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U.S. NUCLEAR REGULATORY COMMISSION

REGULATORY INFORMATION CONFERENCE (RIC)
COMMISSIONER PLENARY: WILLIAM MAGWOOD

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TRANSCRIPT OF PROCEEDINGS

Public Meeting

APPEARANCES

NRC Staff:

Eric Leeds
Director
Office of Nuclear Reactor Regulations

William D. Magwood, IV
Commissioner
U.S. Nuclear Regulatory Commission

1 PROCEEDINGS

2 ERIC LEEDS: Good morning. My, what a punctual bunch! It's
3 good to see you all. Welcome back to the 25th Annual Regulatory Information
4 Conference. Again, my name is Eric Leeds. I'm to office director for the Office of
5 Nuclear Reactor Regulation. I hope you enjoyed yesterday's events and
6 technical sessions and you're ready for another full day.

7 Since a number of you have asked me, I wanted to provide you
8 some information. For this year's conference, we have 3,236 restaurants --
9 registrants --

10 [laughter]

11 Spell check. [laughs] Representing over 33 countries. We have
12 already begun receiving constructive feedback from you on how the RIC is going.
13 I want to thank you for the constructive feedback and encourage everyone to
14 please continue to use the feedback forms. We've also automated the feedback
15 process. So please take advantage of the QR codes that you can see
16 throughout the conference as well as the walkup kiosks to provide your feedback
17 electronically. You know, we take your constructive feedback seriously and we're
18 always trying to improve the conference.

19 Now, before we begin, I'd like to address a few housekeeping
20 reminders. Please remember to visibly display your badge throughout the
21 conference. Please silence all your electronic devices. Be aware of the fire exits
22 at the back of the room and on the sides of the room. All items that are left
23 behind in the conference rooms will be given to the hotel bell staff, and you can

1 find it in the hotel lobby. And also of note, all the presentation materials that are
2 not currently on the website will be posted following the conclusion of the
3 conference on the NRC website.

4 To kick off this morning, I'd like to introduce Commissioner Bill
5 Magwood, the Honorable Commissioner Magwood was sworn in as a
6 commissioner at the U.S. Nuclear Regulatory Commission in April of 2010 to
7 initial term that ends -- that ended June 30, 2010, and then he was reappointed
8 to a term that will end June 30, 2015. Mr. Magwood has had a distinguished
9 career in the nuclear field and in public service. He was the longest serving head
10 of the United States civilian nuclear technology program, serving two presidents
11 and five secretaries of energy. While serving as a director of nuclear energy with
12 the U.S. Department of Energy for seven years, he oversaw the restoration of the
13 federal nuclear technology program and led the creation of Nuclear Power 2010,
14 Generation 4, and other innovative initiatives, including efforts that helped
15 reverse the decline in American nuclear technology education. Since joining the
16 NRC, Mr. Magwood has been a strong advocate for both U.S. science and
17 technology education and robust international cooperation. He has sought to
18 assure transparency and to improve the agency's openness to public
19 participation. As the NRC commissioner, Mr. Magwood has been a vigorous
20 defender of the NRC's regulatory independence and adherence to the principles
21 that regulation should be based firmly on scientific and technical facts. Please
22 join me in welcoming Commissioner Magwood.

23 [applause]

24 COMMISSIONER MAGWOOD: Oh, that does come up. Does that
25 come out of my 45 minutes, that introduction?

1 [laughter]

2 Well, good morning. Welcome to the 25th RIC. This is a sort of
3 pleasure to be here to speak with over 3,000 people representing 33 countries.
4 And I guess that includes the United States, right? We're one of the 33 that
5 we're included in that? And it's a particular pleasure to be here this year because
6 it's the first year to welcome Chairman Macfarlane to the Commission -- her first
7 RIC. She's brought seismic changes to the leadership and the agency.

8 [laughter]

9 I'm the first person to use that joke, so I'm quite proud of that.

10 [laughter]

11 You know, speaking of jokes, I mean, I've been talking to people for
12 the last day, and they've been saying, "Well, you know, the bar's been set really
13 high. Commissioner Svinicki and Commissioner Apostolakis really -- the problem
14 is, you know, because of the sunshine act, I didn't know this was supposed to be
15 a humorous occasion, and I -- and so I'm rather ill-prepared for this. So, the last
16 day was -- late day, so I didn't have time to really think of anything, so this
17 morning I got on the NRC computer and, you know, because Commissioner
18 Svinicki had, you know, already covered the proton and the neutron, I was
19 looking for another complementary joke, so I went to the elementary particle
20 humor page on the Internet, but the NRC computer blocked it because it was a
21 cyber threat, so I couldn't --

22 [laughter]

23 So I -- the humor here is probably going to be lacking. It's because
24 I didn't get the memo, Ostendorff didn't get it either, my speech is probably kind
25 of downer compared to his. But in any event, it's still a pleasure to be here. And

1 I wanted to thank, you know, Eric, Brian, and your staffs for the work you've done
2 to put this together. You know, you've done this several years in a row and
3 you've done a fantastic job. I also want to recognize the protocol office, the
4 Office of the International Programs whose staffs have been very active in all of
5 this. There's many other volunteers as well that have participated in putting --
6 making this conference a success. And I also want to thank the people who are
7 doing the captioning for today because, you know, we're webcasting this and
8 there's captioning. And they don't have my written speech because I actually
9 didn't know what I was going to say this morning, so there's no speech to give
10 them. I'm making a lot of this up as I go, although I do have some things written
11 down, and I'm not going to completely wing it. But, you know, I wish I were more
12 like, you know, Commissioner Ostendorff, who speaks after me, because we
13 were talking to Eric yesterday about today. And Ostendorff mentioned that his
14 speech is 24 minutes long, and I said, "Really? You know that?" [laughs]

15 [laughter]

16 So, well, before I forget, I also want to thank my staff. My staff has
17 worked very hard over the last year, and they're sitting here. I think they're all
18 here. I don't see all of them, but, you know, Patty, Rebecca, Molly, Renee --
19 Renee, who's new. Welcome, Renee. Where's Vic? I know -- we also have Vic.
20 Now, I know you were thinking, "What is it? All female staff?" No. You have to
21 have at least one guy on the staff because if I don't have Vic, then there's no one
22 else that can change the water bottle on the water cooler --

23 [laughter]

24 -- with -- at least without making me feel guilty about it. Yes, I
25 know, Molly, I've seen you do it.

1 [laughter]

2 But it's not -- it's just not pretty to watch.

3 [laughter]

4 On a more serious note, you know, this -- every year in the RIC,
5 there's always -- it's sort of bittersweet because you know that there always will
6 be people who are with us today that they won't be with us next year because,
7 you know, we're reaching this point in our ages where a lot of people retire. So I
8 know there are going to be several people who either have -- are thinking about
9 retiring or who are likely to retire in the very near future, and we're going to miss
10 you. Hopefully, you'll come back and see us again if you don't come back next
11 year. But thank you for your service and thank you for everything you've done for
12 your country. So thank you very much.

13 Well, as I said, my speech is not particularly humorous. In fact,
14 after the speech, there might be some people who won't talk to me any longer.
15 But let's charge into this anyway.

16 Yeah, we -- if you were here last year, you may have noticed
17 something very interesting about the Commission speeches. You got most of the
18 senior presentations. We didn't really talk much about Fukushima last year. And
19 that was entirely on purpose. It wasn't an oversight, as you could imagine.
20 There was so much being said about Fukushima last year. We decided that this
21 -- last year's RIC should not become the Fukushima RIC. We didn't want to see
22 Fukushima dominate the conversation because there were so many other
23 important issues. If Fukushima had been discussed and discussed and
24 discussed in so many different fora that we felt it was appropriate to focus on
25 other things. Nevertheless, Fukushima was obviously very much on our minds

1 last year. We -- as a matter of fact, I met on March 10th -- I met with members of
2 the old Japanese Nuclear Safety Commission, who were giving a very, very good
3 presentation on -- guess what? Japan's efforts to deal with seismic events, and
4 they had spent a lot of effort working on that. And, you know, the irony of all that
5 was sort of a wash as time went on because, you know, the irony gave way to
6 obvious tragedy.

7 And, you know, we've all been dealing with the aftermath of
8 Fukushima, and it's really been interesting to me how people, as they talk about
9 what happened two years ago, they focus on the nuclear aspects of this. And
10 with this audience, it's obviously appropriate that we talk about that, but I think
11 some people forget the true tragedy of two years ago, whereas the devastation
12 caused by the unprecedented tsunami that swept across northeastern Japan.
13 The great Eastern Japan, earthquake, tsunami was a disaster of vast
14 proportions. And beyond the nuclear accident, beyond all the economic losses,
15 beyond the damage done to cultural and natural resources, I think it's always
16 important to remember that over 19,000 people either lost their lives or are still
17 missing. And that's something that gets lost in these conversations sometimes.
18 And I just wanted to make sure we remember that.

19 Nevertheless, again, we're here to talk about nuclear things, and
20 obviously, you know, the impact of the incident on the Fukushima site was
21 something that we are focusing on. Of those of us who were at NRC at the time
22 remember those early moments and first days with a lot of -- with a lot of
23 emotion. This is -- has left a real scar, I think, on many of us. You know, these
24 pictures, many of you've seen these pictures. This just shows the water as it
25 approached and struck the site. Risk was the initiating event. We often talk in

1 terms, in our business, of initiating event. That's what initiating event looks like.
2 And that first leak was very difficult because there was so much uncertainty.
3 There was such a fog of information. It was very difficult to know what was going
4 on, but, you know, we don't have to go through the details of this. We know what
5 happened over the course of the several months and, you know, the crisis was
6 finally brought under control. And when finally, after a period of time, it was
7 appropriate for senior people to start taking visits. So Commissioner Ostendorff
8 and I visited the site in January of 2012, and we were able to see firsthand, you
9 know, the innumerable homes and businesses that were in the exclusion zone --
10 all the devastation on site caused by the tsunami. And we had a very good
11 sense of the challenges that were going to be facing Japan as they dealt with the
12 aftermath of the Fukushima accident.

13 It's going to be decades -- really quite frankly decades before the
14 damaged reactor cores, the spent fuel, the contaminated water and rubble that
15 we know where all that's dealt with. It's going to take a long time, but there is
16 some good news. You know, two years on -- and I think we'll hear more about
17 this over the course of the conference -- two years on, a lot has been done at the
18 site. They've laid very, very good plans to move forward, to deal with the
19 aftermath of the accident. And it's going to be a long time before life returns to
20 normal, but there are some hopeful signs. For example, there's the story that's
21 going around now about a man who lived in a town about six kilometers away
22 from the reactor, who ran a barber shop. And so he, like the others, had to
23 leave. And he lives outside these exclusion zone, but he's begun to go back to
24 the barber shop at 7:00 in the morning every day. And he has customers, and he
25 cuts hair. He talks to customers about how their lives have been affected and

1 how they want to go home. But it just shows you, you know, the human spirit is
2 perhaps stronger than any tsunami. You know, the fact that this man would go
3 back to start cutting hair on a daily basis, I think, is a true testament to that.

4 Now, we have many Japanese participants today, including senior
5 representatives of the new Japanese Nuclear Regulatory Authority. I thank you
6 for attending the RIC during your first year of existence, and I bid you such
7 welcome. And I would like to say, “ganbatte kudasai oenshimasu.”

8 Now, as we deal with the aftermath of Fukushima -- oops, that's the
9 wrong one. There we go. We've been faced with very complex questions.
10 Questions that come up, for example, you know, what do we do now to assure
11 nuclear safety after Fukushima? How do we now allay public fears regarding the
12 safety of spent fuel pools after sometimes hysterical claims that those are dry
13 and the fuel is burning.

14 Let me say about older Mark I and Mark II BWRs. What plant --
15 what do we say about the future of nuclear power? A lot of work remains in all of
16 these questions. But I do think there are some important signs here. One is that,
17 as you know, we have 33 countries here that we talked about. And as you talk to
18 the regulators of the various countries, you find a great deal of commonality in
19 the approaches that the countries are taking to deal with the aftermath of
20 Fukushima. So I feel like we're on a very good track to answer all of these
21 questions.

22 But as we've thought about this situation -- search for answers --
23 many of us, including me, have made a lot of references to Three Mile Island.
24 We like to make that comparison. And there are some important parallels
25 between Fukushima and Three Mile Island. There's instructive similarities. You

1 know, most important, both instances were real flaws in nuclear power plant
2 operations and regulatory oversight and various practice -- things that need to be
3 addressed. Both incidents showed that. And both are leading to changes in
4 safety that are going to be very significant. But in a very real sense, I think that
5 the comparisons are somewhat superficial. I think from a Japanese perspective,
6 especially, I think a better analogy is Chernobyl. Chernobyl is a closer parallel,
7 not because of the quantity of radioactive material that was released, but
8 because of the impact that that accident had on the larger society.

9 Considering the true legacy of Chernobyl. You know, this accident
10 displayed for [unintelligible] that the actions taken by a closed totalitarian socialist
11 system as it systematically failed to take the actions necessary to protect its own
12 people. Along with other challenges facing it in the 1980s, Chernobyl brought
13 popular discontent with the Soviet system and it had historic effect.

14 The [unintelligible] in the United States -- if you want to look for an
15 American parallel, I would not look at Three Mile Island. I would look more at
16 9/11. The terrorist attacks of September 11th was an event that changed the
17 way many Americans look at the outer world and the way that they think about
18 matters such as privacy and personal security. 9/11 prompted many Americans
19 to ask, "How can things like this happen? Who are we that people hate us so
20 much? How could we be so blind to a threat when hindsight was so obvious?"
21 More than a decade later, the intensity of emotion has cooled a bit, but a
22 changed perception has endured. When Americans speak of pre-9/11 thinking, it
23 communicates volumes in a few simple syllables. When Japanese mention 3/11,
24 it has the same kind of resonance and has led to the same brand of questions.

25 When National [unintelligible] Japan launched a special group to

1 investigate the Fukushima accident, this group -- the Fukushima Nuclear
2 Accident Independent Commission was chaired by Dr. Kiyoshi Kurokawa, and
3 essentially what's become the most authoritative, widely cited report on the
4 incident. I met with Dr. Kurokawa and members of the Commission, his staff, on
5 multiple occasions, both in Japan and the United States, as he worked to
6 understand the issues that led to the Fukushima accident and its aftermath.

7 I appreciate this group's independence of thought, their attention to
8 detail, and their fresh perspective. Still, I was quite surprised by the final
9 conclusions on the accident. Many people in the United States, quite frankly,
10 expected official Japanese reports on Fukushima to focus on technical and
11 procedural problems and avoid discussion on cultural issues associated with
12 Japanese system. Far from avoiding these issues, the Kurokawa report made
13 them a central theme. One line from the report was widely quoted around the
14 world. What must be admitted, very painfully, is that this was a disaster made in
15 Japan. Its fundamental causes are to be found in the ingrained conventions of
16 Japanese culture. Our [unintelligible] obedience, our reluctance to question
17 authority, our devotion to sticking with the program, our group is in insularity.
18 These were extremely hard-hitting observations.

19 Now, many people take issue with this report and these comments.
20 And some have accused the Commission of simply reinforcing stereotypes.
21 Others believe the report to be overly critical and say it raises unfounded
22 questions on technical issues. But whatever you think about the report, the
23 report takes its place in shelves of future leaders alongside the Kennedy
24 Commission Report and the 9/11 Commission report.

25 I had the opportunity to meet with Dr. Kurokawa this past

1 December. Here's a picture of that. In this picture, it shows that Dr. Kurokawa,
2 but also Mr. Ishibashi, who is a member of the Commission, two members of the
3 U.S. Embassy staff, Jim Layman [spelled phonetically] and Junko Nakahama,
4 and also the middle there, Kirk Foggie, who is with our Office of International
5 Programs. If you take a picture of Kirk, you realize that Kirk is very, very
6 strategically locating himself any photograph so that he seems to be the center of
7 attention no matter what's happening.

8 [laughter]

9 Now Dr. Kurokawa's returned to his office of Japan's National
10 Graduate Institute for Policy Studies, and as you can see, he's looking quite
11 relaxed. We discussed the factors associated with Fukushima, including the
12 development of what they call in Japan the nuclear village mentality, the
13 relationship between the regulator and the licensees -- the overall issues of
14 safety culture. And his views on this were actually quite expansive. It was
15 actually quite interesting conversation. And he believes that Fukushima really is
16 a symptom of much larger issues in Japanese society, which I won't try to explain
17 today, but it did prompt me to think a great deal about something very profound,
18 perhaps, to think about in the aftermath of Fukushima. And that is when very,
19 very bad things happen, you know, be it Fukushima or Chernobyl or 911,
20 institutions, and even countries, tend to look inward and ask, "What went wrong?
21 Whose fault was it? Who is responsible?" And if the issues demand it, they may
22 even ask, "Who are we that this could have happened? How can we have let
23 this happen?" Asking "who are we?" means stripping away myth and illusion and
24 taking a hard, cold look at what lay beneath the veneer.

25 But why do we have to wait for catastrophe to engage in such a

1 critical introspection? This is a missed opportunity, and introspection could be
2 preventative as well as retrospective. Asking that question often forces to ask if
3 we know organizations live up to our claims and our reputations. It forces to ask
4 if we're doing all we can to live up to the values and principles we promote and to
5 ensure that we're leading the standards we set for ourselves. Talk is cheap.
6 Glossy brochures are just a little bit more expensive. The reality behind that is
7 what really matters. We in this room, representing regulators, power companies,
8 vendors, NGOs, and others, we all play a role in nuclear enterprise. With this
9 responsibility in mind, I ask each of you, who are we?

10 Let me have a show of hands. How many -- do we have people
11 here from nuclear vendor community? Who's here? Yeah, there's a few people
12 here, right? All right, you know, you need to ask this question as well, you know,
13 "Who are we?" The organizations provide technology and products that maintain
14 a safe nuclear fleet in the U.S. for many decades. Many of you have developed
15 new technologies -- supposed to be advancing slides, aren't I? Oop, wrong way.

16 Many of you have been putting into place advanced technologies,
17 making nuclear plants even safer in the future. You know, early in my career, I
18 was with such a company, and I worked on a variety of proposals for a variety of
19 purposes, and when we put these documents together, we always had this
20 boilerplate text that we used -- talk about the company's background and
21 experience. And usually we added in pictures and descriptions of things that
22 were done, you know, as far back in the 1950s and 1960s, and, yes, it's true, we
23 didn't have very many people left in the 1950s and 1960s to write these reports,
24 but it made a lot of sense to us because there was a clear lineage of projects and
25 engineers, people who had learned from others over the course of time, so if we

1 made reference to something that was done in 1958, it made sense to us.

2 I wonder if we can make those claims today. You know, after such
3 a long hiatus in building nuclear projects in the United States, that lineage has
4 largely been interrupted. I don't think we can speak with that such much
5 confidence in referencing our past experience. Many of the people responsible
6 for the success stories in the very community long since retired, and the long
7 hiatus in nuclear projects in the U.S. had made it difficult for them to pass on their
8 knowledge and experience.

9 In recent years, I've seen many vendors struggle with nuclear
10 projects, engineering analyses, and other activities across the industry. The
11 utility industry relies on your capabilities by questioning whether those
12 capabilities are living up to the expectations of your customers. I believe it's to
13 be a source of significant concern.

14 How about utilities? We have utilities present? Have a few utilities
15 here? Yes, yeah, couple out there? Good. You need to ask this question: Who
16 are you? There are currently fewer nuclear plants in this country ever since our
17 tremendous success story. Over the last 30 years, capacity factors increased
18 from around 75 percent to consistently over 90 percent while at the same time
19 showing tremendous advances in safety and by almost every measure.
20 However, where you've grown strong in operations, you know, thanks in no small
21 part to the success of INPO, I believe your engineering capabilities are another
22 story. Many power companies today -- once maintained large engineering and
23 project management teams oversaw and often managed construction of nuclear
24 power plants.

25 Early in my career, I worked with a group of utility research

1 managers. I'm not even sure there is anybody left in the industry with those titles
2 anymore. Most companies have significantly reduced their engineering
3 capabilities as deregulation came into vogue. To be entirely honest, I'm skeptical
4 that most of you could successfully oversee the construction of a new nuclear
5 power plant today; even some of those companies who currently have
6 applications before the agency. This isn't simply an issue about new plants.
7 Those reduced capabilities also affect your ability to maintain the current fleet.
8 As your plants age, your ability to analyze and manage change will face
9 important and pressing new challenges.

10 Are you certain you're ready for these challenges? Are you the
11 companies you think you are? Or are you the companies that have -- are you
12 being falsely confident based on past success when much of your past expertise
13 is sitting by a pool in Florida? Or is somebody expecting that you'll be able to call
14 your favorite vendors to come deal with complex emerging issues? Let's see
15 previous comments. But even under the best circumstances, vendors will require
16 close expert oversight. These are your plants and you're responsible to your A-
17 payers [spelled phonetically] and the public for all the work done at your sites.
18 Blaming vendors if things go wrong will buy you very little sympathy.

19 How about NRC staff? Any NRC staff in the room? Yes, there's a
20 few of you here. You know, NRC staff had the global reputation for excellence --
21 is richly deserved. I believe the NRC has the finest, most dedicated group of
22 nuclear safety regulators in the world and do set a gold standard to which others
23 should aspire. The training processes, research, and experience available at the
24 NRC staff has allowed the agency to establish a regulatory framework that has
25 assured a high level of safety for many years. Nevertheless, I have sometimes

1 worried this success itself can lead to future problems. We want licensees to
2 avoid the trap of complacency. When things are going well, and you're
3 recognized for excellence, that's usually the point at which things start to go
4 wrong. I -- it's easy to miss the early signs of trouble when others continually
5 point to you as the gold standard. Success is a trap. When you are successful,
6 you avoid challenging the status quo. When it ain't broke, you don't want to fix it.
7 And worse, success gives rise to an instinct to protect the institution by limiting
8 debate. Remember the words then by Dr. Kurokawa. "Our reluctance to
9 question authority, our devotions to sticking to the program, our groupism, our
10 insularity." Read those words and ask yourselves, "Who are we?"

11 Our goal of "willing to get along" mentality can be a side effect in
12 during in any organization, but for safety regulators a cancer. It's a subtle
13 disease that can start deep inside the body and spread, not becoming apparent
14 until it's too late. Fortunately, the NRC offers many effective ways for staff to
15 voice their concerns, and they often use them. And this is a very, very good
16 thing.

17 I encourage all of you to view the airing of differing views as a
18 success, not a failure. It would be tragic for some independent commission in
19 the future to conclude that disaster is allowed to occur because of a devotion of
20 sticking with the program at the NRC.

21 Finally, there are the NRC commissioners. There's a few of those
22 in the room, too, I think. As I've discussed during past occasions, I feel that the
23 magic in a Commission's structure is its ability to reflect the broad spectrum of
24 views in our country regarding the important question of how safe is safe
25 enough? I know each of my colleagues thinks long and hard about the work we

1 do and the responsibilities we bear. I know them to be serious, talented people,
2 independent of mind, and each bring a different perspectives and backgrounds to
3 work at the agency. But I think we also need to ask ourselves, "Who are we?"

4 We expound values such as regulatory stability, predictability,
5 openness and transparency, and decision-making based on the scientific and
6 tapped into facts. But are we certain we could not be more in each of these
7 areas? Being a political appointee is certainly an honor, but it's also a curse.
8 You work hard to deal with issues of national importance and you devote yourself
9 to your job and your agency. But you know that you're just the highest paid temp
10 in the building. The hours are long but the years are very short. There's so little
11 time to make a difference you must use every opportunity available to us, and
12 leave the agency -- we will be stronger in our final day than it was on our first
13 day.

14 So all of us in this room should ask the simple question of
15 ourselves and our organizations. If we learned a true lesson of Fukushima we
16 were always asked, "Who are we?" And ask it now. Each individual involved in
17 the nuclear field plays an important role in the ensuring of health, safety, and
18 security of the public. We cannot afford to reverie in reputation and past glory.
19 We cannot afford the comfort of illusion. We cannot afford the luxury of
20 overconfidence. We must all look inward and identify, accept, and address the
21 weaknesses of our organizations, our companies, and our agencies. If we do
22 not, we may see those weaknesses highlighted for us in a post-disaster report
23 written by an independent commission. Don't let that happen. Go back to your
24 offices. Look at your staff. Look at your colleagues and ask them, "Who are
25 we?" Thank you.

1 [applause]

2 Thank you, sir. I apologize for not advancing slides that I've carried
3 away, but I did have a really nice picture of the Commission up there. Now, I
4 thought this was an interesting picture, because this is what we look like when
5 the hearing is going well.

6 [laughter]

7 ERIC LEEDS: Thank you very much, Commissioner. We have a
8 number of questions from the audience. To begin with, you've worked at both
9 the Department of Energy and the Nuclear Regulatory Commission. How has
10 your experience been different between these two government agencies?

11 COMMISSIONER MAGWOOD: Well, I wish I would have left.

12 [laughter]

13 Well, they're very different. They're very, very different agencies.
14 You know, I often -- no, I may not use that one. [laughs] I think I was -- I'll look at
15 it this way. The biggest difference between DoE and NRC is that NRC's much
16 more process oriented. NRC's processes and practices, very clear ways of
17 doing things. DoE is a little bit more organic, I think, and there's more flexibility.
18 There's more, I guess I'd say, more ability to try and move things a little bit more
19 easily, but these are things that have the plusses and minuses . In a system like
20 NRC that's -- where you have a regulator that has to make very clear decisions
21 on clear bases, you want to have that kind of discipline. In DoE where you were
22 thinking more about technology development, you want a little more flexibility.
23 So, I think they both have their plusses and minuses. But I think that one thing
24 they all have in common are people who are very devoted to what they do, and I
25 think that I've had pleasure of working with fantastic people in both organizations.

1 So, I look at both and they have been a great success for me.

2 ERIC LEEDS: Thank you for that. Thank you. All right, the next
3 question, when will the Commission vote on the filtered vent requirement for
4 BWR Mark I and II containments?

5 COMMISSIONER MAGWOOD: I think we are very close to having
6 a decision on that. So, it could happen very quickly.

7 ERIC LEEDS: Thank you. Anything else you'd like to say about
8 that?

9 COMMISSIONER MAGWOOD: No, not really.

10 [laughing]

11 ERIC LEEDS: Just curious. Next question. As a regulator, what
12 would you like to see the industry doing more of and the staff doing more of?

13 COMMISSIONER MAGWOOD: You know, I should have taken the
14 example of Commissioner Apostolakis. I should have just simply said, "I don't
15 know."

16 [laughing]

17 I agree. I do what my lawyer tells me to do.

18 [laughing]

19 I think that one of the big challenges that we have is, and I think
20 Chairman Macfarlane mentioned this, is we do have this aging fleet, and I think
21 the aging of the fleet accompanies an aging of experience, as I have mentioned
22 in my remarks. And I think that one of the things we're going to have to do is
23 we're going to have to be very creative and very aggressive in moving forward
24 with knowledge transfer, and both in the industry and NRC. NRC, and we do
25 have knowledge transfer program, there's a lot of effort to bring new people into

1 the agency and have them train, but as you know, and this is true on the industry
2 side as well, there's hiring people and they're bringing new people in, but it's
3 easier to transfer knowledge. It's almost impossible to transfer experience. And
4 I think we have to both recognize that there's going to be bumps in the road as
5 we go forward. So, I think one of the things we both can do is get ready for that,
6 get ready for that transition, because it's coming faster and faster all the time.
7 And that's not a bad thing, it's just a reality. And I think we have to be ready for
8 that reality.

9 ERIC LEEDS: Okay, thank you, sir. With cheap natural gas being
10 plentiful, what do you see as the future or the direction for new nuclear power
11 here in the United States?

12 COMMISSIONER MAGWOOD: Well you know, first I would say
13 that that's something for the markets to decide. You know, it's impossible to sit
14 here today and project how all that will work out, but I'll give you my basic view
15 on this, because we've seen low gas prices in the past. And we saw many
16 companies invest heavily in building natural gas capacity, only to see gas prices
17 later rise, and then that caused all sorts of disruption. When I talk to people in
18 the industry, what I understand is that nuclear serves a role as basically a hedge
19 against [unintelligible] alliance to any one fuel, and so it's just part of our portfolio.
20 It's part of the diversity of our energy supply, and really quite frankly our diversity
21 of energy supply has played an important role in our energy plans for many
22 years. It's been a true advantage to us. So, I simply see nuclear as a
23 component of a larger portfolio, but exactly how large that component will be and
24 what it looks like, that's something that we'll just have to wait and see.

25 ERIC LEEDS: Okay, thank you. In your opinion, is the NRC

1 getting too close to the Institute for Nuclear Power Operations and the Nuclear
2 Energy Institute when setting policies, specifically when it comes to the
3 Fukushima lessons learned?

4 COMMISSIONER MAGWOOD: Well, first let me separate those.
5 Those are two different creatures entirely. It rolled -- NEI and INPO are two very
6 different things. I think we have a very good relationship with INPO. Let me
7 speak to INPO first. I think Bob Willard is here with us today, and the CEO of
8 INPO. Typically he attends the RIC, and typically all five NRC commissioners
9 attend the INPO annual conference, and there's a very good reason for that.
10 Because we have very important intersecting interest. NRC is focused on
11 assuring the compliance of plants to meet regulatory standards. INPO is focused
12 on achieving excellence in operations, and those have a very -- a lot of overlap,
13 and so having some discussion between those organizations is extremely
14 important. It has benefitted safety and performance in the industry, to the benefit
15 of the public. So, I think those interactions are very good and very beneficial.
16 Interaction with NEI; NEI is a stakeholder like any other stakeholders. You know,
17 NEI makes, you know, works with the industry to try to achieve consensus on
18 various issues, and they bring them to our attention. And sometimes we agree
19 with them, and sometimes we don't. And just as sometimes we hear from
20 NRDC; we agree with them sometimes and sometimes we don't. And so I'm
21 sure people will think we probably favor one or the other, but I don't think that's
22 true. I think we look at everything that comes before us based on the facts, and
23 we make our judgment as best we can. And there are many cases where I've
24 had discussions with NEI on one issue or another, and simply there's just no
25 agreement. And so I don't think we're too close. I think that we have an

1 appropriate relationship with our licensees, because I think if we isolate
2 ourselves from licensees, our ability to be an effective regulator is damaged, and
3 that's something we want to prevent.

4 ERIC LEEDS: Thank you for that. The next question, NRC is
5 dropping funding for students and the grant program. What would be the impact
6 in our long term supply of nuclear engineers for the industry?

7 COMMISSIONER MAGWOOD: Well, I remain -- this is a reference
8 to the impact of sequestration. I remain hopeful that eventually this will be dealt
9 with and we'll be able to reverse that. Obviously, the Commission supports the
10 education programs that we implement, and we have supported them
11 consistently for several years, and we think they're very important. However, you
12 know, we have to prioritize when things like sequestration strike, and when we
13 have to make a choice between programs relevant to safety, and programs for
14 education, we have to swallow hard and sacrifice education programs. It's not
15 something any of us like. So, I hope that we'll be able to reverse this in the
16 future, certainly hope that even if this year is lost, that we can get back to work
17 next year. I know this is very disruptive for the students and for the education
18 community, but that is the consequences of something like a sequestration cut,
19 and that's why it's unfortunate that it had to happen.

20 ERIC LEEDS: Yes, very unfortunate. Thank you, Commissioner.
21 This question goes towards the use of PRA and regulatory framework. Based on
22 lessons learned from Fukushima, is the Commission rethinking the risk informed
23 approach to regulation? Given the extremely low probability of a tsunami, it's
24 unlikely that probabilistic risk assessment-informed design would have prompted
25 changes that would have prevented the event.

1 COMMISSIONER MAGWOOD: Well, first let me disagree with the
2 assumption behind that, because I think that there is a lot of evidence that there
3 could have been -- more study would have given probably more information to
4 deal with issues associated with the citing of the plant and some other issues
5 associated with the plant. So, I don't quite agree with that. But I do think that it
6 raises an important point and that is that natural events, and you know, and
7 Chairman Macfarlane and I have had conversations about this from time to time -
8 - natural events are very difficult to predict. They're not like mechanical systems
9 where you can establish a PRA approach. So, you do have to take into account
10 the uncertainties associated with natural events such as, you know, seismic
11 events, or storm events, or any number of things. However, I do think that you
12 take all of these things in totality. You look at risk inform as far as you can, and
13 then you have to make some other judgments, and I think that's what you do.
14 We try to make reasonable judgments, not just based on quantifying everything,
15 because we recognize that Commissioner Apostolakis, if you want to ask about
16 this, please refer further questions to him. But if in developing PRA for anything,
17 you don't assume that the number you come out with is an absolute, and it gives
18 you a basis comparison between other systems. And I think that we take that
19 into account. We take a lot of things into account when we make these
20 judgments. And so I think we will continue to use risk informed techniques. In
21 fact, I fully expect that we'll use them even further as we go in the future, but we
22 have to be smart about how we use and recognize what the limitations are.

23 ERIC LEEDS: Thank you, sir. The next question, you have been a
24 leader in risk informing Part 61. Without a high degree of compatibility, the states
25 may not be adopting the same risk-focused approach to low level waste disposal.

1 Where do you see the NRC going on compatibility for the revisions of Part 61?

2 COMMISSIONER MAGWOOD: Well, that's something we're going
3 to be discussing with our state partners over the course of time. We are moving
4 forward with the revisions to Part 61, but I think that we'll do it in a fashion that
5 will be very collaborative with the states. And I don't think there's any value in a
6 process where we attempt to force the states to take approaches that they aren't
7 comfortable with. We want to do this in a way that the states -- because the
8 states host these facilities. You know, I think with low level waste in this country,
9 we had structured our original regulations in the law around essentially a national
10 program. We don't really have a national program. What we have is a program
11 that relies on a few states that have decided to open low level waste disposal
12 sites. So, we have to work with those states, because they've taken this
13 initiative, and having the NRC come in after they've opened sites and change the
14 roles without their agreement is irrational. So, I think we'll work with them. We'll
15 do the right thing and I think in the end we will be able to risk inform Part 61 more
16 than we have so far.

17 ERIC LEEDS: Thank you, sir. We have time for one more
18 question. This question goes back to your speech, sir. How can we avoid
19 complacency and yet reassure the public by citing the safety record that we've
20 achieved since Three Mile Island?

21 COMMISSIONER MAGWOOD: I think that's a good question. I
22 think it does assure the public that -- the cite to safety record. I think we share
23 cite to safety record because it's a good record, but I think we also have to tell
24 the public that we're never satisfied, that we're always looking for weaknesses in
25 our system. We're always looking for places where we can improve as a

1 regulator, and I think that -- and I heard the staff, this is very common among the
2 NRC staff to say we're a learning organization; and I think that's true. I think we
3 look at experience. We take experience on and we make changes, and that's
4 what happened in the case of Fukushima. We've taken the Fukushima
5 experience very seriously. That's why we're changing how our approach to
6 station blackout. That's why we're changing our approach to multi-unit events.
7 That's why we're changing -- that's why we're relooking at some of the natural
8 hazards facing our plants. We're a learning organization and we want to show
9 the public that we're a learning organization. And I think that's the biggest and
10 the most important message by NRC, that we never stop learning, we never stop
11 asking questions. And that's why I encouraged this NRC staff to even -- to
12 continue asking those questions, even if other people around you don't want the
13 questions asked. I think it's very important that each individual member of the
14 NRC staff take it on as a personal responsibility to ask those difficult questions;
15 and if someone doesn't want to hear it, say it anyway. And just ask my staff;
16 they're always asking them difficult questions. So with that, I think the public will
17 be assured. So, thank you.

18 ERIC LEEDS: All right, thank you, Commissioner. Thank you.

19 [applause]

20 [whereupon, the proceedings were concluded]