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NRC POLICY AND GOVERNANCE OVERSIGHT

JOINT HEARING

BEFORE THE

SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY

AND THE

SUBCOMMITTEE ON ENERGY AND POWER

OF THE

COMMITTEE ON ENERGY AND COMMERCE
HOUSE OF REPRESENTATIVES

ONE HUNDRED TWELFTH CONGRESS

SECOND SESSION

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SUBMITTED MATERIAL

Report, undated, of the Office of the Inspector General, Nuclear Regulatory Commission, "Possible Violations of the Reorganization Plan No. 1 of 1980 and NRC's Internet Commission Procedures by NRC Chairman," submitted by Mr. Shimkus [1]

[1] Internet link to the report is available on page 75.

NRC POLICY AND GOVERNANCE OVERSIGHT

TUESDAY, JULY 24, 2012

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY
JOINT WITH THE
SUBCOMMITTEE ON ENERGY AND POWER,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The subcommittees met, pursuant to call, at 10:01 a.m., in room 2123 of the Rayburn House Office Building, Hon. John Shimkus (chairman of the Subcommittee on Environment and the Economy) presiding.

Present from the Subcommittee on Environment and the Economy: Representatives Shimkus, Murphy, Pitts, Bass, Latta, McMorris Rodgers, Cassidy, Barton, Upton (ex officio), Green, Butterfield, Barrow, Matsui, DeGette, Capps, Dingell, and Waxman (ex officio).

Present from the Subcommittee on Energy and Power: Representatives Whitfield, Walden, Terry, Burgess, Bilbray, Scalise, Olson, McKinley, Gardner, Pompeo, Griffith, Rush, Castor, Markey, and Engel.

Staff present: Nick Abraham, Legislative Clerk; Carl Anderson, Counsel, Oversight; Gary Andres, Staff Director; Charlotte Baker, Press Secretary; Mike Bloomquist, General Counsel; Sean Bonyun, Communications Director; Anita Bradley, Senior Policy Advisor to Chairman Emeritus; Maryam Brown, Chief Counsel, Energy and Power; Allison Busbee, Legislative Clerk; Annie Caputo, Professional Staff Member; Cory Hicks, Policy Coordinator, Energy and Power; Heidi King, Chief Economist; David McCarthy, Chief Counsel, Environment and the Economy; Andrew Powaleny, Deputy Press Secretary; Chris Sarley, Policy Coordinator, Environment and the Economy; Brett Scott, Staff Assistant; Peter Spencer, Professional Staff Member, Oversight; Lyn Walker, Coordinator, Admin/Human Resources; Jeff Baran, Democratic Senior Counsel; Phil Barnett, Democratic Staff Director; Alison Cassady, Democratic Senior Professional Staff Member; and Caitlin Haberman, Democratic Policy Analyst.

Mr. SHIMKUS. The joint subcommittee hearing will now come to order.

First of all, I want to welcome our friends from the Nuclear Regulatory Commission. And let me start by again welcoming you in particular. Well, let me just recognize myself for 5 minutes for an opening statement.

OPENING STATEMENT OF HON. JOHN SHIMKUS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Again, welcome. And Chairman Macfarlane, congratulations. And it is good to meet with you for a few minutes before this session. Commissioner Apostolakis will be unable to be here today since he is visiting his mother in Greece. We wish him safe travel and pray that she feels better soon.

A lot has happened since the Commission last testified before this committee. Early this year, the NRC issued the first license for new plants in 34 years. In March, the Commission issued orders to implement post-Fukushima improvements. Only 2 weeks ago, we saw a "changing-of-the-guard" as Chairman Jaczko exited the Commission and Chairman Macfarlane was sworn in. Under Chairman Jaczko, the last 3 years have been turbulent for the NRC, to say the least, and the change in leadership was long overdue.

With the new chairman, today's hearing provides an excellent opportunity to review policy and governance of the Commission. We can gather important perspective from the commissioners, and importantly, Chairman Macfarlane, about the future of the Commission and its work. This is an opportunity, not to dwell on the past, but to look to the future through some of the important lessons of recent commission events and actions. It is critical for our oversight that we examine weaknesses in the NRC governance identified during the past chairman's tenure and to assess the many policy challenges facing the agency.

One broad area of policy interest concerns regulatory priorities. In its other work, this committee has focused significant attention on the combined effect many substantial EPA regulations has had on our Nation's coal plants. It should be of no surprise I am similarly concerned about the potential impact of numerous post-Fukushima and other regulatory changes on our Nation's nuclear plants.

Without a doubt, the industry must ensure safe operation and regulatory compliance. None of us would tolerate anything less. However, I believe it is incumbent on the Commission to consider the cumulative effect regulatory changes have on safety. In a March 2011 information paper to the Commission, the NRC staff cautioned that the cumulative Effects of Regulation "can potentially distract licensee or entity staff from executing other primary duties that ensure safety or security." I believe this cumulative effect risk is valid.

The NRC and the industry had a full workload of safety improvements under development before the Fukushima accident occurred. The Commission must be diligent about ensuring its licensees can focus on completing changes with greatest safety significance rather than being diverted onto other, less important changes simply to meet artificial timelines.

Adequate protection is about risk reduction but should not be confused with "risk elimination." Risk is inherent to all sources of energy, yet energy is necessary to our health and well being—to heat our homes, grow our food, and power our economy. With the Atomic Energy Act, Congress endeavored to balance the benefits nuclear energy brings to the general welfare with protection of pub-

lic health and safety. Our goal as legislators and yours as regulators should be to preserve that balance.

I want to thank all of the commissioners for coming here today to update the committee on the NRC activities, and I look forward to their testimony and willingness to answer our questions.

And I would like to yield the balance of my time to my friend, Mr. Terry, from Nebraska.

[The prepared statement of Mr. Shimkus follows:]

Opening Statement Chairman John Shimkus
"NRC Policy and Governance Oversight"
July 24, 2012

The joint subcommittee hearing will now come to order.

Let me start by welcoming the Nuclear Regulatory Commission and, in particular, the new Chairman, Allison Macfarlane. Commissioner Apostolakis was unable to be here today since he is visiting his mother in Greece. We wish him safe travel and pray that she feels better soon.

A lot has happened since the Commission last testified before this Committee. Early this year, the NRC issued the first license for new nuclear plants in 34 years. In March, the Commission issued orders to implement post-Fukushima improvements. Only two weeks ago, we saw a "changing-of-the-guard" as Chairman Jaczko exited the Commission and Chairman Macfarlane was sworn in. Under Chairman Jaczko, the last three years have been turbulent for the NRC, to say the least, and the change in leadership was long overdue.

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Without a doubt, the industry must ensure safe operation AND regulatory compliance. None of us would tolerate anything less. However, I believe it is incumbent on the Commission to consider the cumulative effect regulatory changes have on safety. In a March 2011 information paper to the Commission, the NRC staff cautioned that the Cumulative Effects of Regulation *"...can potentially distract licensee or entity staff from executing other primary duties that ensure safety or security."* I believe this cumulative effect risk is valid.

The NRC and the industry had a full workload of safety improvements under development before the Fukushima accident occurred. The Commission must be diligent about ensuring its licensees can focus on completing changes with greatest safety significance rather than being diverted onto other, less important changes simply to meet artificial timelines.

Adequate protection is about risk reduction, but should not be confused with "risk elimination." Risk is inherent to all sources of energy, yet energy is necessary to our health and well-being: to heat our homes, grow our food, and power our economy. With the Atomic Energy Act, Congress endeavored to balance the benefits nuclear energy brings to the general welfare with protection of public health and safety. Our goal as legislators and yours as regulators should be to preserve that balance.

I want to thank all of the commissioners for coming here today to update the committee on NRC activities, I look forward to their testimony and willingness to answer our questions. With that I yield the balance of my time to Mr. Barton for the purposes of an opening statement.

OPENING STATEMENT OF HON. LEE TERRY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEBRASKA

Mr. TERRY. Thank you, Mr. Chairman. Thank you for holding this very important hearing. As you may be aware, I introduced legislation in December of last year in response to many of the concerns that were being raised at the Nuclear Regulatory Commission, and the IG reports confirmed those concerns.

I want to welcome the new chair of the Commission and relay that it is my sincere hope that we can work together. I wanted to also stress that the NRC has been known throughout the world as a premier regulatory agency that has been known to work together. I hope we can restore the confidence that people once held with the NRC.

Now, during my questions, I want to discuss aspects of my bill to get your feedback, particularly on the previous abuse of emergency powers and maybe setting those down in a more certain way.

I yield back my time.

Mr. SHIMKUS. The gentleman yields back his time.

Does Mr. Barton want the remaining time?

Then, the chair yields back his time now. And the chair recognizes the gentleman from Texas, Mr. Green, for 5 minutes.

OPENING STATEMENT OF HON. GENE GREEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS

Mr. GREEN. Thank you, Mr. Chairman, for holding this hearing. And I want to welcome our commissioners back to our committee.

Chairman Macfarlane, congratulations on your recent appointment. We are aware of the situations you inherited and I applaud your enthusiasm and willingness to address the governance issues head-on. I know some of my colleagues continue to have concerns about some of the actions initiated under the former Chairman Jaczko. I do hope that we can allow the new chair the opportunity to tackle some of these governance issues before making the assumptions on the NRC's work going forward. In the meantime, we should focus our committee oversight on ensuring safety and viability of our nuclear fleet.

I am a long-term supporter of nuclear energy because it is a cleaner energy alternative. The President has said he supports investments in alternative forms of energy, and Secretary Chu has testified before this committee that we would be unable to meet the President's goals if we do not continue to invest in nuclear energy.

With that, there is no doubt, though, that the issue of long-term and interim nuclear storage facility disposal needs to be dealt with and I do hope the Commission will seriously look at this issue in the near future.

Again, thank each of you for being here. My hope is that today starts a new chapter in our committees' relationship with the NRC and I wish you all the luck in turning over a new leaf.

With that, Mr. Chairman, I would like to yield the balance of my time to our ranking member of our full committee, Mr. Waxman.

OPENING STATEMENT OF HON. HENRY A. WAXMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. WAXMAN. Thank you very much for yielding to me.

I also want to begin by welcoming Dr. Allison Macfarlane and the other members of the Commission. I look forward to your testimony on the safety and security of America's nuclear power plants.

The mission of the Nuclear Regulatory Commission is to license and regulate the Nation's civilian use of nuclear materials to "ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment."

This is a vital mission, but for the last year and a half, the Commission has been distracted from its responsibilities by politicians who second-guessed its decisions and sowed internal dissention. Regrettably, this committee helped fan the flames of discord within the Commission by looking for any opportunity to cast aspersions on the former chairman.

It is time to move on with the four commissioners here today and the new chairman. We should focus on examining important nuclear safety issues, not rehashing old grudges.

There is no shortage of issues to discuss, from the ongoing shutdown of the San Onofre Nuclear Generating Station in California due to safety concerns, to the status of NRC's post-Fukushima review of nuclear power plant safety in the United States.

It has been more than a year since the Fukushima nuclear accident in Japan. Japan's independent commission investigating the events leading up to the disaster recently concluded that the power plant operator and Japan's nuclear regulators failed to implement basic safety measures despite known risks posed by earthquakes, tsunamis, and other events that can cause long-term blackouts at reactors. This is a cautionary tale for the United States, one that NRC should heed when implementing lessons learned from the Fukushima disaster.

I look forward to the hearing. I thank the gentleman for yielding to me and I yield back the time to Mr. Green should he wish to use it.

[The prepared statement of Mr. Waxman follows:]

FRED UPTON, MICHIGAN
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA
RANKING MEMBER

ONE HUNDRED TWELFTH CONGRESS

Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
2125 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515–6115

Majority (202) 225–2927
Minority (202) 225–3641

Opening Statement of Rep. Henry A. Waxman
Ranking Member, Committee on Energy and Commerce
Hearing on "NRC Policy and Governance Oversight"
Subcommittee on Environment and the Economy and Subcommittee on Energy and Power
July 24, 2012

I want to begin by welcoming Dr. Allison Macfarlane, the new chairman of the Nuclear Regulatory Commission. I look forward to hearing your testimony and perspectives on how to refocus the Commission's energy on the safety and security of America's nuclear power plants.

The mission of the Nuclear Regulatory Commission is to license and regulate the nation's civilian use of nuclear materials to "ensure adequate protection of public health and safety, to promote the common defense and security, and to protect the environment."

This is a vital mission, but for the last year and half, the Commission has been distracted from its responsibilities by politicians who second-guessed its decisions and sowed internal dissension. Regrettably, this Committee helped fan the flames of discord within the Commission by looking for any opportunity to cast aspersions on the former Chairman. It is time to move on.

We have four commissioners here today, including the new chairman. We should focus on examining important nuclear safety issues, not rehashing old grudges.

There's no shortage of issues to discuss, from the ongoing shut-down of the San Onofre Nuclear Generating Station in California due to safety concerns to the status of NRC's post-Fukushima review of nuclear power plant safety in the United States.

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I look forward to hearing testimony from the witnesses, and I thank them for their time.

Mr. GREEN. Mr. Chairman, unless another member on our side wants the remainder of the minute—no one?

I yield back my time.

Mr. SHIMKUS. The gentleman yields back time.

The chair recognizes the chairman of the Energy Subcommittee, Mr. Whitfield, for 5 minutes.

OPENING STATEMENT OF HON. ED WHITFIELD, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF KENTUCKY

Mr. WHITFIELD. Thank you, Mr. Chairman. And I also want to welcome the commissioners from the NRC today and tell all of you how much we appreciate the important work that you do. We are all optimistic and hopeful that Chairwoman Macfarlane will make great improvements and restore the collegiality at the Commission. And we know that she has an impressive background in this area and look forward to working with her.

All of us watched closely the events that surrounded the Fukushima situation, and when the Japanese Diet's Nuclear Accident Independent Investigation Commission reported that if Fukushima had been required to implement, for example, the "B.5.b" order issued by the NRC following the 9/11 terrorist attacks on the U.S., "that accident may have been preventable."

That same report also observed that Japanese plants were not required to consider a possible station blackout scenario, something that the NRC instituted in the 1980s. And last year, the NRC's Taskforce concluded that "events like the Fukushima accident are unlikely to occur in the United States" and that "continued operation and licensing activities do not pose an imminent risk to public health and safety."

We all were encouraged by that and I know that on March 9 of this year, the NRC issued a series of orders without a rigorous cost-benefit analysis. I understand it was the Commission's collective judgment to proceed in that fashion due to the urgency of those high-priority issues and I don't think any of us disagree with that. But moving forward with the complicated and complex issues that you deal with, we do know that you will be striving and we hope that you will strive for a solid technical basis and rigorous cost-benefit analysis on any decision that is made.

But once again, we look forward to your testimony and look forward to the opportunity to ask questions, and thank you for joining us.

And I would yield the balance of my time to the chairman of the full committee, Mr. Upton.

[The prepared statement of Mr. Whitfield follows:]

Chairman Whitfield's Opening Statement

NRC Policy and Governance Oversight Hearing

July 24, 2012

I am pleased that we were able to hold this hearing with the Nuclear Regulatory Commission and I welcome Chairwoman Macfarlane to the Commission. You have a big challenge ahead of you at the Commission and we all have high hopes that you'll be able to restore the work environment at the NRC.

I would like to focus my comments today on the Fukushima nuclear accident and make some observations on NRC's many actions.

We all watched closely as the Fukushima situation played out and we're all committed to making sure that an accident like the one in Japan doesn't happen in the United States, which is why in America we already had safeguards in place to prevent such a disaster. However, if there are improvements that need to be to our system, I think we should address them to the extent practicable and necessary.

What I mean by addressing any issues to the extent necessary is recently the Japanese Diet's Fukushima Nuclear Accident Independent Investigation

Commission reported that if Fukushima Daiichi had been required to implement the "B.5.b" order issued by the NRC following the 9-11 terrorist attacks on the U.S., "the accident may have been preventable."

That same report also observed that Japanese plants were not required to consider a possible station blackout scenario, something the NRC instituted in the 1980's.

Last year, the NRC's Task Force concluded that "...events like the Fukushima accident are unlikely to occur in the United States..." and that "...continued operation and licensing activities do not pose an imminent risk to public health and safety."

Reflecting on the NRC's lessons learned following the Three Mile Island accident, the Task Force cautioned "...some of the actions taken by the NRC after Three Mile Island were not subjected to a structured review and were subsequently not found to be of substantial safety benefit and were removed."

On March 9 of this year, the NRC issued a series of orders without a rigorous cost-benefit analysis. I understand it was the Commission's collective judgment to proceed in that fashion due to the urgency of those high priority issues and I don't

disagree.

However, it is my expectation that any regulatory actions going forward will return to the agency's practice of having a solid technical basis and rigorous cost-benefit analysis.

I urge the Commission to remember that the costs of these changes are ultimately born by consumers. For those struggling to fill their gas tanks and pay their bills, we need to ensure that any additional costs are justified by real safety benefits.

Thank you and I yield back the balance of my time.

OPENING STATEMENT OF HON. FRED UPTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. UPTON. Thank you. And I thank both of you for holding this important and very timely hearing. I am pleased for the opportunity to personally relay the concerns that folks in southwest Michigan have regarding recent news reports of degraded performance of the Palisades nuclear plant in my district. I share those concerns and have raised them with Entergy officials. I understand they have made many management changes and have very detailed plans about how to restore their facility to the high level of safety that we, every one of us, expect. And while I am encouraged by their commitment to resolve the situation, I will continue monitoring this situation closely, working directly with the company, as well as the NRC, and I look forward to asking questions of the Commission on that issue.

With regard to governance, Congress recognized in 1974 that one person should not be able to dictate what constitutes nuclear safety. They gave that responsibility to a commission of five people to consider complex issues collegially and in a manner that maximizes the benefit of nuclear technology while protecting the public. Collegiality is not just a buzzword; it is a critical safeguard against ill-considered policymaking by any single commission member.

Following the Three Mile Island accident, Congress passed the Reorganization Plan of 1980 to address organizational weaknesses and clarify lines of authority. The Reorganization Plan shifted a certain amount of authority from the Commission to the chairman, and while that approach served the Nation well for nearly 30 years, we have now witnessed how one person, intent on expanding the limits of his authority, can undermine the Commission's effectiveness. I am relieved the Jaczko era is officially behind us, but flaws have been exposed at the Commission that still need to be addressed.

As we have learned through our investigations and two IG reports, just a few of the former chairman's actions include: repeated attempts to influence or withhold agency staff information from the Commission; intimidation and bullying of commissioners and agency professionals creating a chilled work environment; and use of the Public Affairs Office to denigrate his colleagues and politicize and pressure commission policy positions.

In all my years on this committee, I have never witnessed a situation like that during the past 3 years at the NRC. Last year, four commissioners took the unprecedented step of privately alerting the White House Chief of Staff to the untenable situation. Sadly, the President's response was to turn a blind eye while the four eminently qualified commissioners, whom he nominated, were all vilified by Chairman Jaczko's allies when their concerns became public. We must ensure history never repeats itself.

I yield back.

[The prepared statement of Mr. Upton follows:]

Chairman Upton's Opening Statement
"NRC Policy and Governance Oversight"
10:00 AM, July 24, 2012

Thank you, Chairmen Shimkus and Whitfield for holding this important and timely hearing. I'm pleased for this opportunity to personally relay the concerns that folks in Southwest Michigan have regarding recent news reports of degraded performance of the Palisades nuclear plant. I share those concerns and have raised them with Entergy officials. I understand they have made many management changes and have very detailed plans about how to restore Palisades to the high level of safety that we all expect. While I'm encouraged by Entergy's commitment to resolve the situation, I will continue monitoring this issue closely, working directly with the company, as well as the NRC. I look forward to asking questions of the Commission on this issue.

With regard to NRC governance, Congress recognized in 1974 that one person should not be able to dictate what constitutes nuclear safety. They gave that responsibility to a commission of five people to consider complex issues collegially and in a manner that maximizes the benefit of nuclear technology while protecting the public. Collegiality is not just a buzzword, it is a critical safeguard against ill-considered policymaking by any single Commission member.

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the limits of his authority, can undermine the Commission's effectiveness. I am relieved the Jaczko era is officially behind us, but flaws have been exposed at the Commission that will need to be addressed.

As we've learned through our investigations and two Inspector General's reports, just a few of the former Chairman's actions include:

- Repeated attempts to influence or withhold agency staff information from the Commission;
- Intimidation and bullying of Commissioners and agency professionals creating a chilled work environment; and
- Use of the Office of Public Affairs to denigrate his colleagues and politicize and pressure commission policy positions.

In all my years on this Committee, I have never witnessed a situation like the past three years at the NRC. Last fall, four commissioners took the unprecedented step of privately alerting the White House Chief of Staff to the untenable situation. Sadly, the president's response was to turn a blind eye while the four eminently qualified commissioners, whom he nominated, were all vilified by Chairman Jaczko's allies when their concerns became public. We must ensure history never repeats itself.

My hope is that Chairman Macfarlane recognizes that the NRC is no place for politics and that she will work collegially with her colleagues to mend the agency's credibility. I do welcome some of her recent public comments on this matter and look forward to today's testimony. Thank you.

Mr. SHIMKUS. The gentleman yields back his time.

And again, I would like to welcome the commission members. And it is my understanding that the chairman will offer the opening statement for—oh, I am sorry.

Without objection, I would like to recognize the ranking member of the Energy Subcommittee—I didn't know there were any other subcommittees other than mine, Bobby—for 5 minutes for your opening statement.

OPENING STATEMENT OF HON. BOBBY L. RUSH, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. RUSH. I want to thank you, Mr. Chairman, and I want to thank again all of the NRC commissioners for your attendance here today. You certainly deserve all the accolades that we can give to you because of the hard work that you do and have continued to do, even under the former chairman.

Dr. Macfarlane, I really want to thank you for being here and I want to welcome you. We look forward to your insightful and rigorous leadership, and we know that the genius is yet to appear, but it is here present with us and so I am so delighted that you are here before this committee and that you are the chairman of the NRC. So welcome.

I look forward to hearing from you and I look forward to hearing your vision for the agency moving forward. And I look forward to hearing how you plan to work in concert with your fellow commissioners to ensure that the agency is conducting its work smoothly and without interruption.

Mr. Chairman, for Illinois, our State, housing more nuclear reactors than any other State in the country, my constituents and yours want to be assured that the NRC has in place commonsense protocols for both mitigating risks of a nuclear disaster, as well as procedures to safeguard the public in the event that a disaster occurs. Specifically, I look forward to hearing more about the steps that the Commission has put in place to improve safety based on a huge amount of information we have learned following the events at Fukushima.

It has now been over 16 months since the horrific disaster of last March, and in the past 12 months, there have been seven major reports on Fukushima, as well as numerous international IAEA and other international studies on the events that took place at Fukushima. The 30 plus NRC actions that were initially approved by the agency were based on a report that was drafted within 3 months of the Fukushima events and before any root cause or detailed timeline of events had been made public. And I am curious to know if the agency has assessed the list of NRC actions against the vast array of information to ensure that the NRC staff, and more importantly, the industry, are focused on the issues that were the cause and that are safety-significant.

Mr. Chairman, while I believe nuclear power must be a vital part of our country's overall energy portfolio, we must ensure that we have the best systems and practices in place to safeguard against an unforeseen nuclear accident to prevent widespread disaster like what we witnessed last March in Japan. My constituents in the 1st District and in Illinois, as well as the larger American public ex-

pect us to address these pressing issues, so I look forward to hearing from the commissioners today.

One other matter, Mr. Chairman, on another significant note, I also look forward to hearing more about the NRC's work in supporting the engineering departments of HBCUs, historically black colleges and universities, as reported in the magazine "U.S. Black Engineer and Information Technology." Supporting STEM education is a top priority for me, and the NRC was recognized as one of the government agencies considered most supportive of the engineering departments of HBCUs, and I would like to hear more about your work in that particular area.

So I look forward to hearing more about this work, more in depth about all your activities.

And Mr. Chairman, with that, I yield back 9 seconds.

Mr. SHIMKUS. The chair welcomes the ranking member for those 9 seconds.

And now, I would like to recognize Chairman Macfarlane. Your full statement is in the record for the Commission, and then you are recognized for 5 minutes, and we will be very generous, so don't feel rushed. And then I think it is our understanding that we will give the other members of the Commission an opportunity for 5 minutes for an opening statement.

With that, the chair recognizes the chairman of the NRC, Honorable Macfarlane.

STATEMENTS OF ALLISON M. MACFARLANE, CHAIRMAN, NUCLEAR REGULATORY COMMISSION; KRISTINE L. SVINICKI, COMMISSIONER, NUCLEAR REGULATORY COMMISSION; WILLIAM D. MAGWOOD IV, COMMISSIONER, NUCLEAR REGULATORY COMMISSION; AND WILLIAM C. OSTENDORFF, COMMISSIONER, NUCLEAR REGULATORY COMMISSION

STATEMENT OF ALLISON M. MACFARLANE

Ms. MACFARLANE. Thank you very much.

Chairmen Whitfield and Shimkus, Ranking Members Rush and Green, and members of the subcommittees, I am honored to be here before you today in my first congressional appearance as chairman of the U.S. Nuclear Regulatory Commission.

I am pleased to join my fellow commissioners to discuss the critical policy issues facing our agency. I have had the opportunity and privilege to begin working with Commissioners Svinicki, Apostolakis, Magwood, and Ostendorff. They are all talented professionals with a rich and diverse set of experiences. I am looking forward to collaborating with them and forming a collegial relationship and service to the country and the mission of the agency.

I would like to take a moment to address my leadership style and the approach I will take as chairman. I have already begun to reach out to my fellow commissioners to lay the groundwork for a strong working relationship, and I look forward to seeking and receiving their advice on consequential matters facing the agency. I am committed to maintaining open lines of communication and a respect for their views and best judgment. I believe that by working together collegially, the product of our efforts as a commission will be stronger and more protective of the public interest.

To execute their responsibilities effectively, my colleagues must have access to unfettered and timely information, and I will ensure that they are fully and currently informed.

One of my responsibilities is to ensure that the Commission's policy direction is being carried out in the most effective and efficient manner to support the mission. While the commitment and capability of the executive director of operations and his senior management team is impressive, the chairman must be in the position to monitor staff performance and verify that mission responsibilities are being met effectively. I look forward to working with the EDO to find the right balance between our respective roles.

Finally, I embrace the NRC's organizational values that are intended to guide every action taken by agency personnel. These values are integrity, service, openness, commitment, cooperation, excellence, and respect. I support the commitment to an open, collaborative work environment that encourages all employees and contractors to promptly speak up and share concerns and differing views without fear of negative consequences. I believe these values are worthy of highlighting as we reinforce our agency's focus on its critical mission of safeguarding the public's health, safety, and security and protecting the environment.

This is especially valuable at a time when the agency is dealing with a wide array of critical safety matters. We continue to focus on implementing the important lessons learned from the Fukushima Dai-ichi accident. The NRC continues to believe that our Nation's nuclear fleet is safe and not facing imminent risk from a similar accident. However, the Fukushima disaster clearly offers lessons to be learned.

I look forward in this context to working with my colleagues to establish safety measures derived from the recommendations by the NRC Near-Term Task Force. The staff has prioritized these recommendations into three tiers. In March, the Commission approved the first tier of actions for the staff to issue as immediately enforceable orders. We also issued requests for information to our licensees to help inform the staff as we proceed in developing the Tiers 2 and 3 measures. This is a substantial amount of progress in a short time, and the Commission looks forward to continuing to work with the staff to address remaining Fukushima-related lessons.

In addition, the NRC has made significant strides in several other areas this year. We issued the first two new reactor licenses in over 30 years—the Vogtle site in Georgia and the Summer site in South Carolina. We also authorized a new design certification for the AP–1000 reactor, four new uranium recovery licenses, and a license for the AREVA Eagle Rock centrifuge enrichment facility. We anticipate more applications and decisions being made in the next few years in all these areas.

With all these new developments, the NRC continues its responsibility for making the safety and security of our current operating nuclear fleet by performing thousands of hours of inspections at plants and material sites. On the whole, our Nation's nuclear power plants have performed well, and where issues have arisen, the agency has moved expeditiously to resolve any problems.

We are always working to bring transparency to our operations and maintain strong relationships with our stakeholders and the public. It is these accomplishments that demonstrate time and again the level of professionalism among the NRC staff. I am proud to be a part of this agency and I look forward to working with my fellow commissioners and the staff in the coming months.

Thank you for this opportunity to appear before you today. I am happy to answer any of your questions.

[The prepared statement of Ms. Macfarlane follows:]

WRITTEN STATEMENT

BY ALLISON M. MACFARLANE, CHAIRMAN

UNITED STATES NUCLEAR REGULATORY COMMISSION

TO THE

HOUSE COMMITTEE ON ENERGY AND COMMERCE

SUBCOMMITTEES ON ENERGY AND POWER, ENVIRONMENT AND THE ECONOMY

JULY 24, 2012

Chairman Whitfield, Ranking Member Rush, Chairman Shimkus, Ranking Member Green, and Members of the Subcommittees, my colleagues and I are honored to appear before you today on behalf of the United States Nuclear Regulatory Commission (NRC). Thank you for providing the first hearing opportunity with me as Chairman. Commissioner Apostolakis has asked me to convey his regrets that he was not able to attend today. I believe I speak for all of us on the Commission when I say that I hope that this is the start of a positive working relationship. As we do on the Commission, those of you on this Committee take your oversight role seriously. We respect and welcome that.

Since this is my first time appearing before you, I would like to briefly describe my management style to give you a sense of how I am approaching my new role. My approach to management and to accomplishing work is to operate in a collaborative and collegial manner, always reaching out to others for input and ideas. In the past, I have worked with people with diverse backgrounds and views, most recently as a Commissioner on the Blue Ribbon Commission on America's Nuclear Future. I worked there to forge consensus on the issues we tackled. Toward that end, at the NRC, I have already begun to meet regularly with my Commissioner colleagues, to seek their thoughts on major issues facing the agency, and to benefit from their expertise.

I am honored to be working with Commissioners Svinicki, Apostolakis, Magwood and Ostendorff. I appreciate the warm welcome they have offered me, and I look forward to continuing to forge a collegial relationship with them. Since my nomination, confirmation and subsequent swearing in, I have also had the opportunity to meet a number of the dedicated staff at the NRC, who have begun to provide me with briefings on some of the important issues before the Agency. While I was aware of the staff's stellar reputation, these briefings have reinforced my observations about both the quality of the NRC staff and their strong commitment to the Agency's mission.

I make this commitment to you today: I will devote all my energies to serving on the NRC with the attributes that I consider important to good governance – openness, efficiency and transparency. I will make a strong commitment to collegiality at all levels. An agency endowed with the public trust such as the NRC requires a respectful working environment to assure its integrity.

Today I would like to start with an update on the NRC's implementation of safety enhancements based on our review of the Fukushima Dai-ichi nuclear accident, and then move into an overview of the NRC – some recent accomplishments, and the challenges that lie ahead of us.

With everything that we have assessed to date, the Commission continues to believe that there is no imminent risk from continued operation of existing U.S. nuclear power plants. At the same time, the NRC's assessment of insights from the events at Fukushima Dai-ichi leads us to conclude that additional requirements should be imposed on licensees to increase the capability of nuclear power plants to mitigate beyond-design-basis extreme natural phenomena.

The Commission has approved the staff's prioritization of the recommendations of the Near-Term Task Force ("Task Force") into three categories, or tiers. Tier 1 consists of actions to be taken without delay, and these actions are underway. Tier 2 is the next set of actions that can be initiated as soon as critical skill sets become available and pertinent information is

gathered and analyzed. Tier 3 recommendations require that the staff conduct further study or undertake shorter-term actions first.

On March 9, the Commission authorized the NRC staff to issue three immediately effective Orders to U.S. commercial nuclear reactors. These Orders address what the NRC determined to be the recommendations from the agency's Japan Near-Term Task Force Report issued in July 2011 that could be implemented without delay. The orders, issued by the staff on March 12, require several things:

1) Licensees must develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities following a beyond-design-basis extreme natural event.
2) Licensees with BWR Mark I and Mark II containments must have a reliable hardened vent to remove decay heat and maintain control of containment pressure within acceptable limits following events that result in the loss of active containment heat removal capability or prolonged station blackout.
3) All operating reactors must have a reliable indication of the water level in spent fuel storage pools.

For all three of these Orders, licensees are required to submit their plans for implementing these requirements to the NRC by February 28, 2013, and complete full implementation no later than two refueling cycles after submittal of a licensee's plan or December 31, 2016, whichever comes first. Additionally, licensees are required to provide periodic status reports so that the staff can monitor their progress in implementing the orders and take prompt and appropriate regulatory action, if necessary.

In addition to the three Orders issued on March 12, licensees were also issued a "request for information" that includes the following:

1) Licensees were asked to perform and provide the results of a reevaluation of the seismic and flooding hazards at their sites using current NRC requirements and

guidance, and identify actions that are planned to address vulnerabilities. The results will determine whether additional regulatory actions are necessary (e.g., ordering plant modifications).

2) Licensees were requested to develop a methodology and acceptance criteria and perform seismic and flooding walkdowns. We expect any performance deficiencies that are identified would be addressed by the site's corrective action program. Licensees were asked to confirm that they will be using the walkdown procedures jointly developed by the NRC and industry or provide alternative, plant-specific procedures.

3) Licensees were requested to assess the ability of their current communications to perform under conditions of onsite and offsite damage and prolonged loss of alternating current (AC) electrical power. Licensees also were requested to assess the plant staffing levels needed to respond to a large-scale natural event and to implement strategies contained in the emergency plan.

The remaining near-term recommendations comprise two rulemakings addressing station blackout and integration of emergency procedures. The Commission directed the use of an Advance Notice of Proposed Rulemaking for the station blackout rulemaking to allow for early stakeholder involvement and formal comments. The Commission also designated the station blackout rulemaking as a high-priority activity with a goal of completion within 24-30 months from October 2011. The emergency procedures integration rulemaking also used an Advance Notice of Proposed Rulemaking to solicit early stakeholder input. These notices were issued in March and April respectively.

Going forward, we will continue stakeholder interaction to support any necessary guidance development activity. Beyond that, we will continue our ongoing efforts on the highest priority, near-term rulemakings.

Regarding Tier 2 recommendations, we anticipate beginning that work once we collect information from Tier 1 activities that is required in order to address Tier 2 recommendations, and we are able to reallocate critical staff resources previously devoted to Tier 1 activities. For example, the review of other external hazards will begin when resources currently being applied to the flood hazards assessments become available.

We are making good progress. My colleagues on the Commission and I look forward to continuing to hear from the NRC staff as we all tackle the remaining work related to lessons-learned from Japan.

The NRC staff has done an outstanding job of not only making good progress on work related to lessons-learned from Japan but also on continuing to ensure the safe and secure operation of all our existing licensed facilities. The Commission never loses sight of the fact that our effectiveness as a safety and security regulator depends first and foremost on the staff's hard work and dedication.

The NRC once again scored among the top tier of Federal agencies in the 2011 Best Places to Work in the Federal Government rankings, in a survey conducted by the Partnership for Public Service. While ranking number two overall, the NRC scored number one in all four major indices, including leadership and knowledge management, results-oriented performance culture, talent management, and job satisfaction. These rankings were determined through an analysis of the 2011 Federal Employment Viewpoint Survey conducted by the Office of Personnel Management. As Chairman, one of my priorities will be to assure that NRC remains a top-ranked Federal agency.

At the agency, we knew that the Fukushima Dai-ichi nuclear emergency in Japan would raise substantial new challenges. During the past year, however -- in addition to the emergency in Japan -- a number of natural disasters in the United States, including flooding in the Midwest in June, the August 23rd earthquake in Virginia, as well as hurricanes and tornadoes, created additional pressures. These natural disasters required close coordination with states, federal

agencies and licensees, as well as significant public outreach and involved the efforts and expertise of numerous staff at the NRC's headquarters and regional offices.

During the past year, the NRC staff has performed thousands of hours of inspections at nuclear power plants and materials sites. The agency has taken hundreds of enforcement actions, reviewed more than a thousand licensing actions and tasks, and issued a number of proposed and final rules. A final Safety Culture Policy Statement was issued, establishing for the first time the Commission's expectations for individuals and organizations involved in NRC-regulated activities to establish and maintain a positive safety culture proportionate to the safety and security significance of their activities.

While many plants performed very well during the past year, there is currently one plant in a shutdown condition due to significant performance concerns, and one plant in Column Four, on a five-column scale, of the Reactor Oversight Process Action Matrix after experiencing issues that the NRC views as safety significant. There are three plants in Column Three, which indicates declining performance, 12 plants in Column Two, and the remaining 87 plants are in Column One. The NRC conducted 21 special inspections during 2011—a greater number than at any point in recent memory.

There are currently two units in extended shutdowns -- Fort Calhoun and Crystal River. Two units at the North Anna plant were in extended shutdown last year due to the August 23rd earthquake in Virginia. They are now successfully in operation again. In addition, the two units at the San Onofre Nuclear Generating Station have been shut down since the beginning of the year due to problems with tube wear in their new steam generators. On March 27th, the NRC issued a Confirmatory Action Letter documenting actions that Southern California Edison officials have agreed to take related to unusual wear on steam generator tubes prior to restarting both units. While, in its current assessment of industry trends, the NRC staff has not identified any statistically significant adverse trends, we continue to closely monitor these trends.

On the licensing front, the NRC staff completed the safety and environmental reviews of the first two new reactor combined license applications for the Vogtle site in Georgia and the Summer site in South Carolina. The Commission held mandatory hearings on both applications. Subsequently, the NRC staff issued the first new Combined Licenses for two units at the Vogtle site on February 10, and issued Combined Licenses for two units at the Summer site on March 30, 2012. The staff also issued the Design Certification for the AP1000. Among the existing reactor fleet, the NRC staff issued seven reactor license renewals. They also successfully completed the review and approval of two pilot applications for voluntarily transitioning to National Fire Protection Association 805 -- a risk-informed, performance-based standard for fire protection at nuclear power plants -- and worked with stakeholders to establish a submittal and review schedule for 29 anticipated transition applications.

The NRC staff issued three new uranium recovery licenses and authorized the restart of one such facility. The NRC staff is currently reviewing two applications for expansions of current facilities and two applications for new facilities, while continuing to receive and review license renewal applications for existing uranium recovery facilities. We are expecting a total of 27 applications for new uranium recovery facilities, expansions, and restarts through 2013.

The NRC staff issued a license for the AREVA Eagle Rock centrifuge enrichment facility to be built in Idaho, the first such license approval issued in almost 5 years. In late February 2012, we issued the Safety Evaluation Report and Final Environmental Impact Statement for the GE-Hitachi Global Laser Enrichment license application to construct a laser-based enrichment facility in Wilmington, NC, and our Atomic Safety and Licensing Board held a hearing on the application earlier this month.

In line with our responsibilities to ensure the safety and security of nuclear materials, we continued implementation of the License Tracking System and the National Source Tracking System. We also issued a final policy on the protection of sealed radiation sources containing

radioactive cesium chloride, which are used in blood irradiation, bio-medical and industrial research, and calibration of instrumentation and radiation measuring instruments.

We continued to focus on resolving long-standing safety issues such as Generic Safety Issue -191, concerning the potential for the blockage of pressurized water reactors' containment sump screens, due to debris accumulation. In addition, we recently issued (with our partners at the Electric Power Research Institute and the Department of Energy) a new seismic model that will be used by nuclear power plants in the central and eastern United States for seismic re-evaluations.

Cybersecurity is a serious concern for all agencies across the Federal government. In 2011, we approved cybersecurity plans for all nuclear power plants and established an implementation plan to have all plants at a high level of cyber protection by the end of 2012. A cybersecurity inspection effort at reactor facilities will commence in 2013.

Approximately 30 NUREGs - reports or brochures on regulatory decisions, research, investigations and other technical and administrative information - were published on a wide variety of topics, such as groundwater contamination and the effect of neutron irradiation on the internal parts of reactor cores.

In October 2010, the NRC hosted the first Integrated Regulatory Review Service mission to the United States to assess our regulatory infrastructure against international safety standards and good practices. The mission was coordinated by the International Atomic Energy Agency and concluded that the NRC has a well-established national policy and strategy for nuclear safety. Earlier this month, the NRC requested that the International Atomic Energy Agency conduct a follow-up mission in the United States in 2014 that would focus on the NRC's actions in response to the recommendations and suggestions contained in the October 2010 mission report and on the NRC's actions in response to the accident at the Fukushima Dai-ichi nuclear power plant site.

Transparency and openness are part of our formal NRC organizational values, and they are integral guiding principles in everything we do, both internally and externally. After the challenges we have faced over the past year, and the bright spotlight that has been shined on nuclear regulation, nuclear safety, and nuclear power plants by the Congress, the media, and the public, the NRC continues to be accessible and open, to make sure that all of our stakeholders understand what we are doing and why we are doing it.

The NRC has held more than one thousand public meetings across the country throughout the past year, addressing a full range of NRC issues. The agency's public website has been redesigned to improve navigation, content, and accessibility. We have also substantially improved our web-based document management system to enable the public to more easily and quickly access all public documents. In addition, the agency has successfully begun to utilize social media tools - including a public blog, Twitter, and YouTube accounts - to enhance our outreach efforts.

As we have worked to fulfill our responsibilities for our safety and security mission, we have also been working to increase our effectiveness and efficiency as an agency. Construction of our new third headquarters building, Three White Flint North, is on schedule and we expect to begin occupying the building in late 2012. One of the valuable lessons learned after Three Mile Island was the importance of being co-located. The new building will allow headquarters staff to once again work in one central location to better support the agency's critical health and safety mission. None of the agency's many achievements during the past year could have happened without support from the entire NRC team - those working on budget, finance and legal issues, personnel and administrative support, and technical issues.

By no means does my testimony cover the full breadth of the agency's wide-ranging activities. I am still learning from my colleagues and the NRC staff of the many accomplishments this year. But these accomplishments are indicative of an agency with a

strong focus on our mission, and the staff's strong commitment, day-in and day-out, to maintain nuclear safety and security.

As we look forward, the agency expects to meet new and unanticipated challenges. We are confident that the NRC will continue to ensure the safe and secure operation of the existing licensed facilities and materials, while also ensuring the safe and secure construction and operation of new nuclear power plants, possibly including small modular reactors and other nuclear facilities.

We have many important issues on our plate right now - both internally to strengthen our organization and externally to continue ensuring the safety and security of our nation's nuclear facilities and materials. We are committed to prudently managing the resources entrusted to us by the American people, taking full advantage of all the talents and expertise that our diverse team brings to the table, and keeping our focus - first and foremost - on public health, safety, and security.

Chairman Whitfield, Ranking Member Rush, Chairman Shimkus, Ranking Member Green, and Members of the Subcommittees, this concludes my formal testimony today. Thank you for the opportunity to appear before you. My colleagues and I would be pleased to respond to any questions you may have.

Mr. SHIMKUS. Thank you, Chairman. Right on the button on 5 minutes, so you were well prepared. So that is a good first start.

The chair now recognizes Commissioner Svinicki. You are recognized for 5 minutes.

STATEMENT OF KRISTINE L. SVINICKI

Ms. SVINICKI. Thank you, Chairman Shimkus, Ranking Member Green, Chairman Whitfield, Ranking Member Rush, and members of the subcommittees for the opportunity to appear before you today at this oversight hearing to examine NRC policy and governance.

I would like to begin by recognizing the early commitment of the Commission's new chairman, Dr. Allison Macfarlane, to forge a collegial relationship with each member of the Commission, which began even prior to her swearing in earlier this month and has continued since that time. I am appreciative of her reaching out to me, our fellow commissioners, and members of the NRC Senior Executive Service and staff. The tone she is setting is constructive and is a most welcomed opportunity to move forward in a positive manner.

Having joined the Commission in March of 2008, I arrived at an agency whose regulatory program is regarded as among the most informed and disciplined in the world. I am grateful to President Obama for having nominated me this year to serve a second term on the Commission. Having been confirmed just last month, I continue to pledge my efforts to advance the NRC's important work during this new term of service.

The tragic events in Japan in 2011 cast the NRC's work into even sharper relief for the American public. Nuclear technology is unique and its use demands an unwavering commitment to safety principles. This past March, the NRC issued a series of orders to nuclear power plant licensees requiring features to mitigate beyond design-basis extreme natural events, the installation of hardened venting systems at some plants, and enhanced spent fuel pool instrumentation. The NRC is also requiring nuclear power plant licensees to undertake substantial reevaluations of seismic and flooding hazards at their sites.

The NRC continues to develop and communicate the specific guidance for implementing these actions with input from nuclear operators, nuclear safety, and environmental interest groups, and other members of the public. This work is carried out through the committed efforts of the women and men of the NRC in advancing the NRC's mission of ensuring adequate protection of public health and safety and promoting the common defense and security.

I would like to convey publicly my gratitude to the NRC staff for the work they do and for assisting my efforts to advance our shared goals.

Chairman Whitfield, Ranking Member Rush, Chairman Shimkus, Ranking Member Green, and members of the subcommittees, I appreciate the opportunity to appear today and look forward to your questions. Thank you.

Mr. SHIMKUS. Thank you. The chair now recognizes Commissioner Magwood, sir, for 5 minutes.

STATEMENT OF WILLIAM D. MAGWOOD IV

Mr. MAGWOOD. Thank you. Chairmen Whitfield and Shimkus, Ranking Members Rush and Green, members of the subcommittees, it is a pleasure to be before you today to discuss the work of the Nuclear Regulatory Commission.

During the 2 ½ years I have served on this commission, we have been faced with historic challenges and significant change. We have authorized electric utilities to begin construction on the first new nuclear power plants since the 1970s. We have also licensed the construction and operation of the first uranium enrichment facilities in this country not constructed by the government. At the same time, we have also seen troubling errors in the application of radioactive sources for medical treatment at the Philadelphia Veterans' Affairs Medical Center, and in the last year, we responded as nuclear power plants were rocked by earthquakes, threatened by floodwaters, buffeted by hurricanes and tornadoes.

In a very real sense, the key attribute of a safety regulator is the ability to process experience into learning and learning into action. All these events and many others provide us lessons that must be learned and applied to make us a better regulator. Fortunately, in my experience, the NRC has proven to be extraordinary in its ability to learn from experience and find practical ways of assuring safety.

For this current Commission, the greatest challenges we face arise from the urgent need to continue to learn from the lessons of the tragedy in Japan at the Fukushima Dai-ichi plant. The Commission has already unanimously approved a set of high-priority initiatives that are designed to enhance the defense in depth at U.S. plants and enable operators to respond more effective to beyond design-basis events.

We still have much work to do but the steps taken thus far represent a very significant increase in safety based on the Fukushima experience. While the technical and regulatory lessons are important, it is my observation that the greatest lesson Fukushima holds for any safety regulator is the fleeting nature of credibility. A regulator who loses credibility and public trust is a regulator that has failed its mission. If a regulator is not seen as truthful, credible, and reliable with a clear focus on the health and safety of the public, it cannot function nor can the nuclear facilities under its oversight. Those who question this need only observe the tens of thousands of Japanese citizens who marched in Tokyo this past weekend.

It is in that respect that I welcome Chairman Macfarlane to this commission. I look forward to working with her to assure that the NRC continues its long tradition of technical excellence, veracity, and credibility. In the very short time she has been with us, I believe she is off to an excellent start.

This commission and the agency as a whole will face many difficult impactful decisions in the coming weeks and months. It does not overstate the matter to tell you that these decisions could determine the future shape of nuclear regulation in this country for many years to come. I look forward to working with my colleagues on the Commission, our many stakeholders, and with your subcommittees as we address the challenges ahead.

I look forward to today's discussion and look forward to your questions. Thank you.

Mr. SHIMKUS. Thank you.

Now, I would like to recognize Commissioner Ostendorff. And before that, it is important for me to use the bully pulpit to make sure that I put on record, beat Navy. We have priorities here in this country, and that Army-Navy rivalry is one of the biggest.

So before you start, beat Navy. And you are recognized for 5 minutes.

STATEMENT OF WILLIAM C. OSTENDORFF

Mr. OSTENDORFF. Chairman, I must call to your attention the record of the past decade. But I have a son who served as an Army officer, did two combat tours in Iraq and was there in a very busy time period, so I have a very soft spot in my heart for the Army.

Chairman Shimkus, Ranking Member Green, Chairman Whitfield, Ranking Member Rush, members of the committee, I appreciate the chance to be here before you today. It has been a little bit over a year since I had the opportunity to appear before this committee.

Last July, the NRC Fukushima Task Force concluded that a sequence of events in the United States similar to that experienced in Japan is unlikely. The task force also significantly concluded that there is no imminent risk from continued operation of U.S. nuclear power plants. I firmly believe those conclusions offered in July of last year remain true and solid today. Nevertheless, I continue to support the NRC in its efforts to strengthen our regulatory framework where appropriate in response to Fukushima.

Along with my colleagues at this table, I commend the NRC's dedicated staff of professionals. I also appreciate the work of my colleagues at this table.

Earlier this year, along with my other colleagues, I voted to approve the issuance of three orders associated with Fukushima actions. Orders related to acts of mitigation strategies, containment vent systems, and spent fuel pool instrumentation based on lessons learned from Fukushima. I continue to support the information-gathering and analysis necessary to take additional actions as appropriate to enhance safety. We need to continue to pursue these efforts in a prioritized, thoughtful manner.

But even as we dedicate resources to implementing the recommendations and lessons learned from Fukushima, the Commission and our staff continue to be successful in performing our other vital work. Effective safety oversight of reactor materials licensees remains our preeminent goal.

And as mentioned by colleagues to my right, earlier this year in February and March, we issued the first new reactor licenses for construction and operation at the Vogtle and Summer plants. I note that the additional Fukushima-related requirements that came from the Commission were imposed in these new construction reactors. I had the chance to witness the construction of these two sites just 2 weeks ago, and I am encouraged by the progress that I saw.

Finally, I join my colleagues in warmly welcoming Dr. Macfarlane to the Commission. I fully expect that the collegiality

and effectiveness of the Commission will benefit from her new leadership. And I state with great confidence today that she is off to a very strong start as chairman.

I appreciate this committee's oversight role and I look forward to your questions. Thank you.

Mr. SHIMKUS. Thank you.

Now, I recognize myself for 5 minutes for the first opening round of questions.

This is to the Commission as a whole. My district is home to Honeywell's uranium conversion plant. It is the only one of its kind in the U.S. This past May, the NRC reconfirmed as part of a performance review that the plant is operating safely. Two months later, Honeywell is in the process of laying off 228 employees due to a prolonged shutdown to address recently discovered seismic issues. I am concerned for both the safety of the nearby residents but also for the livelihoods of those employees. What I am struggling to understand is this: was the NRC correct in May when they indicated the plant is safe? If so, then shouldn't there be a way to make safety improvements while minimizing the disruption to the plant's operation and the lives of the employees? Chairman?

Ms. MACFARLANE. Thank you for that question, Chairman.

You will have to bear with me. I have been on the job 2 weeks and I am struggling to understand all of the different issues that are before us. But I am familiar with the Honeywell issue and I am familiar with the fact that the order, the confirmatory action letter that was issued to the Honeywell plant came out of Fukushima-related inspections. And that is my current understanding of the situation. So it was perhaps separate from what you are talking about.

Mr. SHIMKUS. Commissioner Svinicki?

Ms. SVINICKI. Chairman, as Chairman Macfarlane indicated, the NRC did order some additional in-depth inspections at facilities, including fuel-cycle facilities at Honeywell after the events in Fukushima. As a result of that, there were indications that the amount of material that could hypothetically be released in a seismic event had been underestimated previously, and that is under further analysis by both Honeywell as the operator and the NRC staff at this time. There is the potential for facility modifications to be needed and my understanding is that the issue of what measures might be needed is under very active analysis right now.

Mr. SHIMKUS. So just a brief follow-up. So you are saying that the May analysis may not have been correct and you are not attributing that to Fukushima changes?

Ms. SVINICKI. My understanding is that the situation that the facility is in right now is an outgrowth of the more in-depth Fukushima-related inspection but it is against the current design basis of the facility.

The question of whether or not this could have been discovered previously is a very complex one, Congressman, and I think we owe you, as we complete our analysis, a further answer on that.

Mr. SHIMKUS. Yes. And more to the 228 employees who no longer have employment right now.

Commissioner Magwood?

Mr. MAGWOOD. Yes, I think both of my colleagues have given you a very good summary of the situation. The only thing I would add is that a portion of the difficulty we face with the Honeywell facility is that it is a very old facility that actually predates some of our regulatory structure. And while we have a lot of certainty that it is being operated safely, some of the criteria that one might apply today were not available when this plant was first built. So, for example, there are no criteria guiding whether the buildings housing the process facilities should have any earthquake resistance, for example. We don't have that requirement in place for this facility. But what we do have in place is a requirement that in the event of a credible accident that the public be protected.

And as Commission Svinicki pointed out, in the analysis to decide whether the public is protected, you have to make an assumption as to how much material could possibly be released, and that appears to have been an error made in the process to determine how much could have been released. We now believe much more could be released than had been previously assumed, and that is why this change has been——

Mr. SHIMKUS. Yes, let me reclaim my time because I have got 3 and I am only going to get one question in.

So let me to go a quote by you, Commissioner Magwood, that said, "it does not, as a general matter, advance the cause of safety to inundate licensee staff with multiple actions when a more thoughtful process might achieve the agency's safety goals without straining licensee resources." And this is the issue about the additional work, time, effort, energy that might take people off the prize of the real concerns on safety. What are your comments to that? That is your comment, Commissioner Magwood. Why don't you follow up on that?

Mr. MAGWOOD. Well, just very briefly and give others a chance to comment. My belief is that it is very important whenever we take a regulatory action that it be done in a prioritized fashion. Obviously, every facility is very different, and we should have an approach that recognizes that what may be a threat to one facility may be a much lesser threat to a second facility. And then as we are approaching our regulatory implementation, we ought to take that into consideration.

Mr. SHIMKUS. Does everyone generally agree with that analysis? And I see everyone shaking their head yes, and we appreciate that.

With that, my time is expired. Chair recognizes the ranking member, Mr. Green, for 5 minutes.

Mr. GREEN. Thank you, Mr. Chairman.

On June the 8th, the U.S. Court of Appeals in DC Circuit Court called NRC's evaluation of the risk of spent nuclear fuel deficient, noting the Commission did not examine the environmental impact, the impacts of failing to license a permanent repository, or environmental risk. The court instructed the NRC to perform a detailed evaluation and possible risk posed by the extent of storage pools in reactor sites such as leaks and fires or explain why such an evaluation is not needed.

When do you plan to start this evaluation? And what do you expect it to look like?

Ms. MACFARLANE. We are in the process of considering various options of what to do with waste confidence decisions right now, and these options are being vetted. And I can't say more because the issue is an active adjudicatory matter.

Mr. GREEN. Do you have any idea on a time frame?

Ms. MACFARLANE. We are going to be working part of this right now, immediately.

Mr. GREEN. OK. On June the 18th, the NRC received a petition to suspend final decisions on all pending reactor licensing proceedings pending revisions to be remanded about the Waste Confidence Rule. In its response, NRC stated, "the commission staff agrees that no final decision to grant a combined license, operating license, or renewed operating license is to be made until the NRC has appropriately disposed of the issues remanded by court." Is it true that you will not make any final decision on a license until you have addressed the problems with the Waste Confidence Rule?

Ms. MACFARLANE. Again, I believe this is an adjudicatory matter and we can't say more until we have taken a vote.

Mr. GREEN. OK. In the 16 months since the nuclear accidents in Japan, there has been a vast amount of information published about the event, the causes, the action taken by the global nuclear energy industry. With the benefit of this information, have your initial conclusions on the cause of accidents or the priority of the regulatory actions associated with Fukushima changed?

Ms. SVINICKI. Congressman Green, the NRC staff remains very cognizant of those international reports as they are issued and they do have the potential to further inform our response in the United States to Fukushima. So I would characterize to you that we stay very engaged in reviewing those results and want to have the most risk-informed process that we can to respond to Fukushima going forward.

Mr. GREEN. You know, our concern is we want to make sure—it was a terrible tragedy in Japan. We just want to make sure we don't reinvent the wheel, that we see what the problem was there.

You issued three orders and a request for information on flooding, seismic and emergency preparedness in March. Based on the information that is available in the past 12 months, are there any other areas where orders may be necessary?

Ms. MACFARLANE. I believe this is to be decided. We are working through the different tier activities, and as we get to Tier 2 and Tier 3 activities, we may decide on new orders.

I invite my colleagues to comment.

Ms. SVINICKI. I would just add that the orders that you described were considered by the Commission and the NRC staff to be those that provided the greatest potential for risk reduction, so they were the highest priority items.

Mr. OSTENDORFF. I wanted to add, Congressman, to echo Commissioner Svinicki's comments that not all of these recommendations from the task force are of equal safety significance. There are some that are more urgent, some less urgent, and some that still need to be studied. And I will just tell you from where we sit, a year and 4 months after Fukushima, I think the thoughtful prioritized approach that the agency has taken as a result of the staff's recommendations has been very supportive of safety.

Mr. GREEN. So there are other orders being looked at, just not the higher priority that these three orders, is that correct? If you will say yes so the mike can pick it up.

Mr. OSTENDORFF. Well, I would say that we are still reviewing. As Chairman Macfarlane mentioned, there is a Tier 1 set of issues, the highest priority. We are still evaluating recommendations on Tier 2 and Tier 3.

Mr. GREEN. There are a number of recent reports and articles critical of the Japanese nuclear industry and government emergency preparedness plans and activities. Are there differences between our regulatory requirements and those of Japan with respect to emergency preparedness than those of Japan?

Mr. MAGWOOD. Yes, actually, there are very significant differences in our approaches. For example, in the United States, each nuclear plant is required to perform a full-scale emergency planning exercise once every 2 years. That requirement doesn't exist in Japan. And so we practice emergency planning very rigorously. It is a very important part of our defense-in-depth. And I think this is something that in Japan they are giving a lot of careful thought to today.

Mr. GREEN. Mr. Chairman, I know I am almost out of time. A number support expansion of nuclear power. There is lots of things in the market—low-price natural gas, lots of other issues—but if we are going to deal with long-term, we need to have some transparency, which the chair talked about, but also some guidelines so the industry can have some certainty to make sure they go forward.

Mr. Chairman, I thank you for my time.

Mr. SHIMKUS. And the gentleman yields back his time.

The chair now recognizes the chairman of the Energy Subcommittee, Mr. Whitfield, for 5 minutes.

Mr. WHITFIELD. Thank you, Mr. Chairman.

And thank you all for your testimony.

As you know, the U.S. is still struggling to rebuild its economy and to lower unemployment, and energy is always a key component in our ability to compete in the global marketplace. And of course, cost is a factor that we always look at, the cost of producing energy. Regulations certainly affect cost. And I talked about in my opening statement how the Japanese Diet's investigation really was quite complimentary of the U.S. regulatory system because we had put in place certain safety safeguards that certainly Japan did not have. And as Mr. Ostendorff mentioned, you all adopted three emergency orders last summer. And it is my understanding that it is not required that you do a cost-benefit analysis and it is not required that you do some sort of a technical basis, rationalization for the decision. And I am assuming that in those three orders there was not a cost-benefit analysis or a technical analysis. Is that correct?

Ms. MACFARLANE. That is correct. Two of them were deemed adequate protection issues and one was given an exemption.

Mr. WHITFIELD. Two were—I am sorry?

Ms. MACFARLANE. Deemed adequate protection issues.

Mr. WHITFIELD. OK.

Ms. MACFARLANE. I will let my colleagues expand on that.

Mr. WHITFIELD. Well, then, Chairman Macfarlane and each of the commissioners, let me ask this question. I know you are looking at different tiers now, Tier 2, Tier 3, Tier 4, or there may be additional orders for post-Fukushima safety improvements. Do you believe that any future post-Fukushima actions—it would be beneficial to have a rigorous technical basis and a cost-benefit analysis?

Ms. MACFARLANE. I believe we have to consider all potential actions on their own merits as they come through, and we will decide at that time whether they are an adequate protection issue or not. And, you know, it depends. There is a lot of information we need to gather and examine about each of these different issues in the different tiers.

Mr. WHITFIELD. Ms. Svinicki, do you——

Ms. SVINICKI. Chairman Whitfield, I don't disagree with Chairman Macfarlane that each regulatory action will be assessed based on the circumstances, but as a general matter, in a number of my votes on the NRC's post-Fukushima actions, I have indicated that after the highest priority potential risk reductions are taken such as the three orders we just issued, that it is my personal view that we need to begin to return to the disciplined cost-benefit analysis because the subsequent and follow-on actions will likely not have the potential to achieve as significant of a risk reduction. Therefore, I believe moving back into our back-fit rule and our cost-benefit evaluation is appropriate for that reason.

Mr. WHITFIELD. Mr. Magwood?

Mr. MAGWOOD. To some degree I agree with both of my colleagues on this because I do think that most of the actions that may follow should undergo a more rigorous analysis. But I also think that there may be some actions that are in the Tier 2 and Tier 3 category that are adequate protection issues and ought not to go through that evaluation. So I agree with Chairman Macfarlane's statement that we should look at each on one an individual basis and make a judgment as we go.

Mr. WHITFIELD. Mr. Ostendorff?

Mr. OSTENDORFF. Chairman Whitfield, I would just add that I think the commission members here at this table that have been voting in these matters, my two colleagues to the right and Commissioner Apostolakis, who is not here, have very clearly stated in our voting record on Fukushima issues that we need a technical analysis to underpin any recommendations for taking action. And I think our staff has done that.

Mr. WHITFIELD. OK. Well, thank you very much.

And I yield back the balance of my time.

Mr. SHIMKUS. The gentleman yields back his time.

The chair now recognizes my colleague from Illinois, Mr. Rush, for 5 minutes.

Mr. RUSH. Mr. Chairman, back in May, my office was notified that the NRC was recently honored by U.S. Black Engineering Information Technology Magazine as one of the government agencies considered most supportive of the engineering departments of historically black colleges and universities. The survey was a result of a poll among deans of accredited HBCU engineering programs and corporate-academic alliance Advancing Minority Interests in Engineering, which is its name, the Alliance's name. Supporting STEM

education and especially for minorities and women is one of my top educational priorities.

I would like to hear more about some of these programs that the NRC has been involved in in this particular area. So I would ask if any of you could discuss some of the agency's work in supporting the HBCUs' engineering program. And can my office be of assistance? And how can we be of assistance especially in areas of recruiting in STEM areas? We know that future scientists and engineers of tomorrow, a lot of them could and should come from HBCUs. So just take a moment. I am aware of the time and I do have some other questions. So please be as brief as you possibly can.

Ms. MACFARLANE. Let me just say that in fiscal year 2011, the Minority Servicing Institutions Grants Program issued 26 grants, of which 15 were awarded to historically black colleges and universities and totaled over $1 million. And the program funded approximately $737,000 in stipends through the Research Participation Program. And as you noted, the NRC has been recognized as a top supporter based on a survey of deans from engineering schools for 4 consecutive years.

Mr. RUSH. Would you send myself, my office, and anyone else on the subcommittees the information in writing on that?

Ms. MACFARLANE. Absolutely, happy to.

[The information follows:]

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Office of Public Affairs Telephone: 301/415-8200
Washington, D.C. 20555-0001
E-mail: opa.resource@nrc.gov Site: www.nrc.gov
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NRC COMPLETES FY11 EDUCATION GRANT AWARDS

With the issuance this week of $2.8 million in grants to Minority Serving Institutions (MSI), the NRC has completed the awarding of approximately $12.4 million in grants to 91 higher education institutions for the 2011 fiscal year.

"This program has introduced thousands of students to the nuclear field and helps to prepare a workforce for the future," said Bill Borchardt, the NRC's Executive Director for Operations. "As a safety regulator, encouraging the next generation to learn nuclear issues is an important cornerstone in ensuring the availability of expertise to effectively carry out safety and security mission in coming years."

The MSI grants were awarded for projects and activities that include nuclear, science, technology and mathematic disciplines, research and development projects, human capital development, leadership and mentoring activities, education training programs and various types of assistance to 26 programs at 53 different institutions. MSIs include the Historically Black Colleges and Universities, Hispanic Serving Institutions and the Tribal Colleges and Universities located in 24 states, Puerto Rico and the District of Columbia.

Previously, an additional $9.6 million was awarded for faculty ($5.0M) and curriculum development ($4.6M) assisting another 44 programs at 38 different institutions, located in 28 states and the District of Columbia. These grants were awarded for nuclear education, curricula and faculty development.

Curriculum development grants programs covered the following disciplines: nuclear engineering, radiochemistry and radiobiology, health physics, materials and mechanical engineering, reliability and risk analysis, electrical engineering, safeguards and security, human factors, human reliability and fire protection engineering.

Grant proposals were reviewed against specific criteria by a panel comprised of NRC staff and qualified outside reviewers. The panel composition was diverse with most reviewers having both experience reviewing proposals for government agencies and advanced credentials in one of the five discipline areas identified in the solicitation. Each panelist had to certify that they did not have any conflicts of interest for the proposals they evaluated.

The contacts for more information on these grants are as follows: administrative questions contact: Sheila Bumpass, 301-492-3484 or Michael Mills 301-492-3621, Division of Contracts; technical questions contact Nancy Hebron-Israel 301-492-2231, or Tanya Parwani-Jaimes, 301-492-2308, Office of Human Resources; and Tuwanda Smith, Esq., 301-415-7394, Office of Small Business and Civil Rights.

The complete list of grants is posted on the NRC's website along with more information about grant opportunities. In addition, a copy of the NRC Grant Award documents is available publicly in the NRC Agencywide Documents Access and Management System (ADAMS). Help in using ADAMS is available from the NRC Public Document Room at 301- 415-4737 or 800- 397-4209.

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Mr. RUSH. Thank you very much.

In the 16 months since the nuclear accidents in Japan, there has been a vast amount of information published about the event, the causes and actions taken by the local nuclear industry. With the benefit of this information, have your initial conclusions on the cause of the accidents or on the priority of the regulatory actions associated with Fukushima changed? What are the top five most important actions being taken by the NRC staff and industry to improve safety based on the huge amount of information surrounding Fukushima?

Ms. MACFARLANE. Well, we have issued three orders and as well as some requests for information from our licensees. Those are the first actions that the NRC has done and now we are working through Tier 2 and Tier 3 activities.

Mr. RUSH. The 30 plus NRC actions that were approved by the NRC were based on a report that was drafted within 3 months of the accident and before any root cause or detailed timeline of events had been made public. Have you assessed the list of NRC actions against this vast array of information to ensure that the NRC staff and the industry are focused on issues that were the cause and that are safety-significant?

Ms. MACFARLANE. The staff is working very hard to understand the full suite of information available out there. They are keeping abreast of it and keeping up with their colleagues in other countries.

And I invite my other colleagues to comment as well.

Mr. OSTENDORFF. I would add, Ranking Member Rush, that I am going to simplify this a little bit. I think there are two main categories of Tier 1 actions that our staff has been working diligently to look at. One is the protection against external events such as a seismic event or flooding. And the second is, what are the mitigation strategies if you have an accident, for instance, if you have a loss of all power onsite? So those two high-level mitigation strategies and the protection against external events I think are the top two categories of all the myriad recommendations that came out of the task force. Those are the ones that are getting the highest priority.

Mr. SHIMKUS. The gentleman's time is expired.

Mr. RUSH. Thank you, Mr. Chairman.

Mr. SHIMKUS. I recognize the chairman of the full committee, Mr. Upton, for 5 minutes.

Mr. UPTON. Thank you, Mr. Chairman.

And I want to just reiterate to Chairman Macfarlane I do welcome some of your comments on your new role and I look forward to sitting down with you and getting to know you certainly a lot better in the weeks and months ahead and ensuring that we have a solid relationship. You have a very important job and we want to make sure that you have the resources to do your job and you do it in a very efficient way. And we are all pulling for you.

Commissioner Ostendorff, as you know the Palisades plant in my district is in Column 3 of the NRC's Reactor Oversight Program. Would you briefly describe for us what that means and what actions the NRC generally takes for plants in that column?

Mr. OSTENDORFF. Yes, sir. We have a reactor oversight process that goes from Column 1, which is the best operating plant, all the way down to Column 5, which is the worst operating plant status. And as a plant has more problems, there is increased oversight that occurs by the NRC staff at that plant. Currently, Palisades is in Column 3, which is basically the result of a substantial safety significance finding dealing with inadequate work instructions associated with DC power supplies that led to reactor scram and reactor trip. That was also accompanied by what is called a "White" finding of low to moderate safety significance that was associated with a service water pump coupling failure. As a result of those two items, Palisades is in this Column 3. It is the degraded cornerstone column. There is increased oversight. We expect our NRC team to be looking with the licensee at their corrective action program and the licensee's assessment of where their problems are. And we expect the next NRC close look at this to be coming sometime probably in September of this year.

Mr. UPTON. So is it your understanding and belief that Entergy and the owners, the operators of this facility, that they are taking all the right actions at this point?

Mr. OSTENDORFF. I think the final determination of that, Congressman, remains to be seen. I think so far Entergy has been communicating well with the NRC staff about what they are doing. Entergy on their own commissioned an external group to come in and do a safety culture assessment earlier this year. That has been reviewed by the NRC staff. Following inspection in September we will look at those details of the safety culture assessment.

Mr. UPTON. So in September you will review all this information and at that point would it be possible to make a determination to move them back to Column 2 or not?

Mr. OSTENDORFF. We go through an annual assessment process led by our executive director for operations, Bill Borchardt, and Bill is in the back row behind us here. And that is on an annual cycle that goes through—I am not sure exactly what the cycle is but typically those determinations are made in the spring, early summertime period. So I can't tell you exactly when a determination might be made as to whether or not that plant should or should not remain in Column 3.

Mr. UPTON. And you will literally have that information—you will be able to make that determination come September?

Mr. OSTENDORFF. Well, there would be a certain aspect that will be looked at September. This is the safety culture aspects that are believed to be part of the root cause, some of the concerns of that plant.

Mr. UPTON. And you will be sharing that with us I am sure.

Mr. OSTENDORFF. Yes, sir.

Mr. UPTON. And last question, is that early September?

Mr. OSTENDORFF. I don't have a specific date for that. We can get back to you if we have some more information about it.

Mr. UPTON. Thank you. I yield back.

Mr. SHIMKUS. The gentleman yields back his time.

The chair now recognizes the chairman emeritus, Mr. Dingell, for 5 minutes.

Mr. DINGELL. Mr. Chairman, I thank you for your courtesy.

These questions to Chairman Macfarlane. Madam Chairman, I have heard concerns related to the Part 52 licensing process for new facilities. It is my understanding that this process is intended to provide both a construction and an operating license through the same review and to streamline the previous Part 50 process. When the first round of Part 52 license applications came into the NRC in 2007 and 8, the stated goal by NRC was to complete these reviews in 36 months. Since that time, the time has been raised to 42 to 48 months. And now it seems that many are headed for 60-month review. This is occurring even as there are less applications in the review pipeline. My question to you, Madam Chairman, is the NRC committed to completing these reviews in an expedited manner? Yes or no?

Ms. MACFARLANE. The NRC is committed to completing these reviews as efficiently as possible.

Mr. DINGELL. Thank you.

Now, there has been frustration on the slowness of the relicensing process. Is the NRC committed to complete these relicensing reviews in an expedited manner? Please answer yes or no.

Ms. MACFARLANE. The NRC is committed to completing these relicensing reviews as efficiently as possible.

Mr. DINGELL. Thank you. Now, Madam Chairman, you were a member of the Blue Ribbon Commission that recommended working with the communities who might volunteer for a single waste storage site. How long would such a process take to finalize?

Ms. MACFARLANE. It is totally uncertain. It could take a few years or it could take decades. It entirely depends on the situation.

Mr. DINGELL. I am very little comforted but I think that is a fair answer.

Madam Chairman, can you tell us what would be the cost of this exercise?

Ms. MACFARLANE. The costs of working with the community?

Mr. DINGELL. Yes.

Ms. MACFARLANE. It entirely depends.

Mr. DINGELL. To finalize the process.

Ms. MACFARLANE. Again, it entirely depends, and it depends also in part on how much compensation is decided for the community and in what form that compensation would be.

Mr. DINGELL. Thank you, Madam Chairman.

Now, under current law, how many sites are authorized to be evaluated and licensed as a single storage site?

Ms. MACFARLANE. One.

Mr. DINGELL. One. Now, does the NRC currently have the funding to move forward to evaluate and license the Yucca Mountain facility? Yes or no?

Ms. MACFARLANE. My understanding is that there is some funding available——

Mr. DINGELL. I am sorry?

Ms. MACFARLANE [continuing]. To complete the license—my understanding is there is some funding available to complete the license review.

Mr. DINGELL. Some. Enough to complete the action?

Ms. MACFARLANE. That I am not completely certain, and I would invite my colleagues to——

Mr. DINGELL. Could you give us an answer for the record later or is——

Ms. MACFARLANE. Yes, certainly. Absolutely.

[The information follows:]

Congress did not appropriate any funding from the Nuclear Waste Fund for NRC in fiscal year 2012. NRC currently has $10.4 million available in unobligated carryover funds appropriated in prior years. This amount is insufficient to complete both the technical review and the proceeding, both of which are necessary to reach a final licensing decision.

Mr. DINGELL. All right, if you please.

Now, in the audience today, I have constituents of mine who are studying nuclear science at the University of Michigan, which is an institution I have the honor of representing. In its fiscal year 2013 budget request, NRC stated that it is not requesting funding for the Integrated University Program, which historically has been the sole provider of critical funding for both student and faculty development in the field of nuclear science. NRC states that this reflects the confidence that the nuclear industry will create incentives for students to enter nuclear-related programs.

Now, I have constantly watched the development of our technical, scientific, and engineering people. And I have always found that we are lagging a lot of other people around the world. I had two boys who were metallurgical engineers. We found that we are developing approximately 11 metallurgical engineers. The Chinese are developing about 11,000. Do you believe that there is a need to train nuclear engineers in this country and do you support the NRC's role in the IUP? Yes or no?

Ms. MACFARLANE. Excuse me, the——

Mr. DINGELL. In the IUP.

Ms. MACFARLANE. Right. Certainly as a scientist myself, I support education in science and engineering and I think that the NRC Commission also supports that strongly.

Mr. DINGELL. If you withdraw from this, however, I must assume that there will be no Federal money for this kind of exercise and that we will not be training the scientists, engineers, et cetera, that we will need in this area. Are we going to produce the scientists, engineers, and technicians that we need if we withdraw and if the NRC withdraws or are we not?

Ms. MACFARLANE. I would leave some of the funding of science and engineering education to you all.

Mr. DINGELL. My time is up. Thank you, Mr. Chairman. I have got my serious doubts that we will be doing so.

Mr. SHIMKUS. The gentleman's time has expired.

The chair now recognizes another chairman emeritus, Mr. Barton, for 5 minutes.

Mr. BARTON. Well, and there is only really one and that is Mr. Dingell. I am glad to be in the same sentence with him.

We are glad to have our new chairman of the NRC.

Mr. DINGELL. You know, this business of being chairman emeritus sounds mighty good but it really ain't much.

Mr. SHIMKUS. If the gentleman would yield to my colleagues who are in the lower levels waiting to ask questions, I still think it is very valuable.

Mr. BARTON. Well, I tend to echo Mr. Dingell. Take that and 50 cents, and in Texas, you get a Dr. Pepper. But it is good to be on the committee regardless of what the titles are.

Chairman Macfarlane, we are certainly glad to have you and I noticed that the previous questioners have all been unbelievably polite, which is somewhat unusual for this committee but not unique.

I would like to go into waters that are a little bit murkier. Your predecessor was not known for his collegiality with his fellow commissioners. In fact, there were some fairly rigorous attempts on his

behalf to withhold information and to manipulate the decision-making process. Would you care to give us your view on how you plan to manage the decision-making process and the information gathering and dissemination at the Commission?

Ms. MACFARLANE. Surely. I am committed to being as collegial as possible. I regard my fellow commissioners as my peer equals. And as such, I think they should have access to all the information I have access to. I am committed to sharing with them written information from my office, and I have directed my staff as well to be as open with their staffs.

Mr. BARTON. So you don't intend to use your position as chairman to withhold and in some ways shape the outcome of decisions? You plan to use the position to gather but to share on an equal basis whatever information comes to you as chairman? Is that a fair assessment?

Ms. MACFARLANE. That is a fair assessment. I believe that the intention of the Commission with five Commissioners is to act together. We certainly will not agree on every issue but that is not the intention of the Commission.

Mr. BARTON. OK. Now, some of the members may have asked a storage question, but there is an obvious—I don't want to say elephant in the room because that has political overtones, but there is a big issue that is not being addressed and that is permanent high-level waste storage. I would say a majority of our committee feels that it would be appropriate to move forward at Yucca Mountain. There are members of the Energy Committee that would prefer that we not. Do you have a view that you want to express about how to assess what to do at Yucca Mountain?

Ms. MACFARLANE. About how to assess what to do at Yucca Mountain? No, at this point I do not. I will wait to see what issues are presented to us as a commission.

Mr. BARTON. That is fair enough for the first time you are here.

I yield back, Mr. Chairman.

Mr. SHIMKUS. The gentleman yields back his time.

The chair now recognizes the ranking member of the full committee, Mr. Waxman, for 5 minutes.

Mr. WAXMAN. Thank you very much, Mr. Chairman.

There are two nuclear power plants in California. One is Diablo Canyon in Mrs. Capps's district; the other is the San Onofre Nuclear Generating Station near San Diego. And I would like to ask some questions about the San Onofre plant.

In February 2011, new steam generators were placed in service at that plant, which was a major capital expense. The project cost California ratepayers $670 million. This expense was large, but the new equipment was supposed to last 40 years. But on January 31 of this year, less than a year after generators were put in place, a tube in one of the unit's steam generators started leaking radioactive steam into the atmosphere. An alarm sounded; the reactor was shut down. The other unit was not operating at the time because it was being refueled. Six months later, both reactors remain shut down. Fortunately, NRC has determined that the actual release of radiation into the environment was minimal in this case. Is that right, Dr. Macfarlane?

Ms. MACFARLANE. I believe that is correct.

Mr. WAXMAN. After the January shutdown, NRC sent in an inspection team who issued their report last week, and according to NRC's inspection team after just a single year of operation, a large percentage of tubes in the steam generators had been worn down because excessive vibration was causing them to rub against each other. Last week's report found that this problem was probably caused by faulty computer modeling in the design of the steam generators and by manufacturing issues. The report stated, "the loss of steam generator tube integrity is a serious safety issue that must be resolved prior to further power operation."

Do all of you agree that this is a serious safety issue?

Ms. MACFARLANE. Certainly.

Mr. WAXMAN. I see the witnesses all shaking their heads in the affirmative. Does anybody disagree? If not, I will assume that all of you agree.

Dr. Macfarlane, can you explain why these significant design and manufacturing flaws were not detected earlier? What NRC oversight process was in place to ensure that the new steam generators would be safe and why didn't that process identify the flaws before the steam generators were turned on?

Ms. MACFARLANE. Thanks for your question, Congressman Waxman.

I am still learning about all the issues and the technical details of the issues at the San Onofre plant. And I understand that this past March the NRC issued a confirmatory action letter to require evaluation and repair of the steam generators prior to restart. And so the NRC will certainly ensure that the plant is safe before it does restart.

As to why this was not detected prior, I will defer to my colleagues for much of that question, but my understanding is that the NRC did evaluate the plans for the new steam generators, but certainly I think we will be evaluating the lessons learned from this entire experience.

Mr. WAXMAN. Anybody else want to answer anything?

Ms. SVINICKI. Yes, sir, to add to Chairman Macfarlane's answer. I am in agreement with her answer. I would note that the Augmented Inspection Team Report that you referred to that was issued last week also identified 10 unresolved items that will be the subject of additional follow-up. I would just mention relevant to your question that there are, of these 10 items, some related to design issues, control of original design dimensions, and adequacy of Mitsubishi's thermo-hydraulic model that mentioned. So at least 3 of the 10 I think have direct relevance to the question you asked.

Mr. WAXMAN. But why didn't the process identify these flaws before the generators were turned on?

Ms. SVINICKI. Well, I didn't mention another of the 10, which is the methodology itself for the review is another unresolved item for additional follow-up.

Mr. MAGWOOD. Yes, I believe, Congressman, you are asking the right questions, a question I have asked the staff myself because I believe that if you look at what the licensee did in going forward with the replacement, they followed our process the way they should have. Everyone did what they were supposed to do under the process. So when you have an outcome that is not satisfactory,

you have to take a look at the process. And I think we should take a look at the process and see if there is something that we can improve.

Mr. WAXMAN. Well, I hope that all of you will look to see how we can prevent something like this from happening again at a nuclear reactor. It is a relief that the shutdown of this reactor went smoothly, the defects in the equipment were discovered before there was a major release of radiation into the atmosphere, but it should not take a release of any amount of radiation into the environment before problems like this one are detected. If ratepayers are going to foot the $670 million bill for new equipment at a nuclear reactor, that equipment needs to be safe and last a lot longer than 1 year.

Thank you, Mr. Chairman.

Mr. SHIMKUS. Mr. Waxman, would you mind if we allow Mr. Ostendorff to answer your last question, too?

Mr. WAXMAN. Oh, yes.

Mr. SHIMKUS. Without objection.

Mr. OSTENDORFF. Thank you, Chairman Shimkus. Thank you, Congressman Waxman.

I was just at San Onofre just 2 days ago——

Mr. WAXMAN. Good.

Mr. OSTENDORFF [continuing]. And spent 3 hours there Sunday afternoon this past weekend and had members of Congressman Issa's staff, Senator Boxer's and Senator Feinstein's staff with me to receive a briefing from the licensee about this exact issue. And I agree with everything my colleagues have said. I will also add that I believe there is a very comprehensive, rigorous technical evaluation that still is underway to look at these problems, and I assure you that everyone shares your concerns on the safety aspects of this issue.

Mr. WAXMAN. Well, I appreciate that. We want to be sure that it operates safely and we don't want to have to find out that it wasn't operating safely after the fact. We want to prevent problems. Thank you.

Mr. SHIMKUS. The gentleman's time is expired.

Chair recognizes the gentleman from Nebraska, Mr. Terry, for 5 minutes.

Mr. TERRY. Thank you, Mr. Chairman.

And certainly it has been unanimously noted here that the previous chairman certainly was a brilliant manipulator of rules and therefore exposed some weaknesses in the rules and processes within the NRC, which we would like your feedback on how to properly repair. If there is a bill that comes through our committee on reforms of NRC rules, I would ask each of you if you could within the next 30 days individually provide us your views on legislative changes that you feel would be useful in this process. It is nice that we can actually now ask you for that type of help when before we felt like that would be, well, not appropriate. So it is great that there is now a new atmosphere that allows us to have open discussions about reforms within the NRC rules.

One of the reforms that I think is necessary, and that is in declaration of an emergency. Again, I think that was highlighted by the last chairman that that is uncertain and I would like, Mr.

Ostendorff, because of your unique background and view, your opinion on the lack of clarity in the management and leadership in the NRC during times of emergencies and how it could be improved.

Mr. OSTENDORFF. Congressman Terry, thank you for your question. Let me make an overall comment first and then I will get to the specific issue on perhaps emergency powers——

Mr. TERRY. OK.

Mr. OSTENDORFF. —if that is acceptable.

Mr. TERRY. Sure.

Mr. OSTENDORFF. I would say that we have certainly under the Energy Reorganization Act, as well as the Commission's own Internal Commission Procedures, we have in place a structure that guides how the Commission does business. And I think everybody here in this committee has experience in leadership roles, management roles, and so often how those roles are executed is a function of the personality and the character of the person who has the key positions. And so I can say at one level that there are no changes required to any of our procedures just by virtue of the fact we have a different chairman in place right now. At the same time I can say that while it should not be situation- or personality- or individual-specific, and therefore, there might be some changes that would be appropriate. So I commit to you to providing this feedback within 30 days on legislative remedies.

With respect to emergency powers, as I previously testified before Congress, we had and other colleagues I think the same situation with Chairman Jaczko at the time grave concerns on his lack of notification as to whether we actually were in a situation where he had taken emergency authority in the events of Fukushima. And there was a clear lack of clarity as to whether or not he had taken those powers, and I think certainly trying to have a more bright line as to whether or not those powers are being invoked would be appropriate.

Mr. TERRY. All right, I appreciate that.

And Chairman Macfarlane, do you think in times of emergency it is important or not important to have the input of your other colleagues, the commissioners?

Ms. MACFARLANE. I understand that the chairman has the authority in an emergency and as chairman I would always follow the law and commission procedures I would like to——

Mr. TERRY. Is that a no, then?

Ms. MACFARLANE [continuing]. Commit to that now. No, certainly it is the opposite. If time allowed before emergency powers were declared, I would absolutely consult with the other commissioners to get their views and hear their concerns.

Mr. TERRY. All right. I appreciate the answer, then. And I have one more question regarding the voting process. One of the things that we have learned is that there appears to be a lack of transparency and commissioners, some have suggested that it needs to be more transparent to the point of all discussions should be live on camera and on the record. That is certainly how we do it in the House but I kind of learned that it is more of a collegial, almost like the Supreme Court discussions. So yes or no, Ms. Macfarlane,

do you believe that there needs to be changes in how the voting process is done, you know, in 7 seconds.

Ms. MACFARLANE. I think I need to learn more about the history of voting practices at the NRC to better understand the options for the internal voting procedures. And certainly, in an effort to maintain collegiality, before any changes were made to the voting process, I would consult again with my fellow commissioners to understand their thoughts on this issue.

Mr. TERRY. All right. Thank you, Mr. Chairman.

Mr. SHIMKUS. I thank my colleague. I would just jump in and just say there is also an issue of time when a vote is called and how long people can vote and there was a problem identified with that. So I appreciate that.

The chair now recognizes the gentleman from Georgia, Mr. Barrow, for 5 minutes.

Mr. BARROW. Thank you, Mr. Chairman.

Members of the Commission, the biggest thing going on in my State right now is the construction of the two nuclear cells at Plant Vogtle in my district. And I wonder who is in a position to give me an update on the status of the progress being made there? Yes, sir?

Mr. OSTENDORFF. Congressman, I was down there 2 weeks ago and visited the site, both Summer and Vogtle, and there is a lot of activity down there. There is probably close to 2,000 workers on the site at Vogtle and they are working on both units three and four. There had been a delay over some what is called rebar issues on the framing that goes down for the base mat concrete. I believe that there is a clear path forward for the licensee, Southern Nuclear Company, to move forward with that. Our NRC resident team is onsite with at least three inspectors full-time plus other people from Atlanta, the Region 2 office, to inspect the status of construction and I think things are moving along well.

Mr. BARROW. What impresses me about a project this large is the relationship you got to have between the owners, the contractors, and the regulators. How would you describe the relationship between the three groups of actors who are responsible for bringing this off?

Mr. OSTENDORFF. My other colleagues, I would ask them to add in here, Congressman, but I think there is great openness in communications between Southern, and they are part of a consortium with Westinghouse and with Shaw, which run the contracting group for the construction operation. I think those three entities on the consortium are communicating well with NRC and I think, as with any project, there are lessons learned, some improvements that could be made, but I think as far as where things are from where I sit, I think it is in pretty reasonable condition.

Mr. BARROW. Mr. Magwood, do you have anything to add?

Mr. MAGWOOD. I agree with Commission Ostendorff's comments. I visited the site myself some months ago and have talked recently with leadership associated with the project. And I think one answer I give to your question is that it is a learning process. This is the first time a nuclear power plant has been built using the 10 CFR Part 52 process.

Mr. BARROW. First one we have done in this country in 30 years.

Mr. MAGWOOD. It is the first one in 30 years but this is the first plant in history ever to use this particular process. And I think we have all learned a lot as we have gone forward in the last several months that clearly the relationship between the owners and the contractors is evolving as we speak. The relationship between NRC and the project is evolving because of the types of information that every side needs to have during the construction process. It is something we are all learning and it has actually been a very educational process I think for everybody.

Mr. BARROW. Commissioner Svinicki, do you have anything to add?

Ms. SVINICKI. Congressman, I would only add that I share your observation about the importance of this communication three ways, the constructor, the licensee, and the regulator, and I have heard that acknowledgement articulated from Southern, from Shaw as well. And I think there is also a commitment, although they realize that communications need to get to a very high fidelity. Also accountability of who has the authority to do what is something I think that they had been working through some issues there, who approves what kind of changes. But I think also there is a commitment that they want to map these things out and learn these lessons one time, learn them early, and have the process go smoothly moving forward.

Mr. BARROW. Chairman Macfarlane, what is your impression of the progress being made?

Ms. MACFARLANE. Of the—sorry?

Mr. BARROW. Of the progress being made on this project.

Ms. MACFARLANE. As far as I understand, it is going well. The process is working as it should and the communication between the regulator, the NRC, and the licensee. And I have not had an opportunity yet in my 2 weeks to visit the Vogtle plant, but I do look forward to visiting.

Mr. BARROW. I look forward to your visit as well.

One last question to all of you all collectively. Are there any concerns on the horizon that you are aware of that we need to address that would help us to know about?

Ms. MACFARLANE. At this point, no.

Mr. BARROW. Does that go for the rest of you? Thank you so much.

I yield back the balance of my time, Mr. Chairman.

Mr. SHIMKUS. The gentleman yields back his time. Chair now recognizes the gentleman from Ohio, Mr. Latta, for 5 minutes.

Mr. LATTA. Thank you, Mr. Chairman. Appreciate the time and also for you all coming in again to testify. I tell you, it is a little bit different from the past testimonies we have had when you have all assembled, quite refreshing.

If I could start with this question, during the hearing process for a license renewal application, the Atomic Safety and Licensing Board and the Commission must adjudicate various contention petitions and appeals. Historically, such decisions were reached in little over 100 days on average. Beginning in 2009—I guess we got the chart right here, as you can see—the average time frame doubled and remains at 185 days or higher. Our research shows that several matters were pending before the Commission for over a

year. The NRC's reliability principle states that, "regulatory action should always be fully consistent with written regulations, should be promptly, fairly, and decisively administered so as to lend stability to the nuclear operational and planning processes." And here is the question. What steps are the Commission taking to address this situation and promptly, fairly, and decisively administer these matters?

Ms. MACFARLANE. Let me take a first stab at this. I will take the 30,000 foot view. My understanding is that the NRC staff are working very efficiently, as efficiently as possible, but we all must recall that these license renewals and licensing issues are adjudicatory matters and they take time before the Commission, especially when they are contested. And we at the Commission have no control over whether these licensing issues are contested.

I will let my colleagues answer, too.

Ms. SVINICKI. In viewing your chart, Congressman, I think I would share two observations. One is that when the time period began to be protracted, I believe overlaps with periods where the Commission only had three serving members—and although I can't definitely attribute the prolonged durations to that period—I would say that the Commission functions best when it is at its full complement of five. When there are only three members, if two vote, a quorum is not established and the third has, in essence, a pocket veto. And so the Commission, in my view, does not function as efficiently when it is down to three members.

So although I can't prove that that is part of the attribution of the prolonged durations, the other observation that I would make is though I have only been on the Commission for a little over 4 years, I have noticed that participants and interveners in the Commission's proceedings have really observed the evolution of license renewal issues over time. They have become extremely skilled and informed in their participation and intervention in these proceedings. Therefore, the numbers of appeals and petitions to the Commission has increased.

I think in response to your question of what can we do, I would make a personal pledge to look at agency resourcing for our Office of Commission Appellate Adjudication, which is a group that, as a first instance, receives and reviews briefs on these appeals and develops draft opinions and orders for the Commission. I think that we could look at whether that office is adequately resourced.

Thank you.

Mr. LATTA. Thank you. Commissioner Magwood?

Mr. MAGWOOD. Your chart actually raises some questions in my own mind, so I would like to discuss with the staff to see if there are some trends that we should be aware of, and if there are some trends, find ways to correct them.

But as a general matter, let me say that it has always been my view that regulatory actions take as long as they take. I don't think the regulators should ever really apologize for taking more time if more time is necessary to assure safety. But at the same time, I do think it is our responsibility to be efficient and to dispatch issues quickly and fairly. But if, because of the contested process, we have a longer-than-normal situation develop with a particular renewal, that is a process we simply have to work our way through.

And we have had, in recent years, some plants that have had more difficult renewals.

Mr. LATTA. Commissioner Ostendorff?

Mr. OSTENDORFF. Thank you, Congressman. I agree with my colleagues. I will add maybe just one statement that is while these issues with the extended license renewal process have typically almost always been in contested cases, I would say I think the commissioners at this table and Commissioner Apostolakis that have voted in a very timely matter on the actions when those have been presented to the Commission, not everything comes to us directly. There are certain activities before the licensing boards that we don't get involved in. And our voting record, I believe, has been very responsible as far as acting in a timely manner once it gets to us. Oftentimes, that is delayed because of contentions.

Mr. LATTA. Well, thank you very much.

And Mr. Chairman, I see my time has expired.

Mr. SHIMKUS. Your time has expired.

The chair now recognizes the gentlelady from California, Mrs. Capps, for 5 minutes.

Mrs. CAPPS. Thank you, Mr. Chairman.

And Chairman Macfarlane, congratulations on your new position. I wish you every success. The fact that you are 2 weeks on the job and you are making an appearance here shows a lot of courage on your part, and I appreciate your willingness to do so.

Before I get to my questions, as my colleague, Mr. Waxman, mentioned, I do represent—I have Diablo Canyon Nuclear Power Plant in California and the surrounding communities. Right now, some of the best eyes and minds in our country and looking at the seismic issues at this plant. And I have worked with the NRC and the utility there, which is PG&E, to pause the relicensing process until advanced seismic studies are finished and reviewed. And I do give a lot of credit to PG&E, as well as State and Federal regulators, for working to update their seismic analyses. As a geologist, you surely recognize why this type of analysis is very important. This is first and foremost about safety.

But the seismic concern also impacts affordability and reliable generation as well. My constituents living in the communities around Diablo feel the same way. And I just want your commitment to work with us and make sure these studies are completed in a timely manner.

Ms. MACFARLANE. Absolutely.

Mrs. CAPPS. Thank you.

Ms. MACFARLANE. I am absolutely committed to that.

Mrs. CAPPS. And now, I want to turn to the Fukushima disaster and the spent fuel pools. Fukushima clearly illustrates how spent fuel pools can become unstable when a nuclear power plant loses the power needed to cool them. The spent fuel rods in Fukushima continue to pose serious problems and many concerns as Japan attempts to stabilize and clean up the site. My understanding is that many spent fuel pools in the United States are even more densely packed with spent fuel rods. Chairman Macfarlane, what are the safety concerns associated with densely packed spent fuel pools?

Ms. MACFARLANE. This is an issue in one of the Fukushima activities, the Tier 3 Fukushima activities that the NRC will be look-

ing at. So I assure you, this issue will get attention. And it is, I believe, also getting attention from a National Academy of Sciences study as well.

Mrs. CAPPS. Exactly. The alternative to pool storage, of course, is dry cask storage——

Ms. MACFARLANE. Um-hum.

Mrs. CAPPS [continuing]. And in 2006 the National Academy of Science issued a report showing that moving spent fuel from pools to dry above-ground casks reduces both the likelihood and potential impact of a radioactive release from spent fuel. This is my question: Do you believe dry casks do rely on external power sources to cool the stored fuel?

Ms. MACFARLANE. No, they are passively cooled.

Mrs. CAPPS. OK. As we all know, the reactors in Fukushima lost all power after the earthquake and the tsunami. So the question is, how did the dry cask on Fukushima site withstand the earthquake, the tsunami, and subsequent station blackout? I am sure this is a question you have been addressing.

Ms. MACFARLANE. My understanding is that the spent fuel casks, the dry casks at Fukushima withstood both the earthquake and tsunami very well. And we have additional information from this country because there were dry casks at the North Anna facility in Virginia during last summer's Mineral, Virginia, earthquake, and those dry casks also performed very well.

I invite my colleagues to add anything if they would like.

Mr. MAGWOOD. I would just add one comment and that is that while there certainly has been a lot of concern and discussion about the spent fuel pools at the Fukushima site, the fact is that the spent fuel pools at Fukushima actually survived the event reasonably well. And today, we believe from all the information we received from our Japanese colleagues are safe right now. And while we encourage them to move that spent fuel out of those pools as quickly as possible, it does demonstrate how rigorous these buildings and structures are, and the ability of the facility at the Fukushima site to survive an earthquake and tsunami does give some confidence that these pools are safe and don't present a threat to the public.

Mrs. CAPPS. And of course this is a topic that is going to take a lot of continued study, long-term study, and I don't have to ask—I hope I can assume—that there is a tremendous interest on your part in doing that given the benefits of dry casks it would seem. And I ask for a confirmation from you or some comments that accelerating transfer of spent fuel from pools to casks lowers the risk posed by densely packed spent fuel pools. And then to sum up in the few seconds your thoughts on this particular area, which I wish to explore with you further.

Ms. MACFARLANE. Sure. And I would be happy to explore this in the future with you at greater length, but as I said, certainly the Nuclear Regulatory Commission is looking at this specific issue and will gather more information about this specific issue.

Mrs. CAPPS. Thank you very much.

Mr. SHIMKUS. The gentlelady's time is expired.

The chair will now recognize the gentleman from West Virginia, Mr. McKinley, for 5 minutes.

Mr. MCKINLEY. Thank you, Mr. Chairman.

To the committee as a whole, I think earlier there was some discussion about the—or Congressman Barton bringing up the subject of the Yucca Mountain. There was some discussion about it. I am curious. I have been reading about Yucca Mountain since the '80s. I am just one of two engineers in Congress who practice engineering. '82 is when the Act was put into effect. In '87 is when Yucca Mountain was designated to be the repository. Twenty-five years we are still talking about it. Is that what I am hearing from the panel? We are not sure what we are going to do with that?

Ms. MACFARLANE. It is not the NRC's job to make policy. We are a regulator. But given that and given my past experience as a commissioner on the Blue Ribbon Commission, I will say, yes, there is still discussion about Yucca Mountain. And let me just say as a scientist—you are an engineer and maybe engineers, you work faster than scientists—but science often works very slowly.

Mr. MCKINLEY. But I think we work faster than 25 years. I am just curious how much money has been spent on Yucca Mountain in terms of infrastructure, bricks-and-mortar? What have we invested in that over these 25 years?

Ms. MACFARLANE. This again is an issue that is not under the control or purview of the Nuclear Regulatory Commission, but I believe if you are looking just at what has been spent on Yucca Mountain itself and not on the entire waste disposal program, you are looking at a figure between 7 and $8 billion

Mr. MCKINLEY. I am sorry?

Ms. MACFARLANE. Between 7 and 8 billion dollars. I don't have the exact number.

Mr. MCKINLEY. Seven and eight billion dollars?

Mr. SHIMKUS. If the gentleman would yield, I think you can make some claims for 15 billion. And the other thing, just to put this in perspective, what the NRC needs to do is finish the scientific study. A lot of Yucca Mountain issue is DOE and money spent in that venue.

Mr. MCKINLEY. We have the permit.

Mr. SHIMKUS. The NRC is tasked, we hope, eventually to finish the scientific study, and then that would then be the final aspect of proving the viability for Yucca. They won't manage the site. There are not going to be empowered to do that.

Mr. MCKINLEY. I am just trying to get a better handle of it up close. This glacial pace that we move around here is pretty incredible to think that 25 years later we still don't have a place to deposit. So my question would from you all, your perspective, given there are probably two courses of action dealing with spent fuel rods, they are either going to go into a geological formation below the ground someplace or we are going to recycle them as they do in France with AREVA La Hague. So can you tell me which is the more likely direction you see nuclear fuel rods going in in this country?

Ms. MACFARLANE. Well, again, the NRC doesn't set that policy for the U.S. The NRC regulates the reactors and materials.

Mr. MCKINLEY. I understand you don't, but in your opinion, you are the regulatory group on nuclear power.

Ms. MACFARLANE. Um-hum.

Mr. MCKINLEY. Where do you think we are going as a nation after 25 years we can't decide it is going to be Yucca Mountain in Washington——

Ms. MACFARLANE. Well——

Mr. MCKINLEY [continuing]. Are we going to go to recycling? Which direction do you think we should go as a nation?

Ms. MACFARLANE. No matter whether you go in direct disposal of spent fuel or you recycle as France does, you will need a final repository. And France itself is working now on its final site selection for a deep geologic repository.

Mr. MCKINLEY. As a nation, do you see us in recycling ever?

Ms. MACFARLANE. I think it is largely an economic and policy question.

Mr. MCKINLEY. OK. I don't think it comes under your purview but I believe under the Act in '82 that they set up that the consumers using nuclear power would be assessed charges for the disposal of——

Ms. MACFARLANE. Yes, the Nuclear Waste Fund, yes.

Mr. MCKINLEY. Right. Where is that money going? If we don't have——

Ms. MACFARLANE. You manage it. Congress manages the money, the Nuclear Waste Fund and you appropriate it.

Mr. MCKINLEY. I am trying to understand here. So we can have that turned back over to the consumer or is it being collected and just saved?

Ms. MACFARLANE. It has been collected and saved into the Nuclear Waste Fund and the consumers—sorry, it is the ratepayers who pay into this fund at 1 mil per kilowatt hour.

Mr. SHIMKUS. The gentleman's time is expired.

Mr. MCKINLEY. My time is expired, I am sorry. Thank you.

Mr. SHIMKUS. Before I go to the gentlelady from Florida, I would ask unanimous consent for my colleague, Mr. Green, for 1 minute.

Mr. GREEN. This is for my colleague. I think we need to look at both long-term storage, which Yucca Mountain was the solution from the '80s, but we also need to look at recycling. But we have to have interim storage. And the success in these other countries—France, for example—they have interim storage but recycling—but again France doesn't have a long-term storage solution either whereas Sweden—and I know Mr. Murphy and I were there a while back and they at least have a potential for long-term storage in Sweden.

Mr. SHIMKUS. The gentleman's time is expired.

The chair recognizes the gentlelady from Florida, Ms. Castor, for 5 minutes.

Ms. CASTOR. Thank you, Mr. Chairman.

Thank you all very much for being here this morning.

Dr. Macfarlane, in your testimony you reference that there are currently two units in extended shutdowns, and one of those is the Crystal River Unit 3 in Florida. Crystal River remains in extended shutdown while its owner evaluates repair options for a separation in the concrete wall of the containment building. In 2009, you all are aware they were conducting some repairs there, and during that time, they discovered and unexpected crack, separation in the concrete wall. And I guess the technical term is delamination. You

all know more about that than I do. They informed the NRC. NRC sent an inspection team. You all followed up with a special inspection team. You have had public meetings. You have issued a special inspection report, came down for another public meeting. In June of last year, Progress Energy, the owner then, stated their intent that they intended to repair Crystal River and they were proceeding with necessary engineering and construction plans, dealing with insurance issues, and had stated an intent to return the plant to service in 2014.

Since that time, just hear earlier in the month, Progress Energy merged with Duke Energy, and reports following that merger appear to make the future of the Crystal River Unit 3 plant a little more uncertain. It appears that the NRC's position has been that Crystal River can be repaired safely. Is that correct in your opinions? And have any of you traveled to the site?

Ms. MACFARLANE. Well, as you might suspect, I haven't had the opportunity to travel to Crystal River yet but I intend to learn more about the situation at Crystal River. And I will ask my colleagues to comment.

Mr. MAGWOOD. I had the opportunity to visit Crystal River. I think it has probably been about 2 months ago. And I did inspect the repair work that is underway. The NRC staff has been watching this very closely. The repair work that is underway is very complex in many ways. Some of it is actually quite unique, but from everything that I was able to learn during my visit and subsequent conversations, it is clearly repairable. It is clearly something that the licensee knows how to complete. I think that the kinds of discussions that you are referring to are business decisions really. How long are they willing to wait and how much will it cost them? But from a regulatory standpoint, from a technical standpoint it seems quite repairable. But whether it is a decision they plan to make or not, we will wait and see.

Ms. CASTOR. Any other comment?

Mr. OSTENDORFF. I visited Crystal River maybe 2 years ago. My understanding is not as up-to-date as Commissioner Magwood, but I believe it is consistent with what I have heard generally.

Ms. CASTOR. OK. Is it the NRC's role to examine the costs, do a cost-benefit analysis of moving forward or not?

Ms. SVINICKI. No, that would not be an appropriate role for us.

Ms. CASTOR. OK. If the nuclear reactor is repaired, is it subject to all of the updated NRC safety requirements?

Ms. MACFARLANE. Yes.

Ms. CASTOR. Including ones—is that the same as if it were going for a new license? The license for this plant expires in 2016. Is that the same analysis and the same requirements?

Ms. MACFARLANE. Same requirements for?

Ms. CASTOR. A repair. Would NRC be asking for the same updated safety requirements when they go for a license renewal? The license expires there in 2016.

Ms. MACFARLANE. My understanding is no, not necessarily.

Mr. MAGWOOD. I think as a general matter that all of our plants operate under the same safety standards. So we don't differentiate between a plant that is operating under its original license versus a plant that is operating under its renewed license or a plant that

has been repaired. They are all expected to meet the same standards.

Ms. CASTOR. Are you aware that the Duke Energy Board of Directors conducted an independent analysis of the Crystal River plant? And has anyone received any report or the details of that independent analysis conducted here over the last few months?

Ms. SVINICKI. I am not aware of that and I am not aware that the agency has received any such report.

Mr. SHIMKUS. The gentlelady's time is expired.

I do appreciate my colleagues really getting their questions done and we have got a lot of Members that are still obviously here to ask questions. And everybody has been doing it in a timely manner. I appreciate that.

The chair now recognizes the gentleman from Colorado, Mr. Gardner, for 5 minutes.

Mr. GARDNER. Thank you, Mr. Chairman, and thank you to the witnesses for your time today. And welcome, Ms. Macfarlane, to the committee.

In a previous question, there was a question about emergency powers that were taken up by the previous chairman of the NRC. Any of those powers left, residual powers? They have all been business as usual has been restored, returned?

Ms. MACFARLANE. It is my understanding.

Mr. GARDNER. Thank you.

And a couple questions about the Office of Public Affairs I think are very important to some of the interactions that we have had as this committee with the NRC. If you take a look at the Reorganization Plan of 1980 that provided the Office of Public Affairs reports directly to the chairman to assist the chairman as the principle spokesman for the agency, when this committee began its investigation into governance of the NRC, we identified some key questions about the role of the Office of Public Affairs. And I wanted to just talk and read a little bit about some of the work that we have seen coming out of the Office of Public Affairs.

And this is from a July 2011 rollout plan for the Fukushima Task Force recommendations, as prepared by the director of the Office of Public Affairs. "In this speech, the chairman can lay out his thought for how to proceed, what he sees as his priorities, the need to move with dispatch, et cetera. This will be a subtle nudge to others to get on board or appear to be foot-dragging. The speech needs to be a) newsworthy, and b) collegial but firm with perhaps a notional timetable to set expectations which, if not met, he can point to as evidence of fill-in-the-blank criticism." That statement then was made. And of course, in December to the Washington Post editorial page, there was another statement from the Office of Public Affairs. "As you may have noticed, our chairman is in a shooting match with his four colleagues on the Commission, a very public and bitter dispute."

The office director drafted a statement that read, "I was not the choice of the nuclear industry to sit on the Commission, let alone be chairman. Time after time on critical safety questions, my vote has been the lone tally cast in the interest of stronger safety requirements and accountability. Others have sought a different level of safety. Some have sought to delay and dilute safety decisions."

And I guess I would ask to you, Madam Chairman and to the other commissioners, do you believe it is appropriate for the Public Affairs Office to devise press strategies to influence commissioners' votes or to impugn commissioners' dedication to public safety?

Ms. MACFARLANE. Thanks for your question. As you said, my understanding is that the Office of Public Affairs at the NRC assists the chairman in carrying out his or her responsibilities as principle spokesperson for the NRC. Therefore, the director of Public Affairs and the Office of Public Affairs work at the direction of the chairman. And all I can point out is now, there is a new chairman. And in my 2 weeks there, I have been comfortable working with the Office of Public Affairs.

Mr. GARDNER. And so the question of do you believe it is appropriate for Public Affairs to devise press strategies to influence commissioners' votes, you would disagree with that strategy?

Ms. MACFARLANE. As far as I understand your question, yes.

Mr. GARDNER. So you would not be using the Office of Public Affairs—Public Affairs would not be used to try to influence other commissioners?

Ms. MACFARLANE. I have absolutely no intention of doing that.

Mr. GARDNER. Or to impugn dedication to public safety?

Ms. MACFARLANE. I have no intention of that.

Mr. GARDNER. Other commissioners care to comment?

Ms. SVINICKI. I would note, Congressman, that a member of the committee this morning asked for any recommendations where statutory language could be perhaps clarified about the appropriate uses of perhaps an office such as Public Affairs. And so I would note that the legislative history of this matter indicates that although the chairman is the principle spokesman, he or she is to be bound in those communications by the overall policy and guidance of the Commission as a whole. So I didn't respond earlier to the question about proposing changes to the Reorganization Act or plan, but I do feel that my experiences of the last 4 years have exposed areas where there was disagreements amongst members of the Commission about what these statutory provisions meant.

And so in my commitment to provide any proposals, I think they wouldn't be to change anything the Congress did after Three Mile Island because I think it was appropriate to strengthen the chairman's role, but I do think that we have disputed each other over what some of the words mean. And to the extent that the Congress were willing to clarify or emphasize some of these points, I think it could further the collegial functioning of the Commission in the future.

Mr. GARDNER. And that is exactly right. And so going back—I am running short on time here—just to make sure that we are clear on what this Office of Public Affairs can and shouldn't be used for, to the chairman, is it appropriate for the chairman to use the Public Affairs Office to promote personal views as a commissioner? I direct that to you.

Ms. MACFARLANE. To promote personal views?

Mr. GARDNER. Yes, to promote——

Ms. MACFARLANE. No, the——

Mr. GARDNER [continuing]. Their personal policy views, excuse me.

Ms. MACFARLANE. Sorry. The chairman is representing the organization, so personal views should not be part of this.

Mr. GARDNER. OK. And you made the comments on the collegial structure. And I guess I would just ask for your commitment, Madam Chairman. Will you commit to refrain from these tactics that have been used in the past?

Ms. MACFARLANE. As far as I understand them, yes, I commit.

Mr. GARDNER. As far as you understand them? So you will not use——

Ms. MACFARLANE. As far as I understand what happened in the past. I was not part of the Commission in the past and I am trying to understand what has happened with the Office of——

Mr. GARDNER. So you won't be using the Public Affairs—I am out of time.

Mr. SHIMKUS. The gentleman's time is expired.

Chair now recognizes the gentleman from New York, Mr. Engel, for 5 minutes.

Mr. ENGEL. Thank you very much, Mr. Chairman.

Welcome, everybody. Dr. Macfarlane, congratulations. I want to talk to you about Indian Point in New York City suburbs. It is one of the most serious issues facing New York. Indian Point is located obviously by our Nation's largest metropolitan area. It has an operational history that has been plagued by irresponsible acts, unplanned shutdowns, lacking spent fuel pools, and inadequate emergency notification and response systems.

One of the planes hijacked on September 11 flew over Indian Point on its way to the World Trade Center. We have learned that the plant is located near two seismic faults that together raise the possibility of an earthquake far larger than any anticipated when it was built. And there simply aren't enough roads to allow for a real evacuation in the event of an accident or attack. Neither of the county executives in both Westchester County, which I represent, and Rockland County, which I also represent, both county executives—one Republican, one Democratic—have refused to certify the evacuation plans for Indian Point because they know they are ridiculous.

Indian Point's two active reactors are set to retire in 2013 and 2015 unless their application for license renewal are approved, and there has always been a cozy relationship, unfortunately, between the NRC and the industry which in my opinion has precluded a serious and realistic evaluation of the safety of Indian Point. I have toured it. I have been there with your predecessor, Dr. Macfarlane, and I am interested in meeting with you to discuss Indian Point in greater detail and perhaps tour with me and Congresswoman Lowey. Would you be willing to arrange a time to meet with me and talk?

Ms. MACFARLANE. Would I be willing to do that in the future? Absolutely. I would be willing to talk with you about it and visit it together with you.

Mr. ENGEL. Thank you. And let me say at the outset I am not opposed to nuclear power. I never issued a peep about Indian Point until September 11 when it became clear to many of us that this was a safety hazard. So thank you.

I want to talk about decommissioning. It is an expensive process. The New York Times reported in March of this year that the operators of 20 of the Nation's aging nuclear reactors, including some whose licenses expire soon, have not saved nearly enough money for prompt and proper dismantling. And Entergy, which owns the Indian Point plant, again, just 24 miles north of New York City and is at least $500 million short of the $1.5 billion estimated cost of dismantling Indian Point Reactors 2 and 3. Entergy insists that the shortfall won't be a problem because they expect Indian Point to be relicensed for another 20 years, and over that period of time, they expect interest to accrue to sufficient levels in the reactor's retirement accounts. But the fact is that 12 reactors across the country have been retired in the last 3 decades all on short notice because of a design or safety flaw that the economics did not justify fixing. The shortfall in these retirement accounts raises the possibility that New York could be sitting on sleeping reactors for decades.

So Dr. Macfarlane, I would like to ask you, what do you envision happening if one of the Nation's 20 underfunded reactors needed to be decommissioned?

Ms. MACFARLANE. Well, I will note that the U.S. has decommissioned a number of reactors and they have been decommissioned successfully. So it can happen. There can be a positive outcome.

As far as how to handle the scenario that you describe, I think we will probably have to visit it if it happens.

Mr. ENGEL. OK. I want to finally talk about relicense criteria because I have long been concerned that the relicensing of aging power plants is not subject to the same stringent criteria used in an application for new power plants for initial construction. So let me ask you this, Doctor. Would you support using the same criteria for relicensing an existing plant as we used to license new plants?

Ms. MACFARLANE. The brand new plants, my understanding that we have a well established license renewal program. Of course, that doesn't substitute for day-to-day regulatory oversight that is required of the operating plants. There is a lengthy public hearing process that engages a variety of stakeholders in relicensing. And so all of this information is publicly available. And I commit to ensuring that these reactors operate safely.

Mr. ENGEL. Thank you. If I may just take about 5 more seconds, Mr. Chairman. I just want to say that information that wasn't available when the plant was originally licensed, in my estimation, should that not be considered in relicensing?

Ms. MACFARLANE. I think it depends on the particular situation.

Mr. ENGEL. OK, thank you.

Thank you, Mr. Chairman.

Mr. SHIMKUS. I thank my colleague. The gentleman's time is expired.

The chair now recognizes the gentleman from Texas, Mr. Burgess, for 5 minutes.

Mr. BURGESS. I thank the chairman for the recognition.

And I thank our witnesses for staying with us through this lengthy hearing today but it is important. And we hear a lot—you all mentioned that in your opening statements about the collegiality and the importance of that. And of course the average

American doesn't know what the NRC is and probably would not be able to name the commissioners, but for the average American, why should they care about collegiality on the Board? Aren't you just supposed to do your jobs anyway?

Ms. MACFARLANE. Certainly, we are supposed to do our jobs anyway. I think we do them better and we do gain the trust of the American people when they do realize that there is an NRC out there. We gain a stronger sense of trust when we do operate collegially. I think it is very important that we operate collegially just to make the process and all the decisions that we make work efficiently.

Mr. BURGESS. I don't disagree with that, but in fact, should not people be able to depend on your commission even in the absence of collegiality?

Ms. MACFARLANE. Yes, absolutely. And I think that the Commission did operate and handle all the issues that came before it no matter what the situation.

Mr. BURGESS. Well, it did seem that at times there were whispers, there were rumors that, you know, legitimate differences in policy were interpreted as some of the commissioners being characterized as anti-safety. For the three commissioners who set the historical precedence, did that ever come up with your discussions amongst yourselves?

Ms. SVINICKI. Congressman, I disagree with the characterization that some of the recent issues on the Commission had to do with disagreeing votes on policy matters. I believe over the course of my tenure I have served with a number of members of the Commission who are no longer on the Commission. I think at one time or another I have probably disagreed with everybody. I think that the dysfunction on the Commission was much more substantive than a simple policy disagreement.

Mr. BURGESS. Was——

Ms. SVINICKI. It was more substantive. It had to do with impeding the flow of information and other very fundamental issues that I felt obstructed the ability for this commission to operate the way Congress intended.

Mr. BURGESS. So legitimate policy differences really should not be interpreted as anti-safety, but you are saying there was an actual impediment of information flow that kept you from doing your job. Whether there was a policy difference or not, you were not able to do your job as far as public health and safety was concerned?

Ms. SVINICKI. That is correct.

Mr. BURGESS. And I guess I am getting the impression this morning that that situation has resolved?

Ms. SVINICKI. I think we are off to a very, very productive beginning.

Mr. BURGESS. So the American public to the extent that they are watching this hearing this morning can take some comfort in the fact that whereas public health and safety may not have been at the forefront in the past, it will be going forward?

Ms. SVINICKI. I think all of us kept public health and safety forefront, and as Chairman Macfarlane indicated, there was an impressive amount of agency work that was conducted. However, I would

hope that some would view there is a great unanimity here and there is an optimism about moving forward.

Mr. BURGESS. Mr. Ostendorff, let me ask you a question because you brought up your observation that the series of events in Japan of March 2011 would be unlikely to occur in this country. I suspect that the month before the earthquake, that same statement could have been made about Japan, could it not?

Mr. OSTENDORFF. Congressman, I think the way I would respond to that is that there are significant regulatory differences and some cultural differences between the United States and Japan as it affects the nuclear industry. As other members of the committee have noted, the Japanese Diet report that came out just last week highlighted two substantive differences between the United States' regulatory framework and that in Japan, one dealing with the actions we took in this country after the attacks of 9/11 to require additional mitigating strategies called B.5.b under our rules to deal with fires, explosions, and flooding; and second, to deal with the station blackouts and loss of all AC power. And I think those are two substantive differences between our two regulatory frameworks that are significant factors from the comparison of the two countries.

Mr. BURGESS. Let me just ask you—and I may have to submit this for the record because of time—but the month before the Japanese earthquake, Chairman Shimkus took several of us out to Yucca Mountain. And after the Japanese earthquake, one of the big problems that was encountered was the loss of the spent fuel rods that were in the cooling pools and the loss of electricity. It seemed to me that just underscored the importance of getting whatever the long-term storage solution is—and I believe Yucca Mountain is still viable—but getting that done and getting those spent fuel rods out of those pools. Do you have any thoughts on that?

Mr. OSTENDORFF. Well, I think as others at this table have mentioned earlier in today's testimony, the Office of Research at the NRC is working on a study—it is almost finished—on the spent fuel pool risk associated with keeping fuel in the pool as contrasted to taking them out of the pool and putting them into dry cask where they are air-cooled. There are a lot of other factors associated with, you know, an accelerated campaign of taking those out in an expedited manner, and I think overall, our staff's assessment to date has been those risks are very, very low. But it is still something we are looking at as part of our Fukushima actions.

Mr. BURGESS. Thank you, Mr. Chairman. I will yield back.

Mr. SHIMKUS. The gentleman's time is expired.

The chair now recognizes the gentleman from Louisiana, Mr. Scalise, for 5 minutes.

Mr. SCALISE. Thank you, Mr. Chairman. I appreciate you having this hearing. I appreciate the commissioners for coming before us.

We have had almost a year-and-a-half now since Fukushima to receive vast amounts of data. A lot has been published about the causes, the actions being taken by the global industry. With the benefit of the information that we have, have any of your initial conclusions—for those of you—we got a little construction going on here.

Mr. SHIMKUS. Would the gentleman suspend for a second?

Mr. SCALISE. Sure.

Mr. SHIMKUS. Committee staff, someone needs to find out who is doing work and get them to stop.

Gentleman may proceed.

Mr. SCALISE. Not sure if that is a shovel-ready project. I guess I will proceed and we will just have to bear with it.

But based on the data that we have, have any of you maybe have different reactions today than what the initial assessment were back a year and a half ago or, you know, less than a year and a half ago about the cause and the priority of the regulatory actions associated with Fukushima? If we could just start with Mr. Ostendorff and go down.

Mr. OSTENDORFF. Thank you, Congressman.

I think, you know, right after the Fukushima event, the Commission made a decision that we did not need to shut down nuclear power plants in this country. We felt that there was no imminent risk. I believe that finding is still relevant today and appropriate today. I think that at a big-picture level, the intervening months have indicated that we were on a good track and are on a good track to take an integrated, prioritized approach to what actions we need to take. And I think the emphasis on Tier 1 activities to date, mitigating strategies, station blackout, looking at external hazards has been appropriate. And I think that is echoed and been reinforced over the last 16, 17 months.

Mr. SCALISE. Thanks. Mr. Magwood?

Mr. MAGWOOD. I think that over the last year, we have had ample opportunity to talk to our international colleagues about their response to the Fukushima events. And as I have talked with regulators around the world, I have discovered a great deal of commonality between what we are doing and the thoughts that they are having. We actually are more advanced in many of our efforts than they are, so that gives us some reassurance. And I think that the more we know about how things actually unfolded in Japan over the last several years, we see that the Japanese have much more to learn from Fukushima than we did and that they are trying to absorb those lessons themselves. And a lot of them are cultural issues that are very difficult to change.

So as the last year and a half has gone by, I actually have grown in confidence that our steps we have taken are the appropriate steps.

Mr. SCALISE. Ms. Svinicki?

Ms. SVINICKI. I agree with my colleagues.

Mr. SCALISE. Thanks. I don't know if you have got maybe a top five or just some top safety changes that you think both the NRC and the industry have taken. What are some of the top things to improve safety that you have seen or that you think should be done that haven't been done based on the information we know now?

Mr. MAGWOOD. Let me take the first crack at that. First, let me say I do think that the infrastructure that we had and the approaches we had before Fukushima were very strong. I don't think that they were lacking. But one thing I would point to is a greater acceptance of the need to be able to respond to beyond-design-basis events. And that is not one specific change; it is more of a philosophical change I think that we are all dealing with. The idea that

you prepare to go beyond the worst-case scenario, you provide equipment, you provide training, you do whatever you can to be ready to respond in case there is a large earthquake or a large flood or a large storm. And that is a philosophical change that the agency is adopting.

Mr. SCALISE. All right. Thanks.

If you look at situations where the NRC comes out with new requirements to hinder implementation of other recent NRC requirements, when you look at the NRC efficiency principle, which states, "regulatory activity should be consistent with the degree of risk reduction they achieve," I think, Commissioner Magwood, you had written, "it does not as a general matter advance the cause of safety to inundate licensee staffs with multiple actions when a more thoughtful process might achieve the agency's safety goals without straining licensee resources." Do you have a view on whether staff industry concerns on potential cumulative effects on multiple new requirements have merit?

Mr. MAGWOOD. I think there is some merit, but I think it is very important to understand why there is merit. And I think the reason it is important is to make sure that—and I think you and a previous Member put it very well—that you are not distracted by issues of low safety significance, and in dealing with those, miss something that is much more important. It is always most important to focus on priority safety effects but make sure you deal with those early. And I do think that we ought to look for more ways of addressing that in our process to make sure that we aren't focusing too much on the small things and missing the big things.

Mr. SCALISE. All right. I see I am out of time. I appreciate the answers. I yield back.

Mr. SHIMKUS. The gentleman's time is expired.

The chair now recognizes the gentleman from Massachusetts, Mr. Markey, for 5 minutes.

Mr. MARKEY. Thank you, Mr. Chairman.

I would like to welcome you, Chairman Macfarlane, and congratulate you on your recent confirmation.

After the Fukushima meltdown, then-Chairman Jaczko created a task force to recommend safety upgrades for American nuclear reactors. That task force was made up of NRC officials who, together, had more than 135 years of nuclear regulatory expertise. Its report was released more than a year ago and included 12 recommendations, which ranged from requirements to upgrade seismic and flood protections against the long power outages that were the ultimate cause of the Japanese meltdown. They also concluded that each and every one of the recommendations were necessary for the adequate protection of nuclear power plants and that they should be mandatory for each nuclear reactor—mandatory. Chairman Jaczko immediately announced his support for all of the NRC staff's recommendation. Regrettably, some of his fellow NRC commissioners did not do likewise and initially insisted that other NRC staff review the task force report before the Commission voted on any of the recommendations.

But this second staff review reached the same conclusions as the first one. They concluded that all recommendations should be made mandatory. Despite this, the Commission has not voted to endorse

its top staff reviews, and thus, it is possible that some of the Fukushima safety upgrades will never be made mandatory for all nuclear power plants.

Chairman Macfarlane, do you support the conclusion of the NRC's top safety experts that all of the post-Fukushima safety recommendations are necessary for the adequate protection of nuclear power plants?

Ms. MACFARLANE. Thanks for that question. As chairman, I am strongly committed to protecting the public health and safety and I am strongly committed to shepherding the Fukushima Task Force recommendations through. And I——

Mr. MARKEY. Do you believe that they should be mandatory?

Ms. MACFARLANE. I think that I need to understand more about, especially the Tier 2 and Tier 3 activities, especially the Tier 3 activities.

Mr. MARKEY. Would it be a good idea or outcome if it turned out that the nuclear industry argued its way out of adopting some of the recommendations that top experts recommended on the grounds that it would be too expensive or inconvenient?

Ms. MACFARLANE. Certainly, that would not be a good outcome.

Mr. MARKEY. Well, when the NRC staff reviewed the task force report, it identified several safety measures that could be implemented quickly and I am pleased that the Commission has moved forward on these. The staff stated that the fact that they had identified some recommendations that could be adopted early "should not be interpreted as a lack of support for the other task force recommendations." But recently, the Nuclear Energy Institute started to discourage the NRC from moving forward on the rest of the recommendations saying that the recommendations that were adopted would accomplish "as much as 90 percent of the safety benefit from all recommendations" and that "at this time, the safety benefits derived from the rest of the recommendations are unclear."

So I would like you to respond to this, Chairman Macfarlane. Do you agree with the Nuclear Energy Institute that the Commission should delay or stop the consideration of the rest of the safety recommendations that the NRC's Fukushima Task Force made?

Ms. MACFARLANE. Absolutely not.

Mr. MARKEY. Absolutely not. And I agree with you. And I know that there are other commissioners who disagree with that point of view and I would just like to say that you have a very difficult job ahead of you, Madam Chair, and you need to keep in mind that your duty is not to win a popularity contest at the NRC with commissioners who disagree with this safety agenda but you must lead it in an absolutely critical time when it is faced with a daunting task of responding to the lessons of the Fukushima nuclear meltdowns in a way that ensures that such a thing never happens in the United States. You are charged with the task of ensuring the safety of our fleet of existing nuclear plants, of licensing any new ones, and of responding to what future course our nation takes with respect to the seemingly intractable issues of how to dispose of all of the toxic high level nuclear waste.

And while I would hope that all would be sweetness and light over at the Nuclear Regulatory Commission, I seriously doubt that that will be the case. So don't be afraid to stick to your guns and

do what is right for the American people, even if that puts you on the losing side of a vote. For in the end, Madam Chair, your term as chairman will be judged on whether you have successfully completed the task of fully implementing the NRC Task Force recommendation on Fukushima, on ensuring that there is safety in the disposal of nuclear waste. And that will be your legacy, notwithstanding the fact that there are going to be other members of the Commission who disagree with that agenda.

Thank you, Mr. Chairman.

Mr. SHIMKUS. The gentleman's time is expired.

The chair now recognizes the gentleman from Oregon, Mr. Walden, for 5 minutes.

Mr. WALDEN. I thank the chairman and I welcome the new chairwoman to the Commission. We appreciate you and your colleagues and the important role that you play in providing safety and security to our nation's nuclear power facilities. As my colleagues I think up and down the aisle and across the aisle, we all believe that that is an essential part of your job both moving forward with nuclear energy development but making sure we are safe along the way.

I would like to ask the other commissioner since you weren't given a chance to respond to my colleague's question regarding the task force recommendations, your views on those recommendations, and whether you believe they should be just automatically adopted or not or why they are not. And maybe we could just go from left to right since the chairwoman had a chance to respond.

Ms. SVINICKI. Thank you for the question, Congressman.

Upon receipt of those recommendations from the task force I voted, as did a commission majority, to take that output of that small group, albeit very experienced as Congressman Markey mentioned, they were just a small group of individuals. And I voted to subject those recommendations to the opportunity for public outreach, for comment, for a wide diversity of stakeholders to have an opportunity to comment on that and then for the NRC staff to synthesize all of that input and prioritize and propose to the Commission a plan for moving forward on those recommendations. Sitting here today, I continue to believe that that was a fulsome and appropriate way to proceed.

Mr. WALDEN. So there had not been a transparent or public process prior to that?

Ms. SVINICKI. There had not been an opportunity to ventilate or to have public comment on those recommendations.

Mr. WALDEN. Is that a normal process at an independent agency?

Ms. SVINICKI. I think that it is not inappropriate for commissioners to have, as a starting point, a small experienced group provide some advice. And it was comprised solely of NRC staff. But I do think that it was important to take that very timely and I think informed output and subject it to a much broader kind of opportunity for public comment.

Mr. WALDEN. Appreciate that.

Mr. Magwood, would you care to comment?

Mr. MAGWOOD. Yes, I think Commissioner Svinicki said it very well. In addition, we also insisted that the Advisory Committee on Reactor Safeguards, our expert, outside independent advisory

group, give us input as to their thoughts about these recommendations. And we also, because we were learning as we went during that process, we individual commissioners actually did make additions, not subtractions but additions to what the task force recommended.

Mr. WALDEN. Is that right?

Mr. MAGWOOD. Absolutely. There were several instances where our colleague, Commissioner Apostolakis put in new items. I put in new items. Others did as well. So we——

Mr. WALDEN. Additional safeguard items?

Mr. MAGWOOD. Additional items for study that I believe will eventually be adopted. And I think these are very important. And Commissioner Ostendorff, for example, made the addressing the station blackout a very high priority, higher than I think the staff had originally anticipated. So the Commission took a very active role in this and I think a very positive, very beneficial role, and I am very proud of what we did.

Mr. WALDEN. Commissioner Ostendorff, so explain to me this station blackout role and why that was an important addition from your perspective.

Mr. OSTENDORFF. Yes, sir. The station blackout rule evaluation really refers to when you have a loss of all alternating current AC power onsite——

Mr. WALDEN. Um-hum.

Mr. OSTENDORFF [continuing]. And AC power——

Mr. WALDEN. Much like what happened at Fukushima.

Mr. OSTENDORFF. Yes. And AC power is needed to drive centrifugal pumps——

Mr. WALDEN. Right.

Mr. OSTENDORFF [continuing]. That provide cooling to remove decay heat from a core. And so the ability of a plant to have robust redundant power sources, including emergency diesel generators, portable generators, DC batteries, the ability to——

Mr. WALDEN. Right.

Mr. OSTENDORFF [continuing]. Recharge those batteries, all those things are part of the calculus of how we can have a more robust opportunity to provide this required decay heat removal capability.

Mr. WALDEN. And was it your view that the task force recommendations didn't go far enough along those lines?

Mr. OSTENDORFF. Well, I think the task force did a tremendous job given the fact they had 90 days or less to do what they did.

Mr. WALDEN. Um-hum.

Mr. OSTENDORFF. But I will note that the task force recommendations themselves were not accompanied by a regulatory technical analysis. And before we go out as a regulator and issue orders or require things to be changed, it is incumbent upon us to have a regulatory technical analysis.

Mr. WALDEN. Right.

Mr. OSTENDORFF. And so that is part of the things that Commissioner Svinicki, Commissioner Magwood, Commissioner Apostolakis, and I have been very adamant about over the last 16 months is to ensure we have that technical analysis.

Mr. WALDEN. Right.

Mr. OSTENDORFF. I would tell you that, as Commissioner Magwood said, that there are areas that have been added in. Commissioner Magwood added in issues on spent fuel pool instrumentation, as well as an ultimate heat sink, so the mix before the Commission today is broader than that that was presented in July of 2011.

Mr. WALDEN. Well, I appreciate that and I know I am just out of time here, but I appreciate the fact you are doing a public, transparent process so that more than just a handful of inside staffers decide what is going to be mandatory across the country. It is something I have drive as chairman of the Communications and Technology Subcommittee at the FCC. I don't think they do enough of the appropriate sort of public, transparent process where everybody has a chance to weigh in. After all, it is the public's business, in your case the public safety, and I think it is important to get it right.

So thank you, Mr. Chairman, for your indulgence.

Mr. SHIMKUS. I thank my colleague. The chair recognizes the gentleman from Virginia for 5 minutes.

Mr. GRIFFITH. Mr. Chairman, thank you for having this hearing. I have to tell you all, those of us who were here the last time that you all were before us know that I was very concerned that the process was completely dysfunctional. I feel much better today.

That being said, Mr. Chairman, I would like to yield the time remaining to you for whichever questions you would like to ask.

Mr. SHIMKUS. And I thank my friend and colleague.

Chairman Macfarlane, when nominated to become a commissioner, Chairman Jaczko recused himself for 1 year on matters relating to Yucca Mountain. In 2009, when asked by a writer for the MIT Technological Review, "is it (Yucca Mountain) really unsuitable? And you answered yes. In your role as NRC chairman you must be fair and objective in adjudicating issues that come before the Commission. Your public criticism at Yucca Mountain leads us to question your objectivity on the matter." Will you recuse yourself on matters relating to Yucca Mountain just as Chairman Jaczko did?

Ms. MACFARLANE. Like any commissioner, I would examine each and every matter before me on the legal specifics at the time and take appropriate action, which could include possible recusal. But at this point, I believe it is inappropriate to commit to a general recusal on this matter without a specific commission action in front of me to evaluate with counsel input.

Mr. SHIMKUS. You have been well prepared. Thank you.

The DC Circuit Court is considering whether the NRC is bound to finish its review of the Yucca Mountain license application. In March, Secretary Chu committed to honor that court's decision. Will you also commit to honor the court's decision?

Ms. MACFARLANE. Absolutely.

Mr. SHIMKUS. What do you see as the Federal Government's proper role in encouraging the use of alternative fuels in vehicles?

Ms. MACFARLANE. Alternative fuels in vehicles?

Mr. SHIMKUS. I have no idea why this is on there.

Ms. MACFARLANE. Because the NRC doesn't do that.

Mr. SHIMKUS. Well, when we talk about electric vehicles, there could be some debate on electricity generation.

To each of the serving commissioners, you know, as a hearing, this has been a very good hearing. Now, that is Mr. Markey going up there to stop me in my final—see, I called him out. So I think the hearing has been very, very good and we have got one more colleague back to ask questions.

But there is some issues that have been raised that I want to give Commissioner Svinicki, Commissioner Magwood, and Commissioner Ostendorff an opportunity to—because some of your votes have been questioned by people who say that you don't support safety. So can each one of you give an example of a vote that has been misconstrued and explain why your vote was protective of public safety?

Mr. SHIMKUS. Commissioner Svinicki?

Ms. SVINICKI. I would begin with the matter we were just discussing, which is the Commission's very important actions on the Fukushima Task Force recommendations. I will use the same word as Commissioner Magwood. I am very proud of what the commission majority put in place. I think that we have shown a real commitment to safety, to moving forward in a way that has technical discipline and rigor but at the same time is moving forward very seriously with these recommendations. And I think that the entire handling of the task force report has been extremely misconstrued.

Mr. SHIMKUS. Commissioner Magwood?

Mr. MAGWOOD. Yes, I think I am forced to point to the same example. There has been this debate about the regulatory basis for our decision as to whether they should be entered what we call adequate protection or an administrative exemption. And in some cases one of us or the other have advocated administrative exemption. And in my case it wasn't because I thought that these issues weren't important. It was simply, as Commissioner Ostendorff pointed out earlier, that I thought we needed to have a much more rigorous technical basis to evaluate these issues. But I wanted them to go forward but still preserve the opportunity to do the analysis so they could provide a very strong framework for us to go forward. So operationally they mean the same thing, but from a regulatory standpoint, it gives you a stronger basis to go forward and that is what I was looking for.

Mr. SHIMKUS. Thank you.

Commissioner Ostendorff?

Mr. OSTENDORFF. Thank you for the question. I think my two colleagues have just provided very cogent examples which I agree with. I will just state one overall comment that I think the actions that the current commissioners have taken who have been here through the Fukushima issues have been very responsible, that I think in large part what gets left out of a lot of the public press commentary is that we are by and large following the recommendations of our close to 4,000-person staff. Bill Borchardt here who is in the row behind us, he and his team under the Steering Committee have been integrating and prioritizing these recommendations, and I think we have been very thoughtful in considering the recommendations. Also realize that not all these issues are of the

same safety significance, and therefore, some deserve more urgency than others. And I think today we have acted in that way.

Mr. SHIMKUS. And I thank you. And I know a lot of this was post-Fukushima but I think there is also examples of other issues that you could probably defend your vote on on public safety. So with that, I appreciate it.

The chair now recognizes the vice chairman of the committee, Mr. Murphy, for 5 minutes.

Mr. MURPHY. Don't you want to say I am in the Navy?

Mr. SHIMKUS. I said beat Navy. You were here there, weren't you? Or that is why you are so late and didn't ask questions because you didn't get here on time?

Mr. MURPHY. Admiral, I want to start out by asking you. You have been involved with issues with the Navy nuclear for a while. You are aware of that. Have we ever had any major problems with nuclear energy systems in the Navy in its history?

Mr. OSTENDORFF. I would say as far as major problems, no, sir.

Mr. MURPHY. That is an important record. How many years has it been?

Mr. OSTENDORFF. I served 26 years active duty.

Mr. MURPHY. But the Navy has been around——

Mr. OSTENDORFF. The Nuclear Navy has been around since USS Nautilus back in 1954, I believe, they had nuclear power submarines and carriers.

Mr. MURPHY. Good track record. Thank you.

And then, Chairman, thank you for coming aboard. I appreciate your comments about collegiality. And if it hasn't been said before, I will say it now, and if it has, I will repeat it. It is valuable. Not only collegiality among members of the NRC, which up to this point—well, up to a point a few months ago—has had a highly respected position and I believe that collegiality is extremely important not just among members of the Commission but with Congress and with the American people. So I appreciate your motivation to turn this in a different direction.

I just want to get a couple things on record. Have you been to a nuclear power plant?

Ms. MACFARLANE. Have I been to a nuclear power plant? Yes.

Mr. MURPHY. OK. And have you been to a fuel manufacturing facility where they make nuclear fuel and assemble it and assembly rods, et cetera?

Ms. MACFARLANE. Yes, I have, actually.

Mr. MURPHY. OK. Where was that?

Ms. MACFARLANE. It was in Europe.

Mr. MURPHY. Where? I am just curious.

Ms. MACFARLANE. I think it was Belgium.

Mr. MURPHY. OK. Thank you, ma'am. And when you were over in Europe, did you have a chance to see what they do in France with reprocessing nuclear fuel?

Ms. MACFARLANE. Yes, I have. I have been to La Hague.

Mr. MURPHY. The AREVA place? Have you been over to Sweden where they have nuclear storage there——

Ms. MACFARLANE. Yes, I have.

Mr. MURPHY [continuing]. Underground in that massive cave?

Ms. MACFARLANE. Yes, to the Clab facility, yes, um-hum.

Mr. MURPHY. Pretty incredible facility over there. Safe?

Ms. MACFARLANE. Yes.

Mr. MURPHY. I imagine you are particularly interested as a geologist noting the entire country of Sweden is in one big block of granite and fairly——

Ms. MACFARLANE. Well, it is a little more complicated than that.

Mr. MURPHY. I understand, different types of granite but it is an impressive facility. Have you been to Yucca Mountain?

Ms. MACFARLANE. Yes, many times.

Mr. MURPHY. OK, you have been there. And with regard to that, one of the concerns on record that you have stated before you took on this position with the committee that you are not in favor of Yucca Mountain and I believe you are not in favor of reprocessing. Do I have those positions correct or am I wrong on those?

Ms. MACFARLANE. I think you are wrong on them. On the Yucca Mountain position, I have never said that I am not in favor of Yucca Mountain. In fact, I can read to you——

Mr. MURPHY. I would love to hear that, thank you.

Ms. MACFARLANE [continuing]. From the book that I co-edited, "Uncertainty Underground," and a direct quote is "this book is not a judgment on the suitability of Yucca Mountain as a repository"——

Mr. MURPHY. I am sorry. What was the title of the book, "Uncertainty?"

Ms. MACFARLANE. "Uncertainty Underground."

Mr. MURPHY. Sounds like a comment to me.

Ms. MACFARLANE. It is a comment, yes——

Mr. MURPHY. All right.

Ms. MACFARLANE [continuing]. It is a comment about uncertainty that exists. But it is a technical uncertainty. Anyway, the quote is "this book is not a judgment on the suitability of Yucca Mountain as a repository for spent nuclear fuel and high-level nuclear waste. We leave that judgment to the reader."

Mr. MURPHY. I understand, but with a title like that, I am serious, I am looking forward to reading your book.

And now your predecessor, Chairman Jaczko, held a fairly negative view I think of the nuclear industry and nuclear energy. In a speech earlier this year he indicated that 20 years from now, the nuclear industry is just as likely to "be dominated by a process of continuous decommissioning" instead of a process of continuous construction of nuclear reactors. What is your view on that?

Ms. MACFARLANE. On the future of the nuclear industry? I think it depends on many, many factors. The economics, certainly the economy right now.

Mr. MURPHY. And policy?

Ms. MACFARLANE. Policy, absolutely.

Mr. MURPHY. Policy at the NRC?

Ms. MACFARLANE. The policy at NRC to a smaller degree I would imagine.

Mr. MURPHY. All right. Please share your opinion regarding the benefits and transparency of the notation voting process of the members.

Ms. MACFARLANE. As far as I understand the notation voting process, I think it has the potential to operate fine. Were there to

be any changes to the voting process, I would discuss those with my colleagues before proceeding.

Mr. MURPHY. How about the other commissioners? Ms. Svinicki, do you have a comment on that?

Ms. SVINICKI. On the notation voting——

Mr. MURPHY. Yes, um-hum.

Ms. SVINICKI [continuing]. Process? I am supportive of the notation voting process. When I was newly on the Commission, I benefited greatly from the rich written record of prior votes of Commissioners. Often we were dealing with the same issue in a different form a few years later. The ability to tap into the tremendous expertise of those who served before me was very beneficial.

Mr. MAGWOOD. I think about a week ago I saw a vote that Commissioner Svinicki had written that raised issues that we in my office had missed. So we investigated Commissioner Svinicki's comments and her vote, took a few days to do that, but after investigating it, I withdrew my original vote and re-voted. That is an example of the kind of dynamic you get from a notation voting process that you would completely lose——

Mr. MURPHY. Um-hum.

Mr. MAGWOOD [continuing]. If you go to an oral, at-the-table process because you don't have time to go back and do research and you don't have time to confer with staff. And so I think a notation voting process works extremely well and I wouldn't really change much of anything.

Mr. MURPHY. Thank you.

Commissioner Ostendorff?

Mr. OSTENDORFF. I would just add I agree with my colleagues. I pulled out a vote I cast July 27 of last year. It is a 5-page vote on Fukushima issues. These are not yes-or-no issues. These are not up or down. These are very complex, here is my vote. Other colleagues have similar lengthy votes where I think we have a very rich opportunity to learn from and explain our viewpoints in a way that we would not have if this process went away.

Mr. MURPHY. I appreciate the complexity of those.

Mr. Chairman, can I just beg for one more since I don't see anybody else?

Mr. SHIMKUS. Without objection.

Mr. MURPHY. Thirty seconds. And then, Chair, in 2009 when you were asked by a writer for the MIT Technology Review, the question "is Yucca really unsuitable?" You answered yes at that time. Are you saying your opinion has changed? And I put this in the context of what the other commissioner said, the value of having a more lengthy and detailed answer to things because maybe these things cannot be reduced to a yes/no answer. Has your position changed? Is it yes? Is it no? Is it we have more work to do?

Ms. MACFARLANE. I am not sure the context of that quote, so I can't speak directly to that quote, but what I can tell you—and maybe in a sense of reassuring—is that I have spent much time researching Yucca Mountain. I believe all the analyses that I have done are technically defensible. As a scientist, I would not try to publish anything that wasn't technically defensible; it wouldn't be publishable. Most of the analyses that I did of Yucca Mountain for the book, which was published in 2006, were done in the early 2000

time frame. That was before the license application was submitted. I have not read the license application. I have not read yet the NRC's technical analyses. Of course, with time, knowledge, changes, more evidence comes to light, and I intend to keep an open mind.

Mr. MURPHY. I appreciate your candor and your scientific integrity. Thank you very much.

I yield back.

Mr. SHIMKUS. The gentleman's time has expired.

We were talking about votes. We took a vote this spring on finishing the NRC study; 326 Members voted to do that so I think it is by far the majority bipartisan consensus that we move forward at least finishing the study.

With that, I would like to ask unanimous consent that June 26, 2012, NRC Office of Inspector General report concerning possible violations of Reorganization Plan No. 1 of 1980, NRC's internal commission procedures be introduced into the record. Without objection, the document will be entered into the record.

[The information is available at http://www.hsdl.org/?view&did=719161.]

Mr. SHIMKUS. In conclusion, I would like to thank you, all you witnesses, and my colleagues, you could see it was very well attended, a lot of good questions participating today in the hearing.

I want to remind members that they have 10 business days to submit questions for the record, and I ask the chairman and the commissioners their willingness to agree to respond should you receive any questions from members of the two subcommittees.

With that, the subcommittee is adjourned.

[Whereupon, at 12:36 p.m., the subcommittees were adjourned.]

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 7, 2012

The Honorable John Shimkus
Chairman, Subcommittee on Environment and the Economy
Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20510

Dear Chairman Shimkus:

The U.S. Nuclear Regulatory Commission appeared before the Committee on Energy and Commerce, Subcommittee on Environment and the Economy and Subcommittee on Energy and Power, on July 24, 2012, at a hearing entitled, *NRC Policy and Governance Oversight*. From that hearing, you forwarded questions for the hearing record. The responses to those questions are enclosed. The questions posed to Chairman Macfarlane, on behalf of the Commission, will be responded to on September 14, 2012. If I can be of further assistance, please do not hesitate to contact me.

Sincerely,

Rebecca L. Schmidt, Director
Office of Congressional Affairs

Enclosure:
As stated

cc: The Honorable Gene Green, Ranking Member
Subcommittee on Environment and the Economy

House Energy and Commerce Committee Hearing

Subcommittee on Energy and Power
and the
Subcommittee on Environment and the Economy
July 24, 2012

Follow-Up Questions for Written Submission

The Honorable John Shimkus

QUESTION 1. **The NRC has repeatedly indicated that U.S. nuclear plants are safe and do not pose an imminent risk to public health and safety and has issued orders on the matters with the highest safety benefit. With that assurance and those actions in mind, please respond to the following:**

a. Do you anticipate supporting any additional orders for post-Fukushima regulatory changes without requiring cost-benefit analysis?

b. Please list any reasons you believe might warrant sidestepping the NRC's usual processes for developing a technical basis and cost benefit analysis when considering additional post Fukushima regulatory changes.

ANSWER.

a. The Commission intends to follow its established processes with regard to any potential additional orders related to post-Fukushima lessons learned. In accordance with these processes, cost-benefit analyses would be conducted where applicable and required. The agency's "backfitting" rule requires that an analysis be performed to determine if

proposed regulatory actions that constitute backfits under this rule are cost-justified, except in three cases: 1) if the action is necessary to bring a facility into compliance with a license or rules of the Commission; 2) if the action is necessary to ensure adequate protection of the health and safety of the public; or 3) if the action defines or redefines what level of protection should be regarded as adequate. Should one of these exceptions be invoked, then a documented evaluation must be completed. Furthermore, the Atomic Energy Act provides the Commission authority to issue requirements that it determines represent a significant enhancement to public health and safety. It is within this existing context of the NRC's established rules, processes, and statutory authority that the Commission would justify any future decisions regarding additional post-Fukushima regulatory requirements.

b. As discussed in the response to Question 1a, the NRC's established processes for promulgating regulatory changes include the development of an analysis that weighs the costs and benefits of a proposed regulatory action that constitutes a backfit under the NRC's backfitting rule, unless one of three exceptions apply. These three exceptions are included within the NRC's established processes, and require a documented evaluation when invoked. The Commission also has authority to establish implementing requirements that significantly enhance public health and safety. The Commission is committed to considering all required and appropriate analyses, evaluations, and authorities available to it when deciding on any proposed regulatory action. In this decision-making process, the Commission remains focused on the health and safety of the American people.

QUESTION 2. In March of 2011, the NRC staff developed a proposal to address situations where new NRC requirements might hinder the implementation of other recent NRC requirements. Regulatory changes should be prioritized based on safety benefit, and recognize timing, staffing, financial, and other constraints. This would certainly be in line with the NRC's Efficiency Principle which states: "Regulatory activities should be consistent with the degree of risk reduction they achieve." In the hearing, Commissioner Magwood was quoted as saying: "it does not, as a general matter, advance the cause of safety to inundate licensee staff with multiple actions when a more thoughtful process might achieve the agency's safety goals without straining licensee resources."

a. What are your views on whether staff and industry concerns on potential cumulative effects of multiple new requirements have merit?
b. Will you work with your colleagues and staff to ensure this matter receives serious Commission attention?
c. Given the scope of Tier 2 and Tier 3 post-Fukushima actions and other regulatory changes under development, what actions are being taken to resolve this concern concurrently?

ANSWER.

a. As discussed in the NRC paper "Consideration of the Cumulative Effects of Regulation in the Rulemaking Process," the staff and industry concerns on potential cumulative effects of multiple new requirements do have merit.[1] The NRC has developed the following working definition for the cumulative effects of regulation:

Cumulative Effects of Regulation describes the challenges that licensees, or other impacted entities such as State partners, face while implementing new regulatory positions, programs, or requirements (e.g., rules, generic letters, backfits, inspections). Cumulative Effects of Regulation is an organizational effectiveness challenge that results from a licensee or impacted entity implementing a number of complex regulatory positions, programs, or requirements within a limited implementation period and with available resources (which may include limited available expertise to address a specific issue). Cumulative Effects of Regulation can potentially distract licensee or entity staff from executing other primary duties that ensure safety or security.
The NRC has implemented a number of regulatory process enhancements to address Cumulative-Effect-of-Regulation issues. However, since safety and security must remain paramount in all regulatory decision-making, process enhancements focus more on scheduling implementation deadlines for the execution of requirements, and less on reducing or scaling back requirements. These process enhancements align with both the Executive Branch's Open Government initiative and the January 18, 2011, Executive Order, "Improving Regulation and Regulatory Review." The NRC staff will provide a paper in

[1] SECY-11-0032, March 2, 2011; ADAMS Accession No. ML110190027

October 2012 that builds upon SECY-11-0032 and also incorporates direction received from the Commission.

b. The Commission has given considerable attention to this matter. With an expected staff paper due in October, we will continue to do so.

c. SECY-11-0032 referenced in the answer to Question 2(a), notes that the NRC staff is considering the cumulative effects of regulation (CER) in the rulemaking process. If the Tier 2 and Tier 3 activities result in rulemaking, the CER process enhancements described in SECY-11-0032 will be directly applied.

For those Tier 2 and Tier 3 activities that are other regulatory actions (i.e., other than rulemakings), the CER will be considered indirectly. In other words, those regulatory actions will be considered to the extent they impact the implementation of ongoing rulemakings. For example, proposed rules will contain specific requests for comment on items related to CER. One such request will seek feedback from external stakeholders on whether any other regulatory actions (e.g., generic letters, orders, etc.) would influence the implementation of the proposed rule's requirements. The NRC staff will use that feedback to inform the implementation dates of the final rule requirements.

In addition, in many cases the staff will conduct a public meeting on implementation during the final rulemaking stage. During this meeting, external stakeholders will have another opportunity to inform the NRC of ongoing regulatory actions, and challenges those actions may create for the implementation of the subject final rule. Again, the NRC notes that safety and security concerns remain the most important decision factors.

Although CER does not directly apply to non-rulemaking activities, the NRC notes that many of the good regulatory principles emphasized in the CER process enhancements, especially extensive stakeholder interaction, are currently being applied in post-Fukushima activities.

QUESTION 3. **The Reorganization Plan of 1980 states that the NRC chairman "shall be governed by the general policies of the Commission." As Chairman, will you respect and adhere to the general policies of the Commission, as embodied by the Internal Commission Procedures?**

ANSWER.

I will adhere to Internal Commission Procedures, as has been the practice since the beginning of my Chairmanship.

QUESTION 4. **Please describe any changes to Internal Commission Procedures that you believe would be helpful:**

a. **In preserving Commission collegiality;**
b. **In ensuring the timely and unfiltered flow of information to the Commission;**
c. **To provide clarity regarding leadership and management during an emergency particularly with regard to the Chairman's use of emergency powers under Section 3 of the Reorganization Plan of 1980.**

ANSWER.

a. I am satisfied that the Internal Commission Procedures provide an effective framework for the Commission to govern as a collegial body.

b. I am satisfied that the Internal Commission Procedures provide an effective framework for ensuring the timely and unfiltered flow of information to the Commission.

c. I am satisfied that the Internal Commission Procedures provide sufficient clarity regarding leadership and management during an emergency, particularly with regard to the Chairman's use of emergency powers under Section 3 of the Reorganization Plan of 1980.

QUESTION 5. **The previous chairman repeatedly attempted to withhold or modify information provided to the Commission by the staff, even attempting to fire the Executive Director for having provided recommendations to the Commission. Please respond to the following questions:**

a. Will you refrain from using your authority for agenda planning to preclude or delay issues from coming before the Commission?
b. Will you refrain from altering information provided by the staff to the Commission?
c. Will you refrain from substituting your views for the staff's recommendations in information provided to the Commission?
d. Will you communicate to NRC staff your commitment to support their ability to communicate with the Commission and provide their best professional advice?

ANSWER.

Much of my July 24, 2012 testimony before the Committee was directed at addressing these matters. My approach to management and to working with my Commission colleagues is to operate in a collaborative and collegial manner, always reaching out to others for input and ideas. Toward this end, I am meeting regularly with my Commissioner colleagues to seek their thoughts on major issues facing the agency and to benefit from their expertise. I look forward to continuing to forge a collegial relationship with them. I have also had the opportunity to work closely with the Executive Director and his direct staff. I have met with, been briefed by, and engaged a wide variety of the dedicated staff at the NRC through walk-arounds, meetings with various offices, and in written communications.

In this overall context, let me reiterate the commitment I made to you at our July hearing: I will devote my energies to serving the NRC with the attributes that I consider important to good governance – openness, efficiency, and transparency. I will practice collegiality at all levels. An agency endowed with the public trust to be protective of its safety and security, such as the NRC, requires a respectful working environment to assure its integrity. As Chairman, I am committed to ensuring that the Commission operates in an environment of collegiality, where information is fully and currently shared, and the work of the Commission and its agenda is collaboratively established and executed.

QUESTION 6. **There have been an extraordinary number of delays in the time it has taken to bring certain matters before the Commission to a vote and to closure, and Commissioners have not always abided by voting procedures. The Office of the Secretary has a critical role in coordinating the**

Commission's voting in accordance with Commission procedures.

a. Will you adhere to voting procedures in the Internal Commission Procedures or work collegially to address needed changes?

b. Will you refrain from interfering in the Secretary's execution of her responsibilities to the Commission?

ANSWER.

I will devote my energies to serving the NRC with the attributes that I consider important to good governance – openness, efficiency, and transparency. I will practice collegiality at all levels, including with the Executive Director and Secretary. An agency endowed with the public trust to be protective of its safety and security, such as the NRC, requires a respectful working environment to assure its integrity. As Chairman, I am obligated and committed to do all within my authorities to ensure that the Commission operates in an environment of collegiality, where information is fully and currently shared, and the work of the Commission and its agenda is collaboratively established and executed. As the principle executive officer, serving on behalf of the Commission, I will assure that the Commission's staff, including the Secretary, and the Executive Director and NRC staff are treated with the respect due them and their important responsibilities.

QUESTION 7. **Following the Fukushima disaster, there was significant confusion regarding former Chairman Jaczko's use of emergency authority. Please respond to the following questions:**

a. As Chairman, will you commit to immediately and publicly announce your exercise of emergency authority under Section 3 of the Reorganization Plan of 1980, should you decide to exercise it?

b. As Chairman, how would you expect to utilize the expertise of your fellow commissioners in an emergency situation?

c. As Chairman, will you commit to file a timely and fulsome report, as required in Section 3 of the 1980 Reorganization Plan, describing any unilateral actions taken during your exercise of that such authority?

ANSWER.

The Chairman's emergency powers are specified under Section 3 of the Reorganization Plan of 1980 and are captured in the following sections:

- Section 3(a) of Reorganization Plan No. 1 of 1980 (Reorganization Plan) reserves to the Chairman the function of "declaring" an emergency. Such a declaration causes the transfer to the Chairman all functions vested in the Commission that pertain to an emergency concerning a particular facility or materials licensed or regulated by the Commission, including the functions of declaring, responding, issuing orders, determining specific policies, advising civil authorities, and the public, directing, and coordinating actions relative to such emergency incident.

- Section 3(b) provides that the Chairman can delegate the authority to perform emergency functions, in whole or in part, to any members of the Commission, or in whole or in part to the staff of the Commission.

- Section 3(c) provides that the Chairman or anyone acting under delegated authority under section (b) shall conform to the policy guidelines of the Commission. This section also provides that to the maximum extent possible under the emergency conditions, the Chairman or other member of the Commission delegated authority under section (b) shall inform the Commission of the actions taken relative to the emergency.

As I understand these matters, the only time the exercise of emergency authority is needed is if the situation demands that I eclipse a function that is ordinarily reserved to the Commission. For example, if I am exercising my authority to serve as the Agency spokesman, or performing executive functions involving supervision of the staff, or deciding matters that don't involve policy formation, I would not invoke emergency authorities. If the need arises, however, to carry out emergency functions, I will do so in accordance with both the letter and spirit of the Commission's established internal procedures. As Chairman, I am obligated and committed to do all within my authorities to ensure that the Commission operates in an environment of collegiality, where information is fully and currently shared, and the expertise and good judgment of colleagues is sought to the greatest extent the exigencies of the emergency permits.

QUESTION 8. **Do you believe that the mission of the Office of Public Affairs (OPA) is solely to serve the Chairman's needs as spokesperson for the agency or do you believe OPA should more broadly serve the agency and reflect the Commission's position? How do you envision managing OPA in executing their mission?**

ANSWER.

As specified in the Internal Commission Procedures, "the Chairman is the official spokesman for the Commission and appoints, supervises, and removes, without further action by the Commission, the Directors and staff of the Office of Public Affairs...." As the official spokesman for the Commission, I am committed to ensuring that I accurately convey the duly established policy positions of the Commission and that the Office of Public Affairs does the same. Furthermore, the Office of Public Affairs under my direction is not only serving my needs as the official spokesman, but the needs of the Commission as a whole. Certainly, the Office of Public Affairs will in all respects serve the important mission of our agency and will not -- in any respect -- be directed to serve my individual purposes.

QUESTION 9. **Please share your opinion regarding the benefits and transparency of the notation voting process.**

ANSWER.

The notation voting process facilitates thorough Commission consideration of complex and technical regulatory issues. The process ensures that Commissioners have sufficient opportunity to consult with their personal staff, or other NRC staff, before the Commission reaches a final decision. The process preserves written records of the Commission's deliberations, and, in many cases, yields published Commission voting records, which provide each Commissioner's reasoning behind his or her vote. This approach under the Government in the Sunshine Act is at least as valuable for promoting transparency and insight into decision making as would a meeting-centered approach. With that said, meetings, including public Commission meetings, have played and will continue to play an important role in the Commission's operations as a collegial body.

QUESTION 10. **For the last three years, the Commission and the agency have struggled with turmoil resulting from failed leadership. Please provide your personal suggestions for legislation to reform its governance structure and strengthen the Commission's function as a collegial body.**

ANSWER.

Taking the long view, and accounting for the full history of the Commission's work, I am satisfied that existing legislation, in combination with Internal Commission Procedures, provides an effective framework for the Commission to govern as a collegial body.

The Honorable Bill Cassidy

QUESTION 1. **Chairman Macfarlane, in the past you have stated opposition to the development and use of Yucca Mountain as a nuclear waste repository. Do you still stand by those comments and oppose the use of Yucca Mountain, as per your previous statements?**

ANSWER:

As an academic and scientist I have published papers, articles, and an edited book that addressed the scope and findings of research completed on the geology of the Yucca Mountain site. My focus at the time was in highlighting the complexities and sources of uncertainty in the federal government's scientific analysis. Much of my research and analyses, particularly for my contribution for the book *Uncertainty Underground*, was done in the pre-2004 time frame. In this context, I wrote in the closing chapter of the book that "I am not trying to suggest abandoning Yucca Mountain and going back to the drawing board. Instead, I would like to put forth some ideas for improving the current situation based on this analysis....Hence, there is considerable time to reconsider whether Yucca Mountain is a reasonable site for the long-term storage of nuclear waste. There is little to be gained, and much to be lost, from rushing a decision of such magnitude." (pp. 406-408, Macfarlane, 2006)

I have not undertaken additional research on this matter since the publication of my book. The Department of Energy's license application seeking authorization to build a geologic repository at Yucca Mountain was not submitted until June, 2008. I have read neither the Department of Energy's license application, nor the Nuclear Regulatory Commission's technical analysis of that application. I would need to read both, as well as any additional relevant scientific literature, to

update my understanding of the suitability of Yucca Mountain for high-level nuclear waste disposal and before taking any action in my role as Chairman of the NRC.

The Commission is waiting for necessary direction and clarification from the U.S. Congress or the U.S. judiciary on these matters. In the eventuality that such direction is received, I will fulfill my responsibilities as Chairman and Commissioner and follow the Commission's established internal procedures for addressing these matters.

QUESTION 2. **If you oppose the development of Yucca Mountain, do you also oppose the expansion of nuclear energy in general?**

ANSWER:

I have not taken a position regarding the development of Yucca Mountain. I do not oppose the expansion of nuclear energy.

QUESTION 3. **Do you commit to allowing normal Commission process to be followed in making the final determinations on the Yucca Mountain issue; as opposed to what former Chairman Jaczko did, essentially subverting this process as he pursued his own agenda?**

ANSWER.

As in all my efforts as Chairman of the Nuclear Regulatory Commission, I will conduct my work with professional integrity, transparency of motive and judgment, and in conformance with both the letter and spirit of the Commission's internal procedures.

QUESTION 4. **If you continue to oppose the use of Yucca Mountain for scientific or other reasons, can you please detail your reasons so that I may better understand your opposition?**

ANSWER.

Please see my response to Question 1.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

COMMISSIONER

September 6, 2012

The Honorable Ed Whitfield
Chairman, Subcommittee on Energy
and Power
Committee on Energy and Commerce
United States House of Representatives
Washington, D.C. 20515

The Honorable John Shimkus
Chairman, Subcommittee on Environment
and the Economy
Committee on Energy and Commerce
United States House of Representatives
Washington, D.C. 20515

Dear Chairman Whitfield and Chairman Shimkus:

I appeared before the Subcommittee on Energy and Power and the Subcommittee on Environment and the Economy on July 24, 2012, along with my colleagues on the Commission. In response to your letter of August 23, 2012, enclosed please find my response to questions for the record from that hearing. If I can be of further assistance, please do not hesitate to contact me.

Sincerely,

Kristine L. Svinicki

Enclosure: As stated

cc: The Honorable Bobby L. Rush
Ranking Member
Subcommittee on Energy and Power

The Honorable Gene Green
Ranking Member
Subcommittee on Environment
and the Economy

Questions from the Honorable John Shimkus

1. **The NRC has repeatedly indicated that U.S. nuclear plants are safe and do not pose an imminent risk to public health and safety and has issued orders on the matters with the highest safety benefit. With that assurance and those actions in mind, please respond to the following:**

   a. **Do you anticipate supporting any additional orders for post-Fukushima regulatory changes without requiring cost-benefit analysis?**

   As noted by Chairman Mcfarlane in her response on behalf of the Commission, the Commission intends to follow its established processes with regard to any potential additional orders related to post-Fukushima lessons learned. In accordance with these processes, cost-benefit analyses would be conducted where applicable and required.

   More specifically to your question, however, as I stated in my vote on SECY-12-0025, "Proposed Orders and Request for Information in Response to Lessons Learned from Japan's March 11, 2011, Great Tohoku Earthquake and Tsunami," I believe NRC has "been well-served by our disciplined approach to regulatory analysis" and "the Commission's actions regarding the consideration of cumulative effects of regulation and President Obama's Executive Orders on regulatory reform remind us that we should not . . . lose sight of the relative benefits and burdens of our regulatory actions. . . . I encourage the staff in future evaluation phases of the Fukushima lessons-learned effort to maintain a rigorous regulatory analysis process."

   b. **Please list any reasons you believe might warrant sidestepping the NRC's usual processes for developing a technical basis and cost benefit analysis when considering additional post-Fukushima regulatory changes.**

   The agency's "backfitting" rule requires that an analysis be performed to weigh the costs and benefits of proposed regulatory actions that constitute backfits under the NRC's backfitting rule except in three cases: 1) if the action is necessary to bring a facility into compliance with a license or rules of the Commission; 2) if the action is necessary to ensure adequate protection of the health and safety of the public; or 3) if the action defines or redefines what level of protection should be regarded as adequate. Should one of these exceptions be invoked, then a documented evaluation must be completed. Furthermore, the Atomic Energy Act provides the Commission authority to issue requirements that it determines represent a significant enhancement to public health and safety. It is within this existing context of the NRC's established rules, processes, and statutory authority that the Commission would justify any future decisions regarding additional post-Fukushima regulatory requirements.

2. **In March of 2011, the NRC staff developed a proposal to address the cumulative impacts of regulatory changes. Such regulatory changes should be prioritized based on safety significance, and recognize timing, staffing, financial, and other constraints. This would certainly be in line with the NRC's Efficiency Principle which states: "Regulatory activities should be consistent with the degree of risk reduction they achieve." In the hearing, I quoted you [Commissioner Magwood] as saying: "it does not, as a general matter, advance the cause of safety to inundate licensee staff with multiple actions when a more thoughtful process might achieve the agency's safety goals without straining licensee resources."**

   a. **Will you work with your colleagues and staff to ensure this matter receives serious Commission attention?**

   I will.

   b. **Given the scope of Tier 2 and Tier 3 post-Fukushima actions and other regulatory changes under development, what actions are being taken to resolve this concern concurrently?**

   In response to voting paper SECY-11-0032, "Consideration of the Cumulative Effects of Regulation in the Rulemaking Process," the Commission directed the NRC staff to prepare a strategy to implement proposed process changes related to consideration of the cumulative effects of regulation and to submit this strategy for the Commission's review and approval in the last quarter of 2012. The strategy will include the NRC's proposed approaches for soliciting and considering stakeholder feedback on the cumulative effects of proposed regulations and for structuring proposed rule requirements and compliance timeframes appropriately, based on this feedback.

   If the Tier 2 and Tier 3 activities result in rulemaking, the process enhancements related to the cumulative effects of regulation will be directly applied. For those Tier 2 and Tier 3 activities that are other regulatory actions (i.e., other than rulemakings), cumulative effects of regulation will be considered indirectly.

3. **Please share your opinion regarding the benefits and transparency of the notation voting process.**

   Throughout my service on the Commission, I have benefited from the rich, written record of prior votes by individual Commissioners, which exist as a result of the historical practice of written, notation voting at the NRC. Individual Commissioner's notation vote sheets, which in part serve to influence the thinking of fellow Commissioners, often provide extensive commentary on the issues for decision and the Commissioner's rationale for supporting or opposing a proposed action, in whole or in part. The written articulation of my colleague's thinking can prove particularly invaluable where the issues

are complex, the relative weight of factors affecting policy is not clear, and the choices are numerous. Often, voting matters before the Commission are an evolution of a previous voting matter. Access to the historical record of previous Commission deliberation can also provide diverse insights, as well as enhance continuity and stability in the consideration of regulatory issues.

4. **There have been an extraordinary number of delays in the time it has taken to bring certain matters before the Commission to a vote and to closure, and Commissioners have not always abided by voting procedures. Going forward, will you adhere to voting procedures in the Internal Commission Procedures or work collegially to address needed changes?**

   I believe I have, and pledge to continue to, adhere to the voting procedures in the Internal Commission Procedures and to work collegially to address any needed changes.

5. **Please describe any changes to Internal Commission Procedures that you believe would be helpful:**
   a. **In preserving Commission collegiality;**
   b. **In ensuring the timely and unfiltered flow of information to the Commission;**
   c. **To provide clarity regarding leadership and management during an emergency particularly with regard to the Chairman's use of emergency powers under Section 3 of the Reorganization Plan of 1980.**

   The substantial revision of the Internal Commission Procedures, undertaken by the Commission in 2010, was intended to clarify and resolve ambiguities in the procedures as they existed before that time, with the aim of improving the flow of information and the Commission's overall collegial functioning. The Commission is still gaining operational experience in the use of the revised procedures under Chairman Mcfarlane's chairmanship and, I believe, would benefit from additional time prior to proposing further adjustment or modification to the procedures. The Secretary of the Commission is scheduled to propose any changes to the procedures, as part of a routine biennial review assigned to her office, in the summer of 2013.

6. **For the last three years, the Commission and the agency have struggled with turmoil resulting from failed leadership. Please provide your personal suggestions for legislation to reform its governance structure and strengthen the Commission's function as a collegial body.**

   Although the current statutory framework is workable and not, in my view, in need of fundamental rework or revision, clarification to the definition and Congressional intent in

certain, narrow areas may promote the collegial functioning of the Commission. Areas which come to mind for further consideration include: 1) the supervisory relationship between the Chairman and the Executive Director for Operations; 2) the Chairman's authority to temporarily reassign officials serving in appointments approved by the Commission as a whole; 3) the Chairman's authority to appoint and rate the performance of the Chief Financial Officer; 4) the Commission's right to full and unfettered access to information already in existence within the agency; 5) the respective roles of the Chairman and the Commission in formulating and overseeing the execution of the agency's budget; 6) the role of the Chairman in formulating and proposing policy matters for the Commission's consideration; 7) the authority of the Chairman and Commission in determining the form in which a voting matter is taken up by the Commission; and 8) the authority of the Chairman in reviewing and determining the content of NRC staff proposals and recommendations to the Commission.

In the spring of 2013, the Commission will formally submit its biennial package of legislative proposals to NRC's authorizing committees in the Congress. I look forward to engaging with the other members of the Commission in developing and submitting proposals, in these or other areas we might mutually identify, next year.

Question from the Honorable John D. Dingell

In the audience during the hearing were constituents of mine who are studying nuclear science at the University of Michigan which I have the honor of representing. In its FY 2013 budget request, the NRC stated that it is not requesting funding for the Integrated University Program, which historically has been the sole provider of critical funding for both student and faculty development in the field of nuclear science. The NRC states that "this reflects the confidence that the nuclear industry ... will create incentives for students to enter nuclear-related programs."

(1) Do you believe there is a need to train nuclear engineers in this country and do you support the NRC's role in the IUP?

I believe government agencies should support the public good derived from a robust educational infrastructure, as well as supporting the development of the next generation of government employees, which in NRC's case, includes nuclear engineers. For these reasons, and others, I support NRC's involvement in the Integrated University Program.

Question from the Honorable G.K Butterfield

After 9/11, the Commission was quick to identify ways to strengthen security at nuclear plants, but it took many years for those plants to implement the new standards. Other safety issues, such as fire safety and debris accumulation inside cooling systems, lingered in some state of NRC review or implementation for decades.

(1) **Can you assure this Committee that NRC won't delay implementation of orders and rules designed to address lessons learned from the Fukushima disaster?**

In response to the tragic attacks of 9/11, the NRC took rapid action to impose enhanced security measures at nuclear facilities through the issuance of immediately effective orders. Requirements imposed through these orders were subsequently codified in agency regulations, via the rulemaking process. In a similar vein, NRC has taken actions to implement lessons-learned from the Fukushima accident, in a risk-prioritized fashion, through the issuance of orders and requests for information in March of this year. NRC's actions include both near-term and longer term actions, which support the timely implementation of our regulatory response to lessons-learned from the Fukushima accident. The NRC will continue to balance the use of available resources to address lessons-learned from the Fukushima event with its day-to-day activities necessary to ensure continued safe operation of U.S. nuclear power plants and the completion of other important safety enhancements not related to lessons-learned from Fukushima.

COMMISSIONER

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

September 6, 2012

The Honorable Ed Whitfield
Chairman, Subcommittee on Energy
and Power
Committee on Energy and Commerce
United States House of Representatives
Washington, D.C. 20515

The Honorable John Shimkus
Chairman, Subcommittee on Environment
and the Economy
Committee on Energy and Commerce
United States House of Representatives
Washington, D.C. 20515

Dear Chairman Whitfield and Chairman Shimkus:

Thank you for the opportunity to appear before the Subcommittee on Energy and Power and the Subcommittee on Environment and the Economy at the July 24, 2012 hearing entitled "NRC Policy and Governance Oversight." By letter dated August 23, 2012, you provided additional questions for the record related to this hearing; my responses to these questions are enclosed.

Please do not hesitate to contact me should you or the members of your subcommittees have any additional questions.

Sincerely,

William D. Magwood, IV

Enclosures: As stated

cc: The Honorable Bobby L. Rush,
Ranking Member
Subcommittee on Energy and Power

The Honorable Gene Green,
Ranking Member
Subcommittee on Environment
and the Economy

Questions from the Honorable John Shimkus

1. **The NRC has repeatedly indicated that U.S. nuclear power plants are safe and do not pose an imminent risk to public health and safety and has issued orders on the matters with the highest safety benefit. With that assurance and those actions in mind, please respond to the following:**

   a. **Do you anticipate supporting any additional orders for post-Fukushima regulatory changes without requiring cost-benefit analysis?**

   We intend to follow our established processes with regard to any potential additional orders related to post-Fukushima lessons learned. As a general matter, these processes would require that cost-benefit analyses be conducted where applicable. Nevertheless the NRC's Backfit Rule allows for exceptions in three cases: 1) if the action is necessary to bring a facility into compliance with a license or rules of the Commission; 2) if the action is necessary to ensure adequate protection of the health and safety of the public; or 3) if the action defines or redefines what level of protection should be regarded as adequate. Should one of these exceptions be invoked, then a documented evaluation must be completed. Furthermore, the Atomic Energy Act provides the Commission authority to issue requirements that it determines represent a significant enhancement to public health and safety without a cost-benefit analysis. Based on the NRC's longstanding regulatory processes, it is my expectation that we will generally require cost-benefit analyses when considering new actions, but cannot preclude the exemption of critical actions if they are necessary for adequate protection of the public.

   b. **Please list any reasons you believe might warrant sidestepping the NRC's usual processes for developing a technical basis and cost benefit analysis when considering additional post-Fukushima regulatory changes.**

   As discussed in the response to your first question, the NRC's established processes for promulgating regulatory changes include the development of an analysis that weighs the costs and benefits of a proposed regulatory action that constitutes a backfit under the NRC's Backfit Rule, unless one of three exceptions apply. These three exceptions are included within the NRC's established processes, and require a documented evaluation when invoked. The Commission also has authority with regard to implementing requirements that significantly enhance public health and safety. My colleagues and I remain focused on the health and safety of the American people and are committed to ensuring that our regulatory decisions are based on full consideration of all of the analyses and evaluations available.

2. **In March of 2011, the NRC staff developed a proposal to address the cumulative impacts of regulatory changes. Such regulatory changes should be prioritized based on safety significance, and recognize timing, staffing, financial and other constraints. This would certainly be in line with the NRC's Efficiency Principle which states: "Regulatory activities should be consistent with the degree of risk reduction they achieve." In the hearing, I quoted you as saying, "it does not, as a general matter, advance the cause of safety to inundate licensee staff with multiple actions when a more thoughtful process might achieve the agency's safety goals without straining licensee resources."**

   a. **Will you work with your colleagues and staff to ensure this matter receives serious Commission attention?**

   As you noted during the hearing, I have advocated for the agency to focus on a more strategic and risk-informed approach for the implementation of regulatory actions. This effort is important from both the perspective of safety—as it helps the agency assure that licensees are focusing their resources on higher priority regulatory actions—and the perspective of regulatory fairness. I remain committed to working with my colleagues and the NRC staff to ensure that this issue remains a high priority.

   b. **Given the scope of Tier 2 and Tier 3 post-Fukushima actions and other regulatory changes under development, what actions are being taken to resolve this concern concurrently?**

   As described in SECY-11-0032, "Consideration of the Cumulative Effects of Regulation in the Rulemaking Process," dated March 2, 2011 (ADAMS Accession No. ML110190027), the NRC staff is considering the cumulative effects of regulation (CER) in the rulemaking process. If the Tier 2 and Tier 3 activities result in rulemaking, the CER process enhancements described in SECY-11-0032 will be directly applied. For those Tier 2 and Tier 3 activities that are implemented using regulatory actions other than rulemakings, the CER will be considered indirectly. In other words, those regulatory actions will be considered to the extent they impact the implementation of ongoing rulemakings. For example, proposed rules will contain specific requests for comment on items related to CER. One such request will seek feedback from external stakeholders on whether any other regulatory actions (*e.g.*, generic letters or orders) influence the implementation of the proposed rule's requirements. The NRC staff will use that feedback to inform the implementation dates of the proposed rule. In addition, in many cases the staff will conduct a public meeting on implementation during the final rulemaking stage. During this meeting, external stakeholders will have another opportunity to inform the NRC of ongoing regulatory actions and challenges those actions may create for the implementation of the subject final rule. Again, the NRC notes that safety and security concerns remain the most important decision factors.

Although CER does not directly apply to non-rulemaking activities, the NRC notes that many of the good regulatory principles emphasized in the CER process enhancements, especially extensive stakeholder interaction, are currently being applied in post-Fukushima activities.

3. **Please share your opinion regarding the benefits and transparency of the notation voting process.**

In my experience, there are a number of benefits derived from the notation voting process. The issues on which the Commission votes are complex and highly technical. As I develop my personal vote on a matter before the Commission, I examine the full public record on the matter, including any staff papers before the Commission, information gleaned from public Commission meetings, and, at times, the written notation votes of previous members of the Commission. I am also greatly informed by conversations with the NRC's technical staff, where appropriate; my personal staff; and my individual colleagues. All of this information is considered in my written vote, which is intended to offer an explanation of the reasoning behind my vote, as well as offer any additional comments or questions I believe should be addressed now or in the future, to my colleagues, the NRC staff, and the public. As I explained during the hearing, while I do try to discuss voting matters as much as possible with my colleagues before voting, often, a Commissioner's written vote will raise an issue that has been previously overlooked or offer a detail or nuance that changes my thinking on a matter, and, as a result, my staff and I will explore whether a change in position is warranted. I believe that if the notation voting process were abandoned in favor of an oral voting process, the Commission would lose the benefits of this give-and-take dynamic and deprive itself, the staff, the public, and future Commissions of a full exploration of every aspect of the issues before the agency.

4. **There have been an extraordinary number of delays in the time it has taken to bring certain matters before the Commission to a vote and to closure, and Commissioners have not always abided by voting procedures. Going forward, will you adhere to voting procedures in the Internal Commission Procedure or work collegially to address needed changes?**

I agree that the Commission should strive to make timely decisions in a manner that supports regulatory efficiency, clarity, and fairness. For this reason, I strive, along with my colleagues, to abide by the Commission's established voting procedures and commit to continue to do so. However, I believe it is important to note that some of the issues the Commission faces are complex, highly technical, and oftentimes controversial. It is vital that we give each issue before us full consideration to ensure that we make decisions that will ensure the health and safety of the public, and sometimes this will mean that we will have to take extra time to arrive at the best decision possible.

5. **Please describe any changes to Internal Commission Procedures that you believe would be helpful:**

   a. **In preserving Commission collegiality;**

   Approximately one year ago, we completed a significant revision of the Internal Commission Procedures (ICPs). I believe that these revised procedures, if applied appropriately, provide for Commission collegiality. Nevertheless, I commit to working with my colleagues to institute further revisions if they become necessary in the future.

   b. **In ensuring the timely and unfiltered flow of information to the Commission;**

   As I discussed previously, the 2011 ICP revisions were designed to ensure that the Commission functions efficiently and collegially. The revisions included improvements to the flow of information to the Commission, including ensuring that the staff can submit information to the Commission for its review and ensuring that the Chairman keeps the Commission fully informed of agency activities. While I believe these revised procedures are serving their intended purpose, I remain open to future revisions if warranted.

   c. **To provide clarity regarding leadership and management during an emergency particularly with regard to the Chairman's use of emergency powers under Section 3 of the Reorganization Plan of 1980.**

   One change not included in the 2011 revisions that I believe may be warranted is to require the Chairman to notify his or her colleagues as soon as practicable that the agency has entered an emergency and that the Chairman is exercising his or her emergency powers. Similarly, I believe it is important to clarify the timing, scope, and formality of the reports currently required under Section 3(c) and (d) of Reorganization Plan No. 1 of 1980.

6. **For the last three years, the Commission and the agency have struggled with turmoil resulting from failed leadership. Please provide your personal suggestions for legislation to reform its governance structure and strengthen the Commission's function as a collegial body.**

   First, I would like to emphasize that, overall, I believe that the current legislative framework for the NRC allows it to function very well. However, there are some areas that I think could be improved, primarily by clarifying and reinforcing already-established interpretations of the current legislation. It would be best if my colleagues on the Commission and I work jointly to consider a unified proposal for Congressional

consideration. I hope to pursue this idea in the coming weeks and months. In the interim, I will respond to your question by providing a few initial thoughts of my own.

Because a free exchange of information is vital to the Commission's ability to function as a collegial body and establish well-considered policy positions, it would be helpful to reinforce the principle that the Commission has the authority to receive all information related to the operation of the agency. Specifically, Congress could consider a revision to Sec. 2(c) of the Reorganization Plan of 1980 to allow the agency's Executive Director for Operations (EDO) to directly provide information to the Commission, rather than through the Chairman. This could ensure that the Commission is fully aware of all staff positions, concerns, and recommendations when exercising its authority under the Atomic Energy Act and the Reorganization Plan.

In addition to specifying that the EDO may, and in many cases should, provide information directly to the Commission, Congress could consider revisions to the Reorganization Plan that would clarify the reporting relationship of the various Commission-level offices (including the General Counsel and Secretary of the Commission as well as newer offices such as the Office of International Programs and the Office of Commission Appellate Adjudication that are not specifically mentioned in the Reorganization Plan) to reinforce that these offices should in all cases provide information that is intended for the entire Commission to the Commission directly.

I also believe there would be value in clarifying the reporting relationship and duties of the Office of Public Affairs and the Office of Congressional Affairs. By statute, both offices presently report directly to the Chairman of the agency. This reporting relationship is in most instances appropriate, particularly because both offices serve chiefly as liaisons — OPA between the NRC and the public, and OCA between the NRC and the Congress. By virtue of his or her role as official agency spokesman and as supervisor of OPA and OCA, the Chairman in most circumstances is the "NRC" in the OPA and OCA liaison equations.

However, even though the Chairman has primary call on OPA's and OCA's services, the agency as a whole benefits when OPA and OCA also provide assistance to the other Commissioners and to the agency as a whole. First, OCA and OPA often provide services to the agency's Commission-level and program offices—for instance, coordinating press outreach for a public meeting or coordinating briefings for members of Congress or their staffs. In addition, OCA already performs the function of assisting individual Commissioners when, pursuant to 10 C.F.R. § 1.27(a), it advises the Chairman, the Commission, and the staff, on the agency's relations with Congress and on the Congress's views on the NRC's policies, plans, and activities. This support is important and appreciated. Additionally, even though Commissioners speak for themselves and not as official spokesmen for the agency, there is value to the agency in conveying a consistent message whenever possible. OCA and OPA should be available to provide the same advice on matters to Commissioners that they provide to the

Chairman — for example, papers and documents provided by OCA or OPA to the Chairman for briefing purposes might be shared with other Commissioners for the overall benefit of the agency.

However, all of these additional functions currently performed by OPA and OCA are performed on an *ad hoc* basis, and therefore, the appropriate boundary of the activities to be performed by these offices is murky at best. One approach to address this might be to consider a reorganization which would place both of these offices under the oversight of the EDO—supporting the Chairman's role as chief spokesperson of the agency, but clarifying that both offices serve the agency as a whole—including, where appropriate, individual Commissioners.

Related to the scope of actions for OCA and OPA, there have recently been concerns regarding the appropriate scope of the Chairman's role as chief spokesperson for the agency. The revisions to the Plan discussed above could also clarify that the Chairman's role as chief spokesperson for the agency is intended to reflect policy positions that are consistent with those adopted by the Commission as a whole.

Finally, legislative changes to clarify the responsibility of the Executive Director of Operations, the Chief Financial Officer, and the General Counsel independent of the Commission could assist with some of the issues noted in the answers above. Congress might also consider an enhanced model for the NRC Office of the General Counsel to further enhance the independence of that organization in assuring the continued legal quality of the agency's work and in providing independent expert advice to the Commission and staff.

Question from the Honorable John D. Dingell

In the audience during the hearing were constituents of mine who are studying nuclear science at the University of Michigan which I have the honor of representing. In its FY 2013 budget request, the NRC stated that it is not requesting funding for the Integrated University Programs, which historically has been the sole provider of critical funding for both student and faculty development in the field of nuclear science. The NRC states that "this reflects the confidence that the nuclear industry...will create incentives for students to enter nuclear-related programs."

1. **Do you believe there is a need to train nuclear engineers in this country and do you support the NRC's role in the IUP?**

   Dating back to my service at the Department of Energy, one of my areas of particular focus has been reviving nuclear engineering programs at colleges and universities in the United States. When I took over as the head of DOE's Office of Nuclear Energy, many people thought nuclear energy to be a dying field. At that time, only about 500 students

were enrolled in undergraduate nuclear engineering programs at U.S. schools. Now, the situation has improved considerably. Today, with a lot of effort by many, targeted funding from the government, and revived interest in commercial nuclear energy, there are nearly 5000 nuclear engineering students at U.S. schools, with many more students receiving some course work in nuclear technology. The NRC's IUP has been a major factor in this revival, and I believe it is vital that support for nuclear engineering programs and other efforts to increase educational opportunities in science, technology, engineering, and mathematics continue.

According to industry estimates, 39 percent of the U.S. commercial nuclear sector's workforce will be eligible for retirement by 2016, resulting in roughly 25,000 jobs that will need to be filled within the next four years to maintain the current workforce. In addition, the Federal government (including national laboratories), academia, and the medical radiological healthcare field will place additional demands on this limited workforce. Educating the next generation of engineers and scientists is essential to meet the Nation's present and future national security needs and for assuring the safe construction and operation of nuclear power plants. Addressing these workforce shortages will require partnerships between the Federal government, the nuclear industry, and colleges and universities to sustain educational programs in nuclear science and engineering, and to continue to attract students to the nuclear energy field.

The IUP represents NRC's role in this partnership by providing scholarships and fellowships to enter nuclear-related fields that will support the educational demands of the nuclear sector including engineering, health physics, radiochemistry, and other related fields where demand for skilled individuals outpaces supply. The IUP also provides faculty development grants to attract and retain highly-qualified individuals in academic teaching careers. In addition, NRC funding is often leveraged with non-Federal funding, thus providing a multiplier effect of the NRC's contributions. Without programs such as the IUP, past history has shown that the non-Federal funding will diminish substantially along with student enrollments in nuclear educational programs.

You have my commitment that I will continue to vigorously advocate for the continuance of the NRC's role in the IUP.

Question from the Honorable G.K. Butterfield

After 9/11, the Commission was quick to identify ways to strengthen security at nuclear plants, but it took many years for those plants to implement the new standards. Other safety issues, such as fire safety and debris accumulation inside cooling systems, lingered in some state of NRC review or implementation for decades.

1. **Can you assure this Committee that NRC won't delay implementation of orders and rules designed to address lessons learned from the Fukushima disaster?**

Following the events of 9/11, the Commission quickly instituted necessary safety and security changes via orders to affected licensees. These orders, with some modifications developed through the agency's normal regulatory process, were later formalized through rulemaking. Similarly, the Commission is committed to implementing regulatory actions to address lessons learned from the Fukushima accident in an expeditious manner that will include both immediate short-term actions and longer-term development of regulations and has already made significant progress along both lines. The Commission and the NRC staff must, however, continue to balance the use of available resources to address lessons learned from the Fukushima event with day-to-day activities necessary to ensure continued safe operation of U.S. nuclear power plants and the completion of other important safety enhancements not related to lessons learned from Fukushima. While balancing these competing needs may be a challenge, I believe that the NRC staff is more than up to the task. I believe that the schedule set by the Commission for implementation of post-Fukushima actions is ambitious yet appropriate given the importance of the actions and is ultimately achievable. I will continue to support the staff's efforts to meet this schedule.

On December 15, 2011, the Commission approved the staff's recommended three-tiered prioritization of the actions identified to address lessons learned from Fukushima. The Tier 1 recommendations are those actions that should be implemented without unnecessary delay. The Tier 2 recommendations are those actions that need further technical assessment or critical skill sets to implement. The Tier 3 recommendations are longer-term actions that depend on the completion of a shorter-term action or need additional study to support a regulatory action.

On March 9, 2012, the Commission approved the staff's recommended actions for addressing the Tier 1 items, and staff has taken action to begin implementation of all of these items. As a result, the agency issued three orders on March 12, 2012, that contained requirements for reliable hardened containment vents, installation of enhanced spent fuel pool (SFP) instrumentation, and the development of strategies to maintain or restore core cooling, containment and SFP cooling capabilities following a natural event beyond what plants were designed to endure. Each licensee is required to achieve full compliance with these orders within two refueling cycles following submittal

of their site-specific implementation plans (which are due February 2013), or by December 31, 2016, whichever comes first.

Also related to Tier 1 recommendations, the NRC issued letters on March 12, 2012, directing each nuclear power plant licensee to reevaluate the seismic and flooding hazards at their site using present-day methods and information, conduct walkdowns of their facilities to ensure protection against the hazards in their current design basis, and reevaluate their emergency communications systems and staffing levels. The NRC anticipates that most nuclear power plant licensees will complete the walkdowns and emergency communications and staffing assessments within the next year, except for the portions of the emergency staffing assessment that are tied to implementation of the order to develop mitigating strategies (*i.e.,* the strategy must be developed before the staff needed to implement it can be assessed). The majority of nuclear power plant licensees, including those plants with the greatest potential seismic and flooding risks, are expected to complete the seismic and flooding hazard reevaluations within five years. The NRC will assess the licensees' responses.

The remaining Tier 1 recommendations consist of rulemakings addressing station blackout (SBO) and the integration of emergency procedures at nuclear power plants. On March 20, 2012, the NRC issued an advanced notice of proposed rulemaking (ANPR) to solicit public input on the SBO rulemaking. This step moves the NRC closer to issuing a final rule within the 24-to-30-month schedule directed by the Commission. The public comment period for the ANPR closed May 4, 2012, and the NRC is currently reviewing the public input it received. Another ANPR on the integration of emergency procedures at nuclear power plants was issued April 18, 2012, and the public comment period closed June 18, 2012. The NRC is currently reviewing these comments as well.

We anticipate beginning work on the Tier 2 recommendations after collecting information from the Tier 1 activities, and as soon as resources currently devoted to those activities become available. On July 13, 2012, the NRC staff provided the Commission with its plans for addressing the remaining, longer-term Tier 3 activities. The plan and schedule for each Tier 3 item is unique, but many of the Tier 3 plans will use information gathered from the Tier 1 activities to inform further action.

The NRC is moving quickly and systematically to implement measures to address the lessons-learned from the Fukushima disaster. I remain committed to working with my colleagues to ensure that these measures are implemented fully, quickly, and effectively.

Committee on Energy and Commerce
Subcommittees on Energy and Power & Environment and Economy Hearing
July 24, 2012
Follow-Up Questions for Written Submission

Questions for Commissioner Ostendorff
The Honorable John Shimkus

1. The NRC has repeatedly indicated that U.S. nuclear plants are safe and do not pose an imminent risk to public health and safety and has issued orders on the matters with the highest safety benefit. With that assurance and those actions in mind, please respond to the following:

a. Do you anticipate supporting any additional orders for post-Fukushima regulatory changes without requiring cost-benefit analysis?

b. Please list any reasons you believe might warrant sidestepping the NRC's usual processes for developing a technical basis and cost benefit analysis when considering additional post-Fukushima regulatory changes.

Answer

a. The Commission intends to follow its established processes with regard to any potential additional orders related to post-Fukushima lessons learned. In accordance with these processes, cost-benefit analyses would be conducted where applicable and required. The agency's "backfitting" rule requires that an analysis be performed to weigh the costs and benefits of proposed regulatory actions that constitute backfits under the NRC's backfitting rule except in three cases: 1) if the action is necessary to bring a facility into compliance with a license or rules of the Commission; 2) if the action is necessary to ensure adequate protection of the health and safety of the public; or 3) if the action defines or redefines what level of protection should be regarded as adequate. Should one of these exceptions be invoked, then a documented evaluation must be completed. Furthermore, the Atomic Energy Act provides the Commission authority to issue requirements that it determines represent a significant enhancement to public health and safety. It is within this existing context of the NRC's established rules, processes, and statutory authority that the Commission would justify any future decisions regarding additional post-Fukushima regulatory requirements.

b. As discussed in the response to Question 1a above, the NRC's established processes for promulgating regulatory changes include the development of an analysis that weighs the costs and benefits of a proposed regulatory action that constitutes a backfit under the NRC's backfitting rule, unless one of three exceptions apply. These three exceptions are included within the NRC's established processes, and require a documented evaluation when invoked. The Commission also has authority with regard to implementing requirements that significantly enhance public health and safety. The Commission is committed to considering all required and appropriate analyses, evaluations, and authorities available to it when deciding on any proposed regulatory action.

Committee on Energy and Commerce
Subcommittees on Energy and Power & Environment and Economy Hearing
July 24, 2012
Follow-Up Questions for Written Submission

Questions for Commissioner Ostendorff
The Honorable John Shimkus

2. In March of 2011, the NRC staff developed a proposal to address the cumulative impacts of regulatory changes. Such regulatory changes should be prioritized based on safety significance, and recognize timing, staffing, financial, and other constraints. This would certainly be in line with the NRC's Efficiency Principle which states: "Regulatory activities should be consistent with the degree of risk reduction they achieve." In the hearing, I quoted you as saying: "it does not, as a general matter, advance the cause of safety to inundate licensee staff with multiple actions when a more thoughtful process might achieve the agency's safety goals without straining licensee resources."

a. Will you work with your colleagues and staff to ensure this matter receives serious Commission attention?

b. Given the scope of Tier 2 and Tier 3 post-Fukushima actions and other regulatory changes under development, what actions are being taken to resolve this concern concurrently?

Answer

a. I share your concern with the cumulative effects of regulation (CER) and commit to work with my colleagues and staff to ensure this matter receives serious Commission attention. CER can potentially distract those we regulate from executing other primary duties that ensure safety or security. In my vote on the Japan Task Force report in SECY-11-0093, I supported an integrated, prioritized assessment of the Task Force recommendations. In that same vein, I also supported the effort for a "Revised Common Prioritization of Rulemaking Process, that seeks to prioritize rulemaking activities on a common basis agency wide, rather than just within a given office, in my approval of the staff's proposed rulemaking process enhancements to reduce CER in SECY-11-0032, "Consideration of the Cumulative Effects of Regulation in the Rulemaking Process," dated March 2, 2011 (ADAMS Accession No. ML110190027). These enhancements included increased interaction with external stakeholders through the rulemaking process (including a public meeting during the final rule stage to discuss implementation issues), issuing guidance with rules, and requesting stakeholder feedback as part of the rulemaking process so that CER can be addressed. The Commission approved these enhancements and gave additional direction in its associated staff requirements memorandum.

b. As described in SECY-11-0032, "Consideration of the Cumulative Effects of Regulation in the Rulemaking Process," dated March 2, 2011 (ADAMS Accession No. ML110190027), the NRC staff is primarily considering the cumulative effects of regulation (CER) in the rulemaking process. If the Tier 2 and Tier 3 activities result in rulemaking, the CER process enhancements described in SECY-11-0032 will be directly applied. For those Tier 2 and Tier 3 activities that are other regulatory actions (i.e., other than rulemakings), the CER will be considered indirectly. In other words, those regulatory actions will be considered to the extent they impact the implementation of

ongoing rulemakings. For example, proposed rules will contain specific requests for comment on items related to CER. One such request will seek feedback from external stakeholders on whether any other regulatory actions (e.g., generic letters, orders, etc.) influence the implementation of the proposed rule's requirements. The NRC staff will use that feedback to inform the implementation dates of the proposed rule. In addition, in many cases the staff will conduct a public meeting on implementation during the final rulemaking stage. During this meeting, external stakeholders will have another opportunity to inform the NRC of ongoing regulatory actions, and challenges those actions may create for the implementation of the subject final rule. Again, the NRC notes that safety and security concerns remain the most important decision factors.

Although CER does not directly apply to non-rulemaking activities, the NRC notes that many of the good regulatory principles emphasized in the CER process enhancements, especially extensive stakeholder interaction, are currently being applied in post-Fukushima activities. Finally, I would note that the Commission chartered a steering committee which is responsible for assessing and prioritizing post-Fukushima actions

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3. Please share your opinion regarding the benefits and transparency of the notation voting process.

Answer

The Commission's current procedures allow for the Commission's decision-making process to be thoroughly documented through a written voting record called the notation voting process. The written voting record is typically made publicly available. This process has served the Commission well over the years, and provides two major advantages. First, it gives each Commissioner an opportunity to document their careful and thorough analysis of the highly-technical issues that are typically before the Commission, as well as the opportunity to explain his or her rationale behind each vote. Second, the notation voting process records the decision-making for historical reference, which is an invaluable tool in maintaining regulatory stability.

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4. There have been an extraordinary number of delays in the time it has taken to bring certain matters before the Commission to a vote and to closure, and Commissioners have not always abided by voting procedures. Going forward, will you adhere to voting procedures in the Internal Commission Procedures or work collegially to address needed changes.

Answer

I work hard to adhere to the Internal Commission Procedures (ICPs) in the way I conduct my business as a Commissioner. My goal as a Commission has always been, and will always be, to address all voting matters, both for policy and adjudicatory items, within the time frames in the ICPs. In my over two years as a Commissioner, I found that the ICPs provide a comprehensive and systematic structure that, when followed, allows the Commission to function effectively. At this time, I do not believe that any changes need to be made to the Internal Commission Procedures to address voting processes, but I commit to work collegially with my colleagues should such changes be needed.

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5. Please describe any changes to Internal Commission Procedures that you believe would be helpful:

a. In preserving Commission collegiality;

b. In ensuring the timely and unfiltered flow of information to the Commission;

c. To provide clarity regarding leadership and management during an emergency particularly with regard to the Chairman's use of emergency powers under Section 3 of the Reorganization Plan of 1980.

Answer

a. I believe that most of the concerns regarding the preservation of Commission collegiality were not a fault of the Internal Commission Procedures (ICPs). While I do not believe that any changes are needed to specifically address this area, I believe that the clarifications proposed below and in response to Question 6 will, in combination, help to ensure collegiality.

b. To ensure the timely and unfiltered flow of information to the Commission, two small changes could be made to the ICPs that would clarify that interference with the flow and content of information from the Executive Director for Operations is not acceptable. Those changes would add the qualifier "including the considered judgments of the staff, as represented by the Executive Director for Operations" to two provisions outlining the types of information to which the Commissioners all have access.

c. Greater clarity may be beneficial regarding leadership and management during an emergency. Along with changes to the Reorganization Plan No. 1 of 1980, the ICPs could be changed to require (1) a formal declaration of the use of emergency powers and (2) a formal declaration of the conclusion of the emergency and use of emergency power.

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6. For the last three years, the Commission and the agency have struggled with turmoil resulting from failed leadership. Please provide your personal suggestions for legislation to reform its governance structure and strengthen the Commission's function as a collegial body.

Answer

If no changes are made, the current legislative framework provides a viable structure. However, there are changes that could be made to legislation that would strengthen the Commission's function as a collegial body. Changes could be made to amend the Chairman's responsibility for "developing policy planning and guidance" to "developing plans and guidance on established Commission policy." A broad interpretation of the current "policy planning and guidance" language can create instances where a Chairman is able to develop or shape policy prior to the Commission's determining that policy, as opposed to using the planning and guidance authority as it relates to already existing policy.

Other changes could be made with respect to clarifying the Chairman's use of emergency powers. Specifically, requiring a formal declaration when invoking the use of emergency powers and also requiring a formal declaration upon the conclusion of the emergency and use of emergency powers. This could be clarified in modifications to the Reorganization Plan.

Finally, the reporting structure of the Offices of Congressional Affairs and Public Affairs has in the past created concern regarding the Commission's interactions with Congress and the public. Incorporating those offices into the general Chairman appointment with Commission approval and Commission reporting structure as other offices like the General Counsel, Secretary of the Commission, etc. may help to rectify those problems.

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Questions for Commissioner Ostendorff
The Honorable John D. Dingell

In the audience during the hearing were constituents of mine who are studying nuclear science at the University of Michigan which I have the honor of representing. In its FY 2013 budget request, the NRC stated that it is not requesting funding for the Integrated University Program, which historically has been the sole provider of critical funding for both student and faculty development in the field of nuclear science. The NRC states that "this reflects the confidence that the nuclear industry . . . will create incentives for students to enter nuclear-related programs."

1. Do you believe there is a need to train nuclear engineers in this country and do you support the NRC's role in the IUP?

Answer

Yes, I believe there is a need to train nuclear engineers, scientists, and technicians in this country, and I support NRC's involvement in the Integrated University Program (IUP). According to the Nuclear Energy Institute, 39 percent of the U.S. commercial nuclear sector's workforce will be eligible for retirement by 2016, resulting in roughly 25,000 jobs that will need to be filled within the next four years to maintain the current workforce. In addition, the Federal government (including national laboratories), academia, and the medical radiological healthcare field will place additional demands on this limited workforce. Educating the next generation of engineers and scientists is essential to meet the Nation's present and future national security needs and for building, operating, and maintaining nuclear power plants. Partnerships between the Federal government, the nuclear industry, and colleges and universities to sustain educational programs in nuclear science and engineering and to continue to attract students to the nuclear energy field are useful in addressing these workforce shortages.

The IUP represents NRC's role in this partnership by providing scholarships and fellowships to enter nuclear-related fields that will support the educational demands of the nuclear sector including engineering, health physics, radiochemistry and other related fields where demand for skilled individuals outpaces supply. The IUP also provides faculty development grants to attract and retain highly-qualified individuals in academic teaching careers.

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Questions for Commissioner Ostendorff
The Honorable G.K. Butterfield

After 9/11, the Commission was quick to identify ways to strengthen security at nuclear plants but it took many years for those plants to implement the new standards. Other safety issues, such as fire safety and debris accumulation inside cooling systems, lingered in some state of NRC review or implementation for decades.

1. Can you assure this Committee that NRC won't delay implementation of orders and rules designed to address lessons learned from the Fukushima disaster?

Answer

In SRM-SECY-11-0124, dated October 18, 2011, the Commission directed the NRC staff to "strive to complete and implement the lessons learned from the Fukushima accident within five years – by 2016." The Commission remains committed to implementing regulatory actions to address lessons learned from the Fukushima accident in an expeditious manner and has already made significant progress. The Commission and the NRC staff must, however, continue to balance the use of available resources to address lessons learned from the Fukushima event with day-to-day activities necessary to ensure continued safe operation of U.S. nuclear power plants and the completion of other important safety enhancements not related to lessons learned from Fukushima.

On December 15, 2011, the Commission approved the staff's recommended three-tiered prioritization of the Near-Term Task Force recommendations, which address lessons learned from Fukushima. The Tier 1 recommendations are those actions that should be implemented without unnecessary delay. The Tier 2 recommendations are those actions that need further technical assessment or critical skill sets to implement. The Tier 3 recommendations are longer-term actions that depend on the completion of a shorter-term action or need additional study to support a regulatory action.

On March 9, 2012, the Commission approved the staff's recommended actions for addressing the Tier 1 items and staff has taken action to begin implementation of all of these items. As a result, the agency issued three orders on March 12, 2012, that contained requirements for reliable hardened containment vents, installation of enhanced spent fuel pool (SFP) instrumentation, and the development of strategies to maintain or restore core cooling, containment and SFP cooling capabilities following a natural event beyond what plants were designed to endure. Each licensee is required to achieve full compliance with these orders within two refueling cycles following submittal of their site-specific implementation plans (which are due February 2013), or by December 31, 2016, whichever comes first.

Also related to Tier 1 recommendations, the NRC issued Request for Information letters on March 12, 2012, directing each nuclear power plant licensee to reevaluate the seismic and flooding hazards at their site using present-day methods and information, conduct inspections of their facilities to ensure protection against the hazards in their current design basis, and reevaluate their emergency communications systems and staffing levels. The NRC anticipates that most nuclear power plant licensees will complete the inspections and emergency

communications and staffing assessments within the next year, except for the portions of the emergency staffing assessment that are tied to implementation of the order to develop mitigating strategies (i.e., the strategy must be developed before the staff needed to implement it can be assessed). The majority of nuclear power plant licensees, including those plants with the greatest potential seismic and flooding risks, are expected to complete the seismic and flooding hazard reevaluations within five years. The NRC will assess the licensees' responses.

The remaining Tier 1 recommendations consist of rulemakings addressing station blackout (SBO) and the integration of emergency procedures at nuclear power plants. On March 20, 2012, the NRC issued an advanced notice of proposed rulemaking (ANPR) to solicit public input on the SBO rulemaking. This step moves the NRC closer to issuing a final rule within the 24-to-30-month schedule directed by the Commission. The public comment period for the ANPR closed May 4, 2012, and the NRC is currently reviewing the public input it received. Another ANPR on the integration of emergency procedures at nuclear power plants was issued April 18, 2012, and the public comment period closed June 18, 2012. The NRC is currently reviewing these comments as well.

We anticipate beginning work on the Tier 2 recommendations after collecting information from the Tier 1 activities, and as soon as resources currently devoted to those activities become available. On July 13, 2012, the NRC staff provided the Commission with its plans for addressing the remaining, longer-term Tier 3 activities. The plan and schedule for each Tier 3 item is unique, but many of the Tier 3 plans will use information gathered from the Tier 1 activities to inform further action.

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