complacency. When things are going well and you are recognized for excellence, that is usually the point at which things begin to go wrong. It is easy miss the early signs of trouble when others continually point to you as the “gold standard.”

Success is a trap. When you are successful, you avoid challenging the status quo. When it ain't broke, you don't want to fix it. And, worse, success gives rise to an instinct to protect the institution by limiting debate.

Remember the words penned by Dr. Kurokawa: “our reluctance to question authority; our devotion to ‘sticking with the program’; our groupism; and our insularity.” Read those words and ask yourselves: “Who are we?”

A go-along to get-along mentality can be a side-effect of enduring success in any organization, but for a safety regulator, it is a cancer. It is a subtle disease that can start deep inside the body and spread, not becoming apparent until it is too late.

Fortunately, the NRC offers many effective ways for staff to voice their concerns—and they often use them. I encourage all of you to view the airing of differing views as a success, not a failure. It would be tragic for some independent commission of the future to conclude that a disaster was allowed to occur because of a “devotion to sticking with the program” at the NRC.

Finally, there are the NRC Commissioners. As I have discussed during past occasions, I feel that the magic of the commission structure is in its ability to reflect the broad spectrum of views in our country regarding “how safe is safe enough.” I know each of my colleagues thinks long and hard about the work we do and the responsibilities we bear. I know them all to be serious people, talented and independent of mind, each bringing different perspectives and backgrounds to the work of the agency.

But I think we also need to ask ourselves: “Who are we?” We espouse values such as regulatory stability and predictability, openness and transparency, and decision-making based on scientific and technical facts, but are we certain that we could not do more in all these areas?

Being a political appointee is certainly an honor, but it is also a curse. You work hard to deal with issues of national importance and you devote yourself to your job and your agency, but you know that you are just the highest paid temp in the building. The hours are long, but the years are very, very short.

With so little time to make a difference, we must seize every opportunity available to us to leave the agency we lead stronger on our final day than it was on our first day.

All of us here today should ask that simple question of ourselves and our organizations. If we have learned the true lesson of Fukushima, we will all ask “who are we” and ask it now. Each individual involved in the nuclear field plays an important role in assuring the health, safety, and security of the public we serve. We cannot afford the reverie of reputation and past glory. We cannot afford the comfort of illusion. We cannot afford the luxury of overconfidence. We cannot wait for the next melted core to ask hard questions and take on hard answers.

We must all look inward and identify, accept, and address the weaknesses of our organizations, companies, and agencies. If we do not, we may see those weaknesses highlighted for us in a post-disaster report written by the next independent commission.

Don't let that happen. Go back to your offices and look at your staff and colleagues and ask: Who are we?