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U.S. NUCLEAR REGULATORY COMMISSION

REGULATORY INFORMATION CONFERENCE (RIC)
CHAIRMAN ALLISON MACFARLANE

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TRANSCRIPT OF PROCEEDINGS

Public Meeting

APPEARANCES

NRC Staff:

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Director, Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission

Allison Macfarlane
Chairman
U.S. Nuclear Regulatory Commission

1 PROCEEDINGS

2 ERIC LEEDS: Now, it's my great pleasure to introduce to you the
3 NRC chairman Dr. Allison Macfarlane. The Honorable Allison Macfarlane was
4 sworn in as chairman of the U.S. Nuclear Regulatory Commission in July of
5 2012. Dr. Macfarlane holds a doctorate in geology from the Massachusetts
6 Institute of Technology and a bachelor's of science degree in geology from the
7 University of Rochester. She's the only individual with a background of geology
8 to serve on the Commission. Prior to joining the Commission, Dr. Macfarlane
9 was an associate professor of environmental science and policy at George
10 Mason University. During her academic career, she's held fellowships at
11 numerous universities. From 2010 to 2012, Dr. Macfarlane served on the Blue
12 Ribbon Commission on America's Nuclear Future, created by the Obama
13 administration to make recommendations about a national strategy for dealing
14 with the nation's high level nuclear waste. Her research has focused on
15 environmental policy and international security issues associated with nuclear
16 energy, especially the back end of a nuclear fuel cycle.

17 Please join me in giving a warm welcome to Chairman Macfarlane.

18 [applause]

19 CHAIRMAN MACFARLANE: Good morning. Thank you, Eric, for
20 that very kind introduction and that very comprehensive set of instructions and
21 announcements. [laughs] I feel fully informed now. [laughs]

22 It's my great pleasure to welcome all of you to the 25th Annual
23 Regulatory Information Conference. Whether you come here every year or are

1 here for the first time, I encourage you to sample the wide variety of sessions and
2 activities this conference offers. I'd like to extend a special greeting to our
3 international colleagues who have traveled from more than 30 countries to be
4 here. As I walked around this morning, I was delighted to see many familiar
5 faces, and I look forward to getting to know more of you during the course of the
6 week. I'd also like to acknowledge the NRC staff for its tremendous effort in
7 making this conference a success year after year.

8 When the RIC was first organized in 1988, the nuclear industry was
9 in a state of flux. Just two years earlier, a devastating nuclear power plant
10 accident had occurred at Chernobyl. Here in the United States we were actually
11 still unraveling the lessons of Three Mile Island even while we tried to make
12 sense of what had happened halfway around the world.

13 The global nuclear safety community was just beginning to come
14 together on what would become the Convention on Nuclear Safety. I might
15 suspect that the first RIC organizers hoped that their idea would endure as an
16 annual tradition a quarter century later. It is safe to assume that they would have
17 had difficulty predicting the myriad ways that the agency and the world would
18 change in the 25 years to come. After all, how many of us squinting into the
19 green glare of a mid-1980s Apple computer could have anticipated the things
20 we'd be able to do with an iPhone?

21 The famed physicist Niels Bohr quipped, "Prediction is very difficult,
22 especially about the future."

23 [laughter]

24 As a geologist, I spent a lot of time studying and writing about the
25 subject. Despite the great technological leaps we've made in the past quarter

1 century, it's unwise to think we can confidently predict what lies ahead. It would
2 have been difficult to imagine in 1988 that just 13 years later the country would
3 be reeling from a terrorist attack that would directly and permanently impact
4 nearly every aspect of U.S. policy. Likewise, it was statistically improbably -- but
5 not impossible -- that Japan would witness an earthquake and tsunami of a
6 magnitude not previously seen in the millennium of recorded history.
7 Nonetheless, both of those happened and substantially altered the way we think
8 not only about nuclear safety and security regulation, but about the limits of
9 predictability and certainty. When I became chairman eight months ago, I came
10 with some specific leadership objectives that were influenced by my previous
11 years of research. I arrived eager to enhance my understanding of all aspects of
12 the agency's responsibilities in order to serve as an engaged and effective
13 regulator. I'm grateful for the support of the diligent and dedicated cadre of NRC
14 management and staff as I moved along this learning curve. While there's still
15 more to learn, I'm pleased that the NRC has continued to progress during my
16 transition. Together, we are meeting our regulatory responsibilities.

17 Since my arrival at the NRC, I've joined my colleagues on the
18 Commission in keeping an ambitious schedule. I traveled to operating plants in
19 various regions of the country and will visit a site under construction later this
20 month. I've spoken extensively with plant management and NRC resident
21 inspectors as well as state and local government representatives and community
22 groups. I've testified on Capitol Hill and met individually with numerous members
23 of Congress. I've met my counterparts from regulatory organizations overseas,
24 led a U.S. delegation to a major international nuclear safety conference, and
25 assumed the chairmanship of the multinational Design Evaluation Program.

1 Inside the White Flint North campus, just across the street, my fellow
2 commissioners and I continue to maintain a collegial working relationship, and
3 I'm privileged to get to know many of the NRC staff.

4 My objective as chairman is to lay the groundwork for the agency's
5 continued success in the next quarter century and beyond through addressing
6 what we already understand and using scientific data to inform our best planning
7 and decision making.

8 So what do we do now? We are continuing to address lessons
9 learned from Fukushima. Our operating reactor fleet is getting older, with
10 approximately half of it slated to enter period of extended operation by 2017.
11 Most of the plants are operating well, while two are in extended shutdown as they
12 address specific issues. Construction is underway on several new reactors, and
13 we're applying our regulations to a new generation of designs. We're addressing
14 regulatory issues that span the entire fuel cycle. We face evolving security
15 threats from a variety of adversaries. We face the challenge of effectively
16 maintaining our core mission in a difficult budget environment. And we have a
17 diverse group of parties who follow our work and seek to maintain an open
18 dialogue with us.

19 As we consider these complex issues, we would be remiss not to
20 draw two important parallels between the first RIC and today. First, we once
21 again find ourselves two years removed from a major nuclear accident, working
22 to understand its lessons and incorporate them into meaningful lasting
23 improvements.

24 Second, and more broadly, the NRC must remain committed to the
25 principle of good regulation that led the NRC to conceive of this conference in the

1 first place. That is clear, consistent communication with those who are affected
2 by our work. This conference has always been open to the public and draws a
3 broad variety of attendees from industry; federal, state, and local government;
4 interest groups; academia; and the international community. Enhancing the
5 NRC's engagement with the public is a high priority for me. I view this
6 conference as a particular source of pride for our agency. I believe our continued
7 commitment to openness and transparency will serve us well as we address the
8 challenges that will shape the agency's next 25 years.

9 The NRC's efforts to implement lessons learned from the
10 Fukushima accident continue. Several of my colleagues on the Commission and
11 I have had the opportunity to visit Fukushima since the accident. My visit there
12 last December was a deeply moving experience for me. On the drive to the
13 plant, we passed villages overgrown with vegetation in a way that's only possible
14 when no one lives in them. Remnants of well-established and hastily abandoned
15 communities like overgrown family gardens and rice paddies served as
16 reminders of how quickly life changed for the people in the area surrounding the
17 plant.

18 At the site, the Japanese are still contending with debris left over
19 from the tsunami as they are working to decommission the damaged reactors.
20 Taken together, the experience served as a sobering reminder of the fact that we
21 don't know everything about how the earth behaves and we must factor this into
22 how we approach nuclear safety.

23 U.S. nuclear power plants have made significant progress in
24 beginning to implement the near-term actions the NRC has identified. And the
25 Commission and staff are working collectively to discuss longer priority items.

1 We are committed to maintaining an open dialogue with industry and other
2 interested parties as we move forward with this process.

3 As operating reactors in the United States continue to age, the
4 NRC is committed to ensuring that they continue to operate safely and securely.
5 Despite an established rigorous regulatory program for aging management, the
6 NRC and industry must contend with unknowns. It's essential that we continue to
7 treat aging management as a dynamic process and draw upon domestic and
8 international operating experience to further our knowledge and our readiness to
9 address unique challenges if they arise. The U.S. reactors have been operating
10 longer than most others in the world. Therefore, there's limited experience to
11 draw on to address life beyond 60 years.

12 In the coming years, as we continue to consider these issues,
13 industry will be responsible for demonstrating a continued integrity of plants'
14 structures, systems, and components. In terms of day-to-day plant operations,
15 most plants are performing well. For those few that are experiencing challenges
16 with their safety performance the NRC maintains a diligent process of oversight,
17 inspection, and follow-through. You'll hear more in a moment from our executive
18 director of operations, Mr. Borchardt, on how the NRC is addressing particular
19 plant issues. I can assure you that the NRC will not allow any reactor to operate
20 unless we are satisfied it can do so safely.

21 As always, we expect that licensees will be responsive to the
22 NRC's inquiries and orders and communicate quickly and effectively with the
23 local community. At all of the sites I've visited I've been consistently impressed
24 with the work of NRC's resident inspectors. They are a daily presence at the
25 sites and are committed to the mission of ensuring public health and safety.

1 Their work ensures that plant activities are properly conducted, equipment is
2 properly maintained, and potential concerns are identified and addressed.

3 I've also observed that there is a direct link between strong plant
4 management and plant performance both from operational and organization
5 perspectives. I've visited sites where management is responsive to its
6 employees as well as the NRC and maintains good relationships with the local
7 community, including the local law enforcement that would serve as first outside
8 responders in an emergency. Good management practices and effective plant
9 operation that results should be emulated throughout the industry. Admiral Jim
10 Ellis, the former president and CEO of the Institute for Nuclear Power
11 Operations, was fond of saying that his organization "promotes excellence, not
12 just regulatory compliance." Common sense dictates a leadership and
13 management style that promotes openness and excellence and actively seeks
14 opportunities for improvement is in everyone's best interest.

15 The NRC is also continuing its work in the new reactor area. Last
16 year, we issued combined licenses for four new units, two each at Summer and
17 Vogtle. We are not overseeing construction activities at both sites, and I
18 understand that Summer completed the pouring of the first nuclear concrete just
19 this past weekend. They are each making good progress, having worked with us
20 to address some issues that caused early delays. These are the first units
21 licensed under the Part 52 licensing process, and some challenges are to be
22 expected as we navigate this new territory. We will continue to work to ensure
23 that these licensees and others that may follow are appropriately constructing
24 their plants as set forth in their licensing basis according to the combined
25 licensing process.

1 At this time, the NRC is actively reviewing 10 additional combined
2 license applications for a total of 16 new reactor units. As new reactor
3 construction potentially expands in the years ahead, licensees must maintain
4 responsibility for quality assurance for reactor components as well as oversight of
5 all contractors, subcontractors, and vendors. In addition to the licensing and
6 oversight of the construction of new plants, the NRC is engaged in reviewing and
7 certifying additional new reactor designs. The agency is nearing completion of
8 the certification of the GE Hitachi design and are reviewing the Mitsubishi Heavy
9 Industries and AREVA designs. We are also engaging in discussions with Korea
10 Hydronuclear Power on their design. Further, we're preparing for applications of
11 small modular reactors, including design certifications from Babcock and Wilcox
12 for their M power design, Westinghouse for their SMR design, and New Scale
13 Power. SMRs represent an evolutionary change for the NRC in which we apply
14 our existing regulations to new concepts. It's important to note that regardless of
15 the reactor size or type, the NRC has lessons learned and integrated them, the
16 lessons learned from Fukushima, into the new reactor licensing process.

17 Small modular reactors may raise new or different safety questions.
18 Their size may lead to a wider range of potential sites, while their designs may be
19 more seismically stable. These reactors may also be of interest in other parts of
20 the world to supply water desalination or enhanced electricity generation to
21 support a local or regional grid. Through the IAEA and bilaterally, the NRC is
22 involved in initiatives to address regulatory infrastructure development in
23 countries considering nuclear technology.

24 As we approach our work, it's clear to me that more emphasis is
25 needed both within the NRC and among those we regulate to holistically consider

1 all aspects of the fuel cycle. In general, I believe that a comprehensive approach
2 to the fuel cycle from a public policy perspective will help enhance public
3 confidence that nuclear facilities can operate safely and securely. In addition, it
4 is essential for aspiring countries to approach a new nuclear power program with
5 ultimate disposal of their spent fuel in mind. The United States and other
6 countries with well-established nuclear programs have an important role to play
7 in advocating this approach. On the front end of the fuel cycle, issues with public
8 health and safety are not all strictly within NRC's purview. For example, as we
9 seek to evaluate environmental impacts associated with uranium recovery, we
10 must work closely with other federal government agencies in state and tribal
11 governments who have made progress in upgrading our regulatory framework for
12 fuel cycle facilities to further account for shared oversight with other agencies.
13 It's important to remember that the lessons of Fukushima extend beyond power
14 reactors. For examples, fuel cycle facilities must also demonstrate that they
15 would be able to withstand seismic events.

16 The back end of the fuel cycle also requires sustained attention as
17 part of a comprehensive regulatory approach. I believe that it is incumbent upon
18 the U.S. Congress and the administration to address a long-term solution for
19 high-level nuclear waste management and disposal. As the U.S. government
20 continues its work in this area, the international community can, of course,
21 provide valuable insights related to approaches other countries have taken.

22 Industry also has an important role to play in demonstrating as
23 spent fuel can continue to be stored safely and securely on site until a permanent
24 solution is identified. Space constraints in spent fuel pools are already a
25 challenge for many U.S. sites. Greater focus is being placed on dry cast storage,

1 particularly as plants consider extended operation.

2 In the next 10 years, additional independent spent fuel storage
3 installations will undergo license renewal and face aging management
4 requirements. The staff is undertaking research efforts to assure that the NRC is
5 prepared to effectively regulate longer term storage.

6 On a related note, the decisions to close the Crystal River Unit 3
7 and Kewaunee Power Stations have focused attention on decommissioning.
8 NRC regulations provide that decommissioning will be completed within 60 years
9 of permanent cessation of operations. And our regulatory guides outline three
10 options for doing so. The first is immediate dismantlement, otherwise known as
11 decon. The second is delayed dismantlement, otherwise known as safe store.
12 And the third is permanent encasing on site, otherwise known as entomb.

13 While the decon option allows for the property on which the facility
14 is located to be released for unrestricted use and the NRC license terminated,
15 safe store permits radioactive material to remain on site for up to 60 years, and
16 entombment would keep contaminants permanently encased on site.

17 Licensees also have the choice of employing a combination of
18 these options where certain portions of the facility are dismantled and others
19 remain. I believe that the NRC should be examining its decommissioning
20 regulations to ensure that they are current and appropriate in preparation for the
21 possibility that other facilities may not opt to renew their licenses. Just as the
22 NRC is preparing for reactor license renewal and new reactor licensing that could
23 result in a possible expansion of the U.S. fleet, we must address this other end of
24 the spectrum. In my view, this reexamination is essential because the 40-year
25 duration of a reactor license and the 60-year duration of safe store both exceed

1 the length of most experts' professional careers. We must ensure that our
2 regulations are sufficiently comprehensive and robust to address issues that will
3 arise long after most of us have retired.

4 Also in the waste area, most of you will recall that last summer the
5 U.S. Court of Appeals for the D.C. Circuit found that the Commission needed to
6 better address the possibility that there would be no permanent disposal option
7 for spent fuel. The court cited particular examples of environmental impacts the
8 NRC needed to more fully explain, including the impact of potential spent fuel
9 pool leaks or fires. In September 2012, the Commission unanimously directed
10 the staff to complete an in-depth environmental impact statement and rulemaking
11 on waste confidence.

12 There were several options that the agency could have chosen to
13 go about this. And I'm pleased to say that the selected approach maximizes
14 opportunities for public involvement. The NRC has a dedicated team of expert
15 staff to address this issue full time and work is well underway. The staff has
16 already organized a number of public meetings and is planning for more
17 extensive engagements after the draft environmental impact statement is issued.

18 Last week, the staff made public its environmental impact
19 statement scoping report. We are committed to taking all views into account as
20 we proceed with our review. Though an environmental impact statement of this
21 type is new in this area, waste confidence has been a focal issue for the NRC
22 since before the first RIC, and there is a long, rich history from which to draw.
23 The agency is not starting from scratch with this work. Rather, they are a
24 number of existing analyses and reports that have already been conducted and
25 considered and now must be included in the agency's response. It's important to

1 note that all license application activities continue, but the NRC will not issue
2 licenses dependent upon the waste confidence decision or temporary storage
3 rule until these issues are addressed.

4 Waste confidence is also an issue that has clear relevance across
5 a variety of sectors. We've received thousands of public comments, and I'm told
6 it was the second most popular RIC session in registrations.

7 The resonance of this issue is cross-cutting because it impacts
8 licensing for new reactors, power reactor license renewals, and site-specific
9 licensing and license renewals for independent spent fuel storage installations.

10 We will encourage all of you to give us your input as we continue
11 our work on these issues.

12 In the materials area, the NRC continues its broad oversight, with
13 tens of thousands of materials licensees across the United States. It's essential
14 that we continue to work collaboratively with our 37 agreement state partners to
15 serve as strong, effective regulators.

16 One area of significant interest is the use of radioactive materials
17 for medical purposes. As the United States continues to explore possibilities for
18 domestic production of medical isotopes, the NRC is committed to ensuring that
19 plans for potential production facilities are carefully reviewed. And as always, the
20 use of these isotopes remains an important regulatory focus. The safe and
21 secure regulation of nuclear materials is another area where coordination with
22 other parts of the U.S. government and our international counterparts is
23 essential.

24 As the agency charged with licensing imports and exports of
25 nuclear materials, and with ensuring the security of nuclear facilities and

1 materials, the NRC plays an important role in U.S. government non-proliferation
2 efforts. It's important that we communicate all that the NRC already does in the
3 non-proliferation area.

4 For the export of high-risk materials, such as highly enriched
5 uranium, we work closely with the executive branch to receive assurances at the
6 highest level from the destination country that the material will be used safely and
7 securely. We also work closely with our foreign regulatory counterparts to
8 ensure that safety and security obligations are well understood. More broadly,
9 we provide a critical perspective within the U.S. government and abroad on the
10 safe, secure, and independent regulation of these materials for peaceful uses.
11 The NRC also contributes to other areas of U.S. government nonproliferation
12 work. A number of our licensed facilities fall under IAEA safeguards and have
13 hosted safeguards inspectors in recent years. Along with other U.S. government
14 agencies, we provide reporting required by the IAEA under the additional
15 protocol. We remain engaged with the IAEA in this area and are meeting our
16 continued obligations. In addition, recognizing that proliferation concerns are
17 inextricably linked with effect and diversion, we are consistently working to
18 assess and, where appropriate, strengthen our security program to address
19 evolving threats.

20 In the years since 9/11, the NRC has taken a comprehensive
21 approach to security, integrating it into each of our technical programs and
22 ensuring a strong interface between safety and security regulatory activities.
23 Advances in technology, expanding use of digital instrumentation and controls,
24 for example, bring new dimensions to what we -- what constitutes a threat.
25 Appropriately, cyber security has been receiving a lot of attention recently. The

1 NRC has been coordinating closely with other federal agencies to address this
2 persistent, constantly evolving threat. In 2009, the NRC published a cyber-
3 security rule for new power reactors. The NRC has reviewed and approved
4 cyber security plans from all of its operating nuclear power plant licensees. The
5 staff is now conducting inspections to confirm security and compliance with
6 requirements and determine how the licensees are progressing. We are in the
7 process of evaluating the need for cyber security requirements for fuel cycle
8 facilities, non-power reactors, independent spent fuel storage installations, and
9 byproduct materials licensees.

10 More generally, we've been working to advance our international
11 cooperation on security issues. Last December, for instance, we hosted the first
12 ever International Security Regulators conference just up the street, which
13 brought together high-level experts from around the world to discuss a variety of
14 issues facing nuclear security regulators. Through this event and other bilateral
15 and multilateral activities, we are developing the international relationships
16 necessary to work effectively toward the prevention and mitigation of security
17 incidents.

18 As the Security Regulators conference has demonstrated,
19 international cooperation has never been more important. In her remarks at the
20 1997 RIC, then Chairman Shirley Ann Jackson announced the establishment of a
21 new International Nuclear Regulator's Association. INRA was intended to
22 promote frank and open discussion among senior regulators from the most
23 established nuclear power programs. Today, INRA is in its 15th year and
24 continues to successfully meet this objective. As I mentioned earlier, I recently
25 assumed the chairmanship of the Multinational Design Evaluation Program,

1 which has worked to develop harmonized approaches to new reactor design
2 review and licensing issues. The Fukushima Daiichi accident clearly reinforced
3 the need for international cooperation to identify and implement lessons learned,
4 do everything possible to prevent another accident, and ensure that optimal
5 emergency response measures are in place everywhere. But the benefits of
6 international cooperation go far beyond this. We must continue to draw upon the
7 wealth of international operating experience and hold regular exchanges with our
8 counterparts to enhance nuclear safety.

9 During my time at the NRC I have made improving public
10 communication a priority. I believe that the NRC is doing an excellent job
11 upholding its regulatory responsibilities, but we should strive for continuous
12 improvement in conveying information about that good work to the public. The
13 NRC's public meeting process and social media initiatives, such as the NRC blog
14 and Twitter account -- and you heard we even have a special Twitter account
15 here -- are examples of the staff's current efforts to engage the public. It is
16 essential that the public have access to information on NRC's activities in plain
17 language that is clear and easily understood. I believe we also need to create
18 more opportunities for two-way dialogue so that we better understand the views
19 of those who wish to communicate with us. In order for our regulatory process to
20 be successful, we must take a broad range of viewpoints into account.

21 Congress; industry; state, local, and tribal governments; nongovernmental
22 organizations; and the public should feel confident that we are not only hearing
23 their views but actively considering them. I think we must go further in pursuing
24 this. There is a growing body of research, including from the 1990s on nuclear
25 waste management, that suggests a direct link between public involvement, the

1 development of trust between the industry and the public, and safety within the
2 nuclear field and beyond. A 2012 study conducted for the IAEA concludes that
3 quote, "More engagement with the public in a formal process that accepts and
4 respects the validity of scrutiny from civil society represents an immediate step
5 the nuclear industry can take that provides additional oversight, builds
6 confidence, and can contribute to increased safety." The study makes this
7 connection in part by noting that quote, "Local knowledge and experience can
8 identify issues that may otherwise have been neglected or omitted." A common
9 theme in the various studies, regardless of the industries assessed, is that
10 communication must consist not only of the sharing of information, but the
11 creation of a kind of dialogue I just referenced. I believe that this ring true -- rings
12 true, not only for the industry, but also for the NRC. I have made an effort to
13 make the diverse cross-section of local communities during each of my site visits
14 and have hosted interested organizations and individuals in my office. To give
15 greater visibilities to my own activities I will soon make my own meeting calendar
16 public. I believe that increased external engagement is a key element to
17 ensuring the NRC's continued success in the coming years.

18 Finally, you may be aware of the NRC's recent efforts to preserve
19 the three-building White Flint Headquarters campus. Questions have been
20 raised about the need to renew the lease for Two White Flint because of the
21 government-wide efforts to reduce building space federal agencies occupy. This
22 issue is a priority for me, recognizing that we are most productive when we can
23 all work together and not operate out of satellite facilities. I am pleased to report
24 that through our ongoing cooperative efforts with the General Services
25 Administration we have made significant progress in developing a plan that

1 maintains the White Flint campus and also reduces the agency's footprint. More
2 work is needed, but I am optimistic about our chances for success.

3 Even as we address the issues I have touched on, our country and many
4 others are operating in challenging economic times. You have undoubtedly been
5 bombarded with reports about the budget challenges the U.S. government is
6 facing.

7 Despite the cuts the sequestration has prompted, the NRC remains
8 focused on its core mission to protect public health and safety and the
9 environment. Furthermore, we will not furlough any employees. That said, the
10 sequester will impact our agency if it continues. You will hear more about this
11 from Mr. Borchardt in a moment. I have been extremely impressed by the NRC
12 staff's response to these challenges. Budget limitations do not change the
13 NRC's mission or the public's expectation of us. We will continue to work with
14 the same diligence and high quality regardless of the fiscal constraints within
15 which we must operate.

16 So what will the next 25 years bring? While we can't predict the
17 future, there are some basic elements of our work that were established when
18 the NRC was created and will endure in the coming decades. The NRC will still
19 be charged with protecting public health and safety, a commitment we will
20 continue to maintain with dedication and integrity whether the focus is on new
21 construction, license renewal, or decommissioning. We will be continuing to
22 apply the lessons of Fukushima and the accidents that preceded it in our efforts
23 to prevent another accident in the United States. We will continue to face down
24 threats and challenges from those who seek to inflict harm on our citizens, and
25 we will have a diverse following of individuals and groups who are interested in

1 and affected by our decisions. Based on our progress on the issues I described
2 earlier, I believe we are pointed in the right direction.

3 We must focus on the following items. We must continue our
4 commitment to effective, open, and transparent regulation. We must continue to
5 incorporate the results of peer-reviewed research into our regulatory decision-
6 making relying, as we do now, on some of the best technical experts in the field
7 within and outside of the NRC. We must continue the RIC tradition by actively
8 involving the public in our decision making, communicating with all interested
9 parties in ways they can understand and ensuring that we consider their
10 perspectives. I believe we must commit to a more integrated approach to the
11 entire fuel cycle and through our actions continue to demonstrate the importance
12 of doing so to our licensees, the rest of the U.S. government, and the public. We
13 must continue to serve as leaders and expert resources to the government and
14 the international regulatory community while preserving our independence. We
15 must maintain and strengthen our cooperation with our international partners in
16 global nuclear safety and security network in which our regulatory approach
17 continues to be regarded as the gold standard.

18 I am committed to steering the NRC toward continued excellence.
19 I'm proud of our agency and I am honored to be its chairman. And while I still
20 think Niels Bohr was right about the limits of prediction, I anticipate a bright future
21 for the NRC that inspires confidence through exemplary performance. Thank
22 you.

23 [applause]

24 I'm not done, I guess.

25 [laughter]

1 ERIC LEEDS: Almost, chairman. Thank you. We have about 10
2 minutes for questions if you would, and I received a number of questions from
3 the audience. Thank you so much.

4 First, just to start things off, how has your time been at the NRC so
5 far? And since your chairmanship is up in June, are you interested in being
6 reappointed?

7 [laughter]

8 CHAIRMAN MACFARLANE: My time at the NRC so far has been
9 excellent. It's been fascinating. I've learned a lot. I really appreciated working
10 with this fantastic staff, a lot of amazing people, looking out at all of you right
11 now, and that's been a wonderful experience. And, you know, if the president
12 would like, I would be most happy to serve again.

13 ERIC LEEDS: Thank you. All right. The next question: What are
14 your perspectives on NRC's Fukushima-related activities, especially in the
15 seismic and hydrology areas in which you have significant background and
16 experience?

17 CHAIRMAN MACFARLANE: Okay. I think, you know, certainly I
18 am very interested in the earth science aspects of the Fukushima accident, and I
19 do strongly feel that we need to regularly update the information that we use to
20 evaluate our sites, because, you know, when a lot of these nuclear power plants
21 in the United States were originally sited, this was prior to a major paradigm shift
22 in geology. This was prior to plate tectonics being accepted as how the earth
23 works, and we need to make sure that we are up to date to make sure that we
24 are operating the plants as safely as possible.

25 ERIC LEEDS: Okay. Thank you. With respect to the

1 comprehensive approach to the fuel cycle that you mentioned in your speech,
2 should the U.S. industry begin recycling of spent fuel, and should long-term
3 storage of spent fuel include a central repository in the U.S.?

4 CHAIRMAN MACFARLANE: I think no matter what management
5 option you choose, whether you choose direct disposal or you choose to
6 reprocess your spent fuel, you still need a deep geologic repository, whether it is
7 a mined geologic repository of the kind that Sweden, Finland, and France are in
8 the process of considering, whether it is deep bore holes, you need something,
9 because you need to basically remove this material from our local environment.

10 ERIC LEEDS: Okay. Thank you. What do you see as the role for
11 the staff in the international regulatory community? How do you see the
12 international community influencing the NRC staff?

13 CHAIRMAN MACFARLANE: I think it's very important that we
14 continue to engage the international community. We engage at the NRC both in
15 the cooperative sense and in an assistance sense. We work cooperatively with
16 other countries to understand common reactor designs, et cetera, common
17 issues, but we also work and provide assistance to some countries on a variety
18 of issues, not just on reactors, but also on materials issues. I think these are
19 both fantastic in part because we have a lot to offer, but in part because we also
20 have a lot to learn and we can learn a lot from the international community as
21 well.

22 ERIC LEEDS: Thank you. Different take. What specific actions
23 are you planning to take to reduce regulatory burden on licensees? Is regulatory
24 reform a priority?

25 CHAIRMAN MACFARLANE: This is something we're actively

1 considering at the NRC; we're in the process of considering the cumulative
2 effects of regulation. We will certainly ensure and require all regulations that we
3 feel are necessary to ensure that plants operate safely. That's sort of the bottom
4 line. But we are constantly talking with industry and understanding the issues
5 that industry is facing as well.

6 ERIC LEEDS: Thank you. Right. We're back to Fukushima.
7 We're two years into the Fukushima lessons learned. What's the agency's
8 direction going forward?

9 CHAIRMAN MACFARLANE: I think it's going quite well in terms of
10 going forward. We've been working very well with industry. Industry has been
11 very responsive to the changes required of them, and we are carefully
12 proceeding through the prioritization of the near-term task force's
13 recommendations. Prior to my arrival at the Commission, the Commission wisely
14 decided to prioritize these recommendations into three tiers, which allowed a
15 measured approach, I think, to the changes that we are considering. And these
16 are changes under consideration. They are not all required yet. I do think we're
17 working in the right direction. I don't think it's time to stop. I think we have to
18 continue working through everything that we've set out.

19 ERIC LEEDS: Thank you. All right. During your speech you talked
20 about a number of your priorities to work on while you're here. Do you have any
21 specific safety concerns with the industry?

22 CHAIRMAN MACFARLANE: Specific safety concerns? No, but I
23 would go back to what I said in my speech, that really one of my observations in
24 the last eight months is that management makes a big difference. You know, I
25 had some fantastic interactions with some facility licensees that really run their

1 facilities very well. They're -- they have good relations with their employees.
2 They have good relations with the NRC. They have good relations with the local
3 community. And then there are others who don't have those good relations.
4 They don't have good relations with their employees. There are constant
5 problems cropping up. You know, yes I think it makes a big difference, and so
6 management and leadership at different licensees is very, very important.

7 ERIC LEEDS: Thank you. All right. This goes back to Yucca
8 Mountain. Will you support completion and issuance of the Yucca Mountain
9 license SER for public knowledge and for information retention?

10 CHAIRMAN MACFARLANE: We're all waiting to see what the
11 court decides. We'll see what the court decides and when the court makes a
12 decision we'll follow the law.

13 ERIC LEEDS: Thank you. All right. You mentioned the sequester,
14 and this question goes to how is this sequester currently affecting the NRC staff's
15 work and will elapse in no continuing resolution -- will elapse in funding on March
16 27th. How would that affect the NRC?

17 CHAIRMAN MACFARLANE: Yeah, as I said earlier, there are no
18 furloughs, which is a great thing and much credit to the staff at the agency for
19 running things very well. But, we will, as the sequester continues, begin to see
20 effects, and I will let Mr. Borchardt go into more detail on them, but we will
21 certainly see things like the loss of our university grants program and effects to
22 some new reactors and design certification programs to some of our research
23 contracts, that kind of thing. So, it will begin to affect some of our work.

24 ERIC LEEDS: Good. And if I could have a final question,
25 chairman, what is the U.S. NRC doing going forward to understand how the earth

1 behaves seismically also in regard to flooding and tsunami threats?

2 CHAIRMAN MACFARLANE: Well, one of the -- or two of the
3 requirements follow on from the Fukushima task force is that all reactor licensees
4 required to reevaluate their seismic and flooding hazard and update them based
5 on most recent knowledge. And actually this was something that was already in
6 place before the accident that has been folded into the Fukushima
7 recommendations. And so, our licensees are actively involved in these renewed
8 analyses, both on the flooding and the seismic side, and I'm looking forward to
9 seeing the results of their analyses and see what -- how everybody comes out.
10 So, we'll see how that goes.

11 ERIC LEEDS: All right. Thank you very much, chairman.

12 [applause]

13 [Whereupon, the proceedings were concluded]