

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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STRATEGIC PROGRAMMATIC OVERVIEW OF THE OPERATING  
REACTORS BUSINESS LINE  
(PUBLIC MEETING)

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THURSDAY,  
JULY 7, 2016

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ROCKVILLE, MARYLAND

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The Commission met in the Commissioners' Hearing Room at the Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, at 9:30 a.m., Stephen G. Burns, Chairman, presiding.

COMMISSION MEMBERS:

STEPHEN G. BURNS, Chairman

KRISTINE L. SVINICKI, Commissioner

JEFF BARAN, Commissioner

ALSO PRESENT:

ANDREW BATES, Acting Secretary of the Commission

MARGARET DOANE, General Counsel

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NRC STAFF:

JAMES ANDERSEN, Director, Cyber Security Directorate, Office of Nuclear Security and Incident Response

ANNE BOLAND, Director, Division of Operating Reactor Licensing, Office of Nuclear Reactor Regulation

BILL DEAN, Director, Office of Nuclear Reactor Regulation

ROB ELLIOTT, Special Assistant, Division of Safety Systems, Office of Nuclear Reactor Regulation

JOSEPH GIITTER, Director, Division of Risk Assessment, Office of Nuclear Reactor Regulation

MIKE JOHNSON, Deputy Executive Director for Reactor and Preparedness Programs

DAVID RUDLAND, Branch Chief, Component Integrity Branch, Division of Engineering, Office of Nuclear Regulatory Research

LEONARD WERT, Deputy Regional Administrator for Operations, Region II

1 PROCEEDINGS

2 9:32 a.m.

3 CHAIRMAN BURNS: Well, good morning everyone.  
4 Welcome to the NRC staff and members of the public who may be here  
5 or listening in on today's session.

6 The purpose of today's briefing is to provide the  
7 Commission with a discussion of strategic considerations associated  
8 with our NRC Operating Reactors Business Line, including key focus  
9 areas and challenges and a status update on Project AIM  
10 recommendations that are relevant.

11 We'll hear from the staff panel consisting of the Deputy  
12 Executive Director for Operations for Reactor and Preparedness  
13 Programs and representatives from our office of Nuclear Reactor  
14 Regulation, Nuclear Regulatory Research, Nuclear Security and  
15 Incident Response and our Region II office in Atlanta.

16 And, we look forward to today's discussion. And,  
17 before we begin, do my colleagues have anything they'd like to add?

18 Very good.

19 Mike, the floor is yours.

20 MR. JOHNSON: Thank you, Chairman.

21 Good morning, Chairman and Commissioners. We  
22 are pleased to present our annual briefing on the status of the  
23 Operating Reactor Business Line which represents about a third of the  
24 Agency's resources and is responsible for a number of a high-visibility  
25 activities.

26 Today, you're going to hear from Bill Dean, Director of

1 the Office of Nuclear Reactor Regulation. He'll describe a number of  
2 important activities.

3 Bill will describe, for example, major accomplishments  
4 such as our progress in implementing recommendations as a result of  
5 the accident at Fukushima Daiichi and the recent issuance of the first of  
6 a kind construction permit for the SHINE isotope facility.

7 He's also going to speak about challenges and focus  
8 areas in the business line.

9 Anne Boland who is the Division -- the Director of the  
10 Division of Operating Reactor Licensing is going to speak about  
11 licensing topics.

12 One of the highlights that you're going to hear in her  
13 presentation is the success that we've had in working off the backlog of  
14 licensing actions that resulted from our necessary shift to focus as a  
15 result of Fukushima.

16 You'll be pleased to hear that we are back on track with  
17 the timeliness metrics this year.

18 Anne's also going to discuss the implementation of  
19 Project AIM and the opportunities that that changing environment has  
20 set up for us with respect to giving us an opportunity to think about our  
21 work in new ways.

22 Rob Elliott from the Division of Safety Systems is going  
23 to talk about one of those important opportunities, specifically, efforts to  
24 enhance risk-informed decision making using valuable insights from  
25 risk to help us make choices, make better choices, actually, about how  
26 we can focus our resources.

1                   And then, you'll hear from three of our important  
2 partners in the reactor business line supporting the work of NRR and  
3 that business line.

4                   Len Wert, the Deputy Regional Administrator from  
5 Region II is going to give a presentation on the region's critical role with  
6 respect to ensuring safety of operating facilities, including focus areas  
7 and challenges.

8                   Dave Rudland who's a Branch Chief in the Office of  
9 Nuclear Regulatory Research is going to talk about some of the key  
10 research projects and answer some of the tough safety questions that  
11 we have in the reactor business line.

12                  For example, you'll hear from Dave about research --  
13 how research has helped us develop tools to look into piping integrity in  
14 new ways.

15                  And then, finally, Jim Andersen who is the head of our  
16 Cybersecurity Directorate in the Office of Nuclear Security and Incident  
17 Response is going to talk about that office's role supporting the  
18 business line with respect to safety and security.

19                  So, as you can see, we have a full agenda. I'll,  
20 without further ado, turn to Bill to begin the presentations.

21                  MR. DEAN: Thanks, Michael.

22                  Good morning, Chairman, Commissioners, it's a  
23 pleasure to be with you here this morning in the first Commission  
24 meeting in the post-Commissioner Ostendorff era. I do miss seeing  
25 Commissioner Ostendorff across the table from us, but I do like the  
26 odds now that we have in terms of two to one staff Commission, seems

1 to be --

2 COMMISSIONER BARAN: Don't get too complacent.

3 MR. DEAN: So, what I plan to talk to you about is give  
4 you a sense of the scope and breadth of the operating reactor business  
5 line. As Mike indicated, talk to you about some of the major  
6 accomplishments over the past year as well as some of the challenges  
7 and focus areas.

8 And, before I get into that, I do want to thank my  
9 technical assistant Trent Wertz and Theresa Clark from Mike's staff  
10 who have been very helpful for us in terms of preparing for this and  
11 getting the slides together. I just want to recognize them.

12 Next slide, please.

13 So, as Mike indicated, the operating reactor business  
14 line certainly composes a substantial amount of the Agency's resources.  
15 About half of the NRC staff are affiliated with the operating reactor  
16 business line, as indicated on this pie chart.

17 Next slide.

18 Relative to dollars, in terms of contract support and  
19 travel, the operating reactor business line encompasses about 60  
20 percent of the non-corporate side of contract support and travel.

21 Most of these funds are utilized to support research  
22 activities, technical and security reviews associated with licensing and  
23 rulemaking, support to the inspection program and the travel activities  
24 that all of our various offices and partners do.

25 Next slide, please.

26 Our two primary product lines are the licensing and the

1 inspection product lines. And, there's a variety of outputs that we use  
2 to measure sort of the breadth and scope of the programs.

3 This is just a smattering of some of the outputs.  
4 These are information that's current to fiscal year '16.

5 I'll note a couple of things. While it indicates 260,000  
6 inspection hours to date for fiscal year '16, while the bulk of that is out of  
7 the regional offices, we do have inspection activities that are conducted  
8 out of headquarters, primarily out of the Nuclear Security and Incident  
9 Response organization, the force-on-force program and efforts  
10 associated with the cyber inspection as we get that program fully under  
11 way.

12 And then, Jim will talk about that a little bit later when  
13 he's on the clock.

14 A lot of licensing actions and licensing work is done.  
15 Anne Boland will certainly talk about that a little bit later.

16 I do want to note, in terms of the 8 supplemental  
17 inspections that are highlighted on here, the 95-003 inspection that was  
18 done at Arkansas Nuclear One earlier this year in which the  
19 Commission was briefed on at the AARM, Agency Action Review  
20 Meeting, a month or so ago certainly is a highlight of a major inspection  
21 activity. And, of course, we're doing a 95-003 inspection at Pilgrim that  
22 is ongoing.

23 Next slide, please.

24 Over the past five years, post-Fukushima Lessons  
25 Learned work has been substantial. I'm pleased to note that five years  
26 later, I believe that we have effected meaningful safety enhancements

1 at every nuclear power plant in this country as a result of our efforts as  
2 well as the efforts of industry to respond to that event.

3 This slide indicates some of the statuses of mitigating  
4 strategy orders and the spent fuel pool instrumentation orders. The  
5 vast majority of plants have completed that work.

6 I do want to offer kudos to my Director of my Japanese  
7 Lessons Learned Directorate for their activities to complete the  
8 mitigating strategies audits. We've finally completed those in the  
9 recent past. A substantial effort over multiple years to be able to  
10 position ourselves to begin the inspection activities that have  
11 commenced now.

12 We have conducted six of our temporary instructions,  
13 191, which is the effort to verify and validate that licensees have done  
14 what they said they were going to do as a result of their mitigating  
15 strategies.

16 And so, thus far, we haven't found any significant  
17 issues to date. That being said, we do plan on a workshop in the near  
18 future to kind of look at the early returns from the first dozen or so  
19 inspections and determine whether we need to make any tweaks or  
20 adjustments to that temporary instruction as we go forward.

21 I do want to highlight renewed license activities. Even  
22 though the license renewal product line is a declining product line, we  
23 did issue five renewed licenses for five units this past year. So, we  
24 continue to do high-quality timely work in the license renewal area.

25 And, of course, our preparing for a subsequent license  
26 renewal which we have had some discussions recently with the

1 Commission at the DOE Commission Meeting.

2 Next slide, please.

3 In the rulemaking area which is another substantial  
4 product line for us, I want to highlight three of the 15 activities that are  
5 noted here on the slide.

6 One being the 50.46c rulemaking which is an adequate  
7 protection rulemaking that's been almost ten years in the making and is  
8 currently in front of the Commission for your deliberation.

9 But, this is a risk-informed technology neutral  
10 performance-based rule associated with Emergency Core Cooling  
11 Systems and fuel safety.

12 The second rule I wanted to highlight is the mitigation  
13 of beyond design basis event rulemaking. We are currently in the  
14 process of evaluating the comments that we received on the proposed  
15 rule and we are on target to deliver to the Commission in December a  
16 draft final rule for your consideration.

17 And then, the last thing I wanted to talk about is the  
18 decommissioning Advance Notice on Public Proposed Rulemaking.  
19 We received over 160 comments on that proposed rulemaking,  
20 Advance Notice of Proposed Rulemaking, which we are currently  
21 evaluating.

22 We are on target to meet our goal of having a draft  
23 regulatory basis out for public comment by November of this year.  
24 But, I would offer, in light of the fact that, over the past year or less,  
25 there have been six units that have indicated that they will enter  
26 decommissioning prematurely.

1                   That certainly puts us into some deliberations about  
2                   our resources. I think we were very clear with the Commission as you  
3                   gave us direction on this rulemaking that, if we saw an additional spate  
4                   of plants make the decision to go into decommissioning, it could create  
5                   some challenges in meeting what we think is a very aggressive  
6                   rulemaking schedule.

7                   So, we're in the process now of evaluating what the  
8                   resource implications will be over the next couple of years and what the  
9                   implications might be for the rulemaking. So, we'll be communicating  
10                  with the Commission sometime in the near future about the implications  
11                  of this and this rulemaking.

12                  Under generic correspondence, I just want to highlight  
13                  one generic letter that we issued this year, Generic Letter 16-01  
14                  associated with neutron-absorbing materials that are utilized in spent  
15                  fuel pools.

16                  The purpose of this Generic Letter was to acquire  
17                  information from industry about the programs and processes that they  
18                  used to monitor some of these neutron-absorbing materials that have  
19                  been utilized in spent fuel pools, the spent fuel capacities have been  
20                  expanded. Those responses are due to us in November and that will  
21                  help us determine what the path forward might be for us as a regulator.

22                  Next slide, please.

23                  Certainly, the operating reactor business line doesn't  
24                  lack for important policy issues. We've had a substantial amount of  
25                  interaction over the past year with the Commission related to the  
26                  Near-Term Task Force Tier 2 and Tier 3 recommendations.

1                   At this point, we have essentially reconciled all of those  
2 Tier 2 and Tier 3 with the exception of three items. We owe the  
3 Commission information later in the year in a SECY paper that will  
4 explain how we plan to reconcile the remaining three Tier 3 items that  
5 exist.

6                   And then, the last three items on there, the open  
7 phase, the digital I&C and the NRR/NRO merger, those are all  
8 documents that we have recently provided the Commission for your  
9 consideration and certainly look forward to the direction that we will  
10 receive from the Commission in the near future on those activities.

11                   Next slide, please.

12                   In terms of major accomplishments, and there's a lot,  
13 and I think the two pages that I have here that highlight a couple  
14 probably don't do justice to the tremendous amount of work that's done  
15 by all the 1,700-plus staff that are involved in the operating reactor  
16 business line. But, I do want to highlight a few.

17                   One of them is the licensing and the safe startup  
18 activities associated with Watts Bar Unit 2, the first Part 50 licensee to  
19 come online in 20 years. A tremendous amount of work done by many  
20 partners including the Region II office that Len represents. Certainly,  
21 NRR staff, the Office of General Counsel and support from NRO and  
22 other parts of the organization.

23                   But, I thought it was a very high-quality effort on our  
24 part to be poised to be able to issue that license.

25                   Earlier this year, the Commission provided the staff  
26 direction to issue the SHINE construction permit, which I think, again, is

1 a meaningful major licensing activity. It will help as that plant gets  
2 constructed and licensed to potentially in the future alleviate concerns  
3 that exist both domestically and worldwide related to moly-99 and it's  
4 capability of support in medical isotopes.

5 I mentioned already the renewing of five units this past  
6 year.

7 And then, in terms of workload management, the focus  
8 here in my remarks is really on what we've done to address the backlog  
9 issue that we had.

10 I'm very pleased with how the NRR management team  
11 and staff have dealt with issue under the leadership of Anne Boland.  
12 Anne's going to talk to you some more about this.

13 But, it's our goal to be able to convince everybody that  
14 we no longer need to talk about the fact that we have a backload  
15 management problem and remove that from our lexicon.

16 Next slide, please.

17 Some other notable accomplishments that represent a  
18 wide breadth of activity and staff, completing the draft of the Convention  
19 on Nuclear Safety National Report. That was an activity that touched  
20 on pretty much every office in the Agency had a piece of that. And, I  
21 thought that we provided the Commission with a very high-quality  
22 product and I know we're close to finalizing the Commission's review of  
23 that.

24 In terms of the Operator Licensing Program, a couple  
25 of years ago, we received a pretty critical critique of the Operator  
26 Licensing Program and how it's been implemented by an Atomic Safety

1 and Licensing Board Panel that was evaluating an appeal of a licensed  
2 operator examination.

3 I think we responded quite dramatically and positively  
4 to that feedback and through a very, I think, in depth lessons learned  
5 review, developed a number of actions to reconcile a number of the  
6 issues that the panel had pointed out to us.

7 The major document that exists that will provide that  
8 direction to the staff is NUREG-1021. We've received over 300  
9 comments on that NUREG when we put it out for public comment.

10 So, it probably will not be until sometime this fall, the  
11 October time frame, that we'll complete our review and consolidation of  
12 those comments and be able to finalize that NUREG.

13 But, I think a notable accomplishment by the staff.

14 Enhancing the reactor oversight process has been  
15 kind of an ongoing activity. You may recall several years ago, the  
16 Commission provided direction to the staff to do an assessment of  
17 reactor oversight process combining that with a number of insights we  
18 got from GAO audits, OIG audits, lessons learned from Browns Ferry  
19 and Fort Calhoun, 95-003s and 0350 panels.

20 We had a whole collection of potential enhancements  
21 to the reactor oversight process.

22 Over the past couple of -- past year or so, in particular,  
23 we have put in place a number of enhancements to the reactor  
24 oversight process. I'm going to come back to this a little bit later when  
25 I get to challenges because, having that collection of potential  
26 enhancements also creates a challenge for us in terms of what do we

1 do with that volume of information.

2 And then, the last thing I want to highlight on this slide  
3 is not necessarily a substantial safety issue, but the reason why I want  
4 to highlight it is because, you know, we continue to work on closing out  
5 Generic Safety Issue 191, PWR sump issues. And, that's been a very  
6 challenging technical issue. We've been dealing with this for over a  
7 decade.

8 But, in parallel with that issue, concerns were raised  
9 that, did we have a similar sort of issue with BWR emergency core  
10 cooling system suction.

11 And so, we processed that issue through the generic  
12 issues program. And, I'm pleased to say that between the Office of  
13 Nuclear Regulatory Research and NRR, the team looked at that issue  
14 and I thought applied a very appropriate risk-informed decision making  
15 process in terms of dispositioning this issue and ultimately reconciling  
16 that potential generic issue and determining that there was no  
17 additional action that was required by the Agency.

18 Okay, next slide, please.

19 So, let me talk about some of the challenges that are  
20 facing us.

21 On the technical side, I think the last three bullets on  
22 here, I've touched on already and there's certainly issues that we have  
23 recently briefed the Commission on or provided the Commission  
24 Commission papers on, so I don't intend to dwell on those.

25 But, I want to talk about the first two bullets on this  
26 because I think these are critical issues for us in terms of what the

1 current environment is like and how we need to be successful as a  
2 credible and effective regulator.

3 And so, I think it's very important that we appropriately  
4 integrate risk insights into our decision making processes as well as  
5 assure that we have the proper safety focus in our technical reviews.

6 So, in that regard, you know, we have a lot of pride in  
7 ourselves as a highly technically competent Agency. It's certainly one  
8 of our strengths.

9 We also have a regulatory frame work that's steeped  
10 primarily in deterministic principles. And so, while together, those  
11 forms strengthen the Agency, they also sometimes serve as an  
12 impediment to us, I think, in terms of being more effective and efficient  
13 and safety focused in our decision making.

14 Almost two years ago, the NRR management team  
15 met to talk about how could we become a more effective and efficient  
16 regulatory decision making body?

17 And, the primary area that we focused attention on that  
18 we thought was our biggest barrier was that our tendency to overdo  
19 some of our technical reviews and our technical analyses.

20 We want to make sure every "t" is crossed, every "i" is  
21 dotted. And, in an effort to try to make a reasonable assurance  
22 determination of safety. Sometimes, we kind of became, I think, overly  
23 conservative and we're looking for almost absolute assurance of safety.

24 And so, that's a challenge for us as a management  
25 team in terms of how do we help the staff visualize what does a  
26 risk-informed technically competent regulator look like when you're

1 trying to make decisions that are focused on reasonable assurance of  
2 safety.

3 And so, the onus is on us as a management team to  
4 provide the tools and the guidance to the staff in terms of how can we  
5 operate more successfully in that regard.

6 I think we've made a lot of progress in that. Rob  
7 Elliott's going to talk to you in a few minutes about a couple of  
8 risk-informed initiatives.

9 I want to spend a minute talking about some things that  
10 we're doing in terms of technical adequacy.

11 In terms of looking at how do we do our technical  
12 reviews, our standard review plans, or our SRPs, generally from the  
13 basis or the approach that we would use in doing a technical review.

14 As we've looked at some of our standard review plans,  
15 we have found that many of them probably don't have an adequate  
16 amount of detail to help guide the staff. And so, that results in injection  
17 of subjectivity, results in inconsistencies and how we do some of our  
18 technical reviews.

19 And so, we've embarked on an initiative to take a  
20 handful of what we consider to be high-value standard review plans that  
21 are commonly used and evaluate those using both risk insights and  
22 engineering judgment to help better define those standard review plans  
23 to identify what are the salient aspects of that standard review plan that  
24 we need to make sure that we evaluate in depth.

25 Whereas, what are the ones that we don't need as  
26 much level of effort in order to make an appropriate reasonable

1 assurance of safety determination.

2 There's some parallelism to this if you've talked to  
3 Jennifer Uhle in the recent past in terms of what they're looking at in  
4 terms of the NuScale review and a safety focus review of the NuScale  
5 review.

6 How do we provide the tools for our staff to help them  
7 focus on the things that are most important and using our engineering  
8 judgment and risk insights to do that.

9 So, look forward to hopefully having a good success  
10 with that initiative.

11 Next slide.

12 So, the last thing that I wanted to talk about this  
13 morning before I pass it on to Anne is some additional organization  
14 challenge focus areas.

15 I'm going to start with the last bullet first which is  
16 implementing enhancements to the ROP.

17 I mentioned earlier that we had developed a fairly  
18 substantial list of potential enhancements to the reactor oversight  
19 process, you know, based on all the various inputs.

20 And, over the last year or so, we've been successful in  
21 addressing some of those proposed enhancements.

22 But, I think the time is right now to kind of take a step  
23 back, look at what remains on the list and determine, are these all  
24 things that we really need to consider to pursue in this environment.

25 We've gotten some feedback from many stakeholders,  
26 including some from the Commission about, you know, have we made

1 enough changes and are we sort of impacting the fabric of the reactor  
2 oversight process with all these changes that we need to make.

3 So, we need to take a look at what kind of remains on  
4 this list of potential enhancements, make some conservative decisions  
5 about what really makes sense in going forward. And then, what are  
6 the things that we can sort of set aside and say, yes, this is something  
7 we really don't need to work on, it's not going to provide us (a) that  
8 much value, and (b) probably in our constrained budgetary  
9 environment, probably not where we want to put our resources.

10 And so, I look forward to discussing in the future the  
11 Commission the results of that analysis.

12 And then, the last thing I want to talk about is the  
13 current environment and how it's impacting us from a resource  
14 perspective.

15 We have a lot of downward pressures on the Agency  
16 and particularly the operating reactor business line. This comes from  
17 budgetary constraints, the re-baselining effort. We're seeing a decline  
18 in workload, right, the Fukushima workload is going down, license  
19 renewal work is going down. We have plants coming offline. So,  
20 there's a lot of downward pressures on the operating reactor business  
21 line.

22 And, we're seeing reductions in our staffing levels  
23 across the board which is appropriate.

24 But, it does create some challenges in terms of being  
25 able to focus the remaining staff on the things that are most important  
26 from a safety perspective.

1                   So, internal to NRR, we're looking at a restructuring  
2 initiative. Over the past several months, we have formed a working  
3 group led by Anne and consisting of branch chiefs and SES managers  
4 from NRR as well as representation from the New Reactors Office to  
5 look at how might we restructure NRR given the fact that we're  
6 anticipating between our fiscal year '16 FTE staffing levels and, what  
7 we're anticipating fiscal year '18 to be almost on the order of a 100 FTE  
8 reduction in our resources.

9                   So, we have a nine-division organization now. We're  
10 looking at, you know, how we potentially form maybe a six or  
11 seven-division organization.

12                  A lot of credit to Anne and her team in terms of the  
13 outreach that they've done with the staff to seek feedback and engage  
14 the staff in town hall meetings and other things.

15                  They anticipate providing to myself and Michelle and  
16 Brian McDermott by early August their proposals or recommendations  
17 about how we might go forward in restructuring NRR, always with an  
18 eye on the ultimate merger with NRO, whenever that may be.

19                  And, we will then engage the staff again in another  
20 round of interactions to make sure that we get their perspectives. And  
21 then, we would look by early September to be in a position to make  
22 some decisions about what the future shape of NRR might look like.

23                  And so, with that, I've talked about you a couple times,  
24 let me turn it over to Anne.

25                  MS. BOLAND: Great, thank you, Bill, and good  
26 morning.

1                   The operating reactor business line has made  
2 substantial accomplishments, as Bill indicated, in the past year. But,  
3 we, at the same time, we were simultaneously improving overall  
4 licensing performance.

5                   Bill mentioned many accomplishments in his opening,  
6 so I won't repeat them here.

7                   We are on track to complete almost 800 licensing  
8 actions for the fiscal year. These actions will include a number of  
9 NFPA-805 fire protection reviews and other challenging complex and  
10 risk-informed amendments.

11                  We successfully transitioned three decommissioning  
12 plants to NMSS this year. With the latest grouping of plants, we  
13 established a systematic approach for completing the reviews and  
14 transferring licensing inspection and communications to NMSS.

15                  As Meena Khanna described during the March  
16 Commission meeting that was held on the decommissioning  
17 rulemaking, through these transitioning of these plants, we gained  
18 significant efficiencies in the transition process through centralizing  
19 project management, streamlining our processes and increasing  
20 communications with licensees on the timing and content of submittals.

21                  We are also in the process of finalizing a lessons  
22 learned document to capture the best practices that we employed and  
23 that we learned through the process. This information will be used for  
24 knowledge management purposes and to facilitate the next group of  
25 decommissioning plants that will occur prior to the planned  
26 decommissioning rulemaking that we anticipate those coming in before

1 that rulemaking time line occurs.

2 Our greatest overall accomplishment, though, was the  
3 integrated effort of the offices and our partners in NSIR and NRO to  
4 reduce the inventory of actions where the review was taking greater  
5 than 12 months, which I will discuss more on the next slide.

6 Next slide, please.

7 NRR's goals in late 2014 were to reduce the total  
8 number of licensing actions greater than 12 months by 50 percent by  
9 December 2015. And, subsequently to achieve to achieve a 2 percent  
10 improvement per year in the one-year metric.

11 We exceeded these goals by reducing old actions from  
12 112 to 26 by the end of December. And, as of today, we are at 14.

13 The 2 percent target was to achieve 90 percent of open  
14 licensing actions with the age of 12 months. And, we are currently  
15 performing at almost 95 percent. And, if you round, we are at 95  
16 percent.

17 This graph is a depiction of the volume of licensing  
18 work we have performed over the last eight years and the timeliness of  
19 issuing actions for both the one and two year metrics.

20 You can see that we've restored compliance with the  
21 two-year metric which is the top two lines and are performing at a  
22 projected level equivalent to 2008 for the one-year metric given the  
23 same approximate number of total licensing actions, licensing tasks  
24 and Fukushima work.

25 This data also bears out that, while achievable, the 95  
26 percent metric is very challenging to sustain. And, as you can see,

1 we've only achieved it at one quarter during that time period.

2                   Currently, we are working new licensing actions faster  
3 than we are receiving them and are continuing to focus on working  
4 older actions and keeping actions out of the backlog or out of the  
5 greater than 12 month old inventory.

6                   Next slide, please.

7                   While we have reduced older case work to increase  
8 resources and contract support, we must continue to optimize our  
9 process to sustain performance in a declining budget environment.

10                   Over the past year, we continued our increased  
11 management focus on licensing case work. This additional focus  
12 includes a monthly cycle of periodic meetings to review open actions.  
13 These meetings begin with a detailed review with the Branch Chiefs,  
14 reviews with NRR Deputy Division Directors and a summary briefing of  
15 case status and hot topics to the NRR executive team.

16                   We have also conducted a number of assessments of  
17 our processes over the last year. These include a lessons learned on  
18 specific licensing actions as well as detailed reviews of our basic  
19 licensing and acceptance review processes and procedures.

20                   As a result, we have implemented a number of  
21 changes. The office has also piloting a new program to assist with  
22 timely decision making called the Timely Elevation and Resolution  
23 Process, or the TERP process. And, that effort is being led by Rob.

24                   Next slide, please.

25                   Relative to data and tools, the Replacement Reactor  
26 Program System will incorporate new tools for licensing monitoring and

1 will be in place for the product line in September 2016.

2 The system will include the capabilities of Firefly which  
3 is our current workload management system as well as add new  
4 monitoring capabilities.

5 We are also in the process of revising our office  
6 instructions and our Project Manager Handbook to include the  
7 changing results of changes resulting from the self-assessments that I  
8 mentioned on the previous slide.

9 Since 2014, we have worked with industry to provide  
10 better workload forecasting of incoming licensing actions. Through  
11 these added efforts, we achieved 100 percent industry participation in  
12 the response to Regulatory Information Summary 2015-16.

13 We are still evaluating the raw data and hope that it will  
14 aid in resource adjustments for highly impacted technical areas.

15 However, the industry has indicated to us that they can  
16 only forecast with any reliability one to two years out. Thus, the data  
17 has limitations for budgeting and precise planning.

18 In his presentation, Jim Andersen will discuss how we  
19 successfully used the data from the RIS in the emergency  
20 preparedness area.

21 Next slide, please.

22 To achieve further consistency and predictability in our  
23 process, we issued a second expectations memo in follow up to a  
24 memo we issued last year. The memo reinforced program  
25 requirements in the areas of acceptance reviews, schedule discipline,  
26 communications and work hour monitoring and applies to both the

1 project management staff and the technical staff in both NRR and NRO  
2 and NSIR.

3 The memo also included expanded guidance on  
4 Requests for Information, or RAIs. RAIs are issued when more  
5 information is needed in order to make a regulatory finding for a  
6 submittal. Each RAI should have a regulatory and technical basis and  
7 fill a specific need in the regulatory analysis.

8 To ensure this is the case, the staff has to draft their  
9 safety evaluation early in the process to identify holes in the regulatory  
10 analysis. These holes are then filled by information acquired and  
11 evaluated through issuance of specific RAIs.

12 We are also encouraging use of other tools to gather  
13 this information rather than RAIs such as onsite audits and public  
14 meetings.

15 Audits in particular have been an effective means of  
16 obtaining information in an efficient manner.

17 All second round RAIs are reviewed by division level  
18 management, both in my organization and in the tech staff, to  
19 understand the need for additional questions and to determine why the  
20 information was not requested initially.

21 Lastly, project managers have been requested to  
22 monitor RAI responses that would significantly change the scope of the  
23 review of a submittal. In these cases, the staff should be questioning  
24 whether the review should be continued or whether a new amendment,  
25 in fact, should be submitted.

26 Next slide, please.

1                                   Efficiencies in the licensing product line are going well.  
2                   We have completed 50 percent of the six month items as of the end of  
3                   May are on track for the others.

4                                   Examples of the types of efficiency efforts we have  
5                   undertaken are described on this slide.

6                                   For example, we have eliminated several activities that  
7                   were not identifying significant issues such as routine periodic review of  
8                   licensing commitments and FSAR changes. The latter of which was  
9                   redundant to regional inspection activities.

10                                  New changes will also enhance the 2.206 Petition  
11                   process. Although not directly related to AIM, we improved the quality  
12                   of 2.206 director decisions. Based on direct Commission feedback,  
13                   we have begun enhanced reviews of the decisions starting with the  
14                   Petition Manager to ensure that final decisions clearly describe the  
15                   issues, how they were evaluated and dispositioned. And that they  
16                   provide a road -- the final decision provides a roadmap which clearly  
17                   articulates the whole process.

18                                  We have received both internal and external positive  
19                   feedback on recently issued director decisions.

20                                  We are exploring greater use of electronic  
21                   concurrences, RAI approvals and correspondence issuance which will  
22                   gain us efficiencies and reduce administrative processing time and  
23                   costs.

24                                  Lastly, we are partnering with OEDO to review briefing  
25                   package procedures to clarify briefing material needs and target  
26                   packages based on the specific subject of the drop-in or site visit.

1                   We are also looking at options for gaining efficiency for  
2 other types of briefing packages as well.

3                   Next slide, please.

4                   Based on the AIM reductions, known workload  
5 changes in JLD, and license renewal and overall budget reductions, we  
6 have established an NRR restructure committee to right-size our  
7 organization for the future.

8                   We must implement these changes to better align the  
9 organization while also staying focused on our mission of ensuring the  
10 safety and security of operating reactors.

11                  Where there is change, there are also opportunities to  
12 better. We must provide for the ultimate merger of NRO and NRR.  
13 And, in this regard, we are currently sharing resources for AP-1000  
14 amendments, implementing specific transition plans and harmonizing  
15 our tools and processes such as our RPS.

16                  As we move forward, we will continue to focus on the  
17 efforts as well as incorporate greater risk insights into our decision  
18 making.

19                  With that, I conclude my presentation and forward it to  
20 Rob Elliott.

21                  MR. ELLIOTT: Thank you.

22                  Good morning, Chairman and Commissioners.  
23 Thank you for the opportunity to talk to you today about two approaches  
24 that NRR has embarked upon to better address low-risk design issues.

25                  Next slide, please.

26                  Consistent with the Commission's policy on the use of

1 probabilistic assessment methods, the staff has continued to integrate  
2 risk-informed approaches into our regulatory activities to the extent  
3 supported by the state of the art and in a way that complements our  
4 deterministic approaches.

5 Examples of where the staff has done this include  
6 utilizing risk insights to better focus inspection activities in the reactor  
7 oversight program, the inclusion of risk-informed completion times and  
8 surveillance frequency controlled programs and technical specifications  
9 and utilizing risk insights to better inform our decisions about  
10 enforcement discretion.

11 As we look to continue to improve our risk-informed  
12 decision making capabilities, we have begun to explore alternatives for  
13 dealing with low-risk, low safety significance design issues.

14 Nonconformance with the licensing basis design  
15 requirements do not always constitute an immediate safety issue.  
16 However, due to the relatively short times allowed in technical  
17 specifications to restore a structure, system or component to an  
18 operable status, a licensee may be driven to either fix the design issue  
19 or seek regulatory action on an urgent basis.

20 We believe that resolution of these issues in a way -- in  
21 this way may not provide the licensee with sufficient time to consider  
22 and implement the best solution nor is it the best use of staff and  
23 licensee resources.

24 Next slide, please.

25 An example of where the staff has utilized a  
26 risk-informed solution for a design issue is in the area of tornado missile

1 protection. As several of these issues were identified at different  
2 plants, it was recognized that we had a generic issue.

3 The staff performed a generic risk assessment and  
4 determined that the tornado striking of a plant is a low probability event.  
5 Furthermore, there's a significantly lower probability of the tornado  
6 causing a loss of safety function.

7 Initially, as these issues were identified, tech spec  
8 compliance drove the licensee and the NRC to treat the issue on an  
9 urgent basis.

10 The picture here shows one instance where the  
11 licensee implemented a costly temporary modification to restore  
12 operability within a week.

13 In this case, the structure was installed to protect the  
14 exhaust stacks of two of their four emergency diesel generators from  
15 tornado missiles.

16 I would also like to note here that this licensee  
17 simultaneously submitted an Emergency License Amendment at the  
18 same time as they were installing this modification, or temporary  
19 modification.

20 And, once the modification was completed, they  
21 declared the emergency diesel generators operable and withdrew the  
22 amendment request, but not before they'd answered a round of  
23 questions from the staff and supplemented their original application.

24 So, because of the urgency caused by the need to  
25 meet the tech spec completion time, the licensee and the staff  
26 expended a significant level of resources on an issue that was low-risk

1 and had low safety significance.

2 So, as more of these issues were identified at other  
3 plants, the staff took a generic risk-informed approach and issued  
4 Enforcement Guidance Memorandum 2015-002 which provided the  
5 licensees an appropriate time commensurate with the safety  
6 significance of the issue to implement corrective action.

7 Next slide, please.

8 Applying the technical specification completion time to  
9 a low-risk, low safety significant design issue can lead to an  
10 unnecessary regulatory burden. This is because the technical  
11 specification completion times are based on an assumption that the  
12 tech spec system is unable to perform its specified safety function  
13 either because it is broken down or because it has been taken apart for  
14 maintenance.

15 When a tech spec system cannot perform its specified  
16 safety function at all, it makes sense that there's some urgency to  
17 restore the system to an operable status.

18 When a design requirement is not met, however, the  
19 tech spec system may be able to perform its specified safety function in  
20 most cases.

21 Going back to the tornado missile protection  
22 requirement, a tech spec system that is not tornado missile protected  
23 would be able -- would be expected to still be able to perform its  
24 specified safety function in almost all cases except if the vulnerable  
25 portion of the system is struck by a tornado missile.

26 In this case, the licensee may be able to provide an

1 acceptable level of safety through compensatory measures in which  
2 case there would not be an urgent need to restore full compliance.

3 For this reason, we are considering a new tool for  
4 dealing with these issues.

5 Staff has formed a working group comprised of staff  
6 from NRR, the regions, Office of Enforcement and the Office of the  
7 General Counsel that is considering a new process for resolution of  
8 these low-risk, low safety significance design issues that affect  
9 operability.

10 The working group is considering a new process for  
11 dealing with these design issues that is similar to an NOED but would  
12 utilize discretion for a longer period in time in recognition of the low risk  
13 and safety significance of the issue and the need for a reasonable  
14 length of time for a corrective action.

15 The working group has engaged the public and the  
16 industry on our proposed process. Feedback from the industry has  
17 been very supportive and they have stood up an industry working group  
18 to engage the staff on the proposed process.

19 We have received feedback from the public in public  
20 meetings that the NRC would not be enforcing its requirements. We  
21 are currently working to address these concerns and we will continue to  
22 engage the public as we develop a process improvement.

23 We will actively seek feedback from all stakeholders as  
24 we proceed.

25 I would note that the concept of using the risk-informed  
26 approach is supported by the Commission's Enforcement Policy which

1 allows the staff to apply discretion for low-risk noncompliances as long  
2 as the staff evaluates whether immediate action is warranted or not.

3 Based on this policy guidance, the staff is looking to  
4 utilize a risk-informed approach that evaluates the risk and safety  
5 significance of these nonconforming conditions and allows them to be  
6 addressed in a time period commensurate with their safety significance.

7 Next slide, please.

8 There are a number of potential benefits to  
9 implementing a risk-informed approach for low-risk, low safety  
10 significance design issues.

11 First, it would ensure the deficiency is corrected in a  
12 timely manner that is commensurate with the safety significance of the  
13 issue.

14 This would give the licensee time to consider  
15 appropriate alternatives for issue resolution and make a decision based  
16 on the best solution path, not just the quickest one which may also  
17 eliminate the need for unnecessary temporary mods being  
18 implemented to avoid a plant shutdown.

19 As such, the approach would have the additional  
20 benefit of minimizing the potential for unnecessary use of large  
21 resources that occur as when we address these issues on an urgent  
22 basis.

23 Second, licensee compensatory measures and risk  
24 management actions would ensure that continued operation --  
25 continued safe operation of the plant.

26 Third, it would allow the licensee and the staff to focus

1 resources on more safety significant issues.

2 And, finally, it adds a new tool to our regulatory toolkit  
3 that is complementary to our existing processes such as the Notice of  
4 Enforcement Discretion and the Emergency License Amendment  
5 process.

6 It is important to note, there would be no change  
7 needed to the existing enforcement policy and violations would  
8 continue to be handled through the normal enforcement process.

9 Next slide, please.

10 Looking forward, the staff will continue to work on a  
11 process improvement for dealing with low-risk, low safety significance  
12 design compliance issues, potentially utilizing long-term enforcement  
13 discretion as a tool.

14 The process improvement would allow continued  
15 operation while the licensee implements corrective action provided the  
16 licensee can demonstrate that the risk is low and that there's no undue  
17 risk to public health and safety.

18 While the initial focus of the working group has been on  
19 low-risk design issues, we will also consider whether it is appropriate to  
20 expand the process scope to include degraded conditions or a licensee  
21 may need more time to fix a problem.

22 For instance, a situation where a licensee needs an  
23 outage to implement corrective action.

24 The working group will continue to actively seek  
25 stakeholder input and feedback, both with internal and external  
26 stakeholders and as required by the SRM-SECY-15-0168, the staff will

1 inform the Commission prior to implementing a new process to  
2 risk-inform the way we address -- respond to operability issues of  
3 low-risk and safety significance.

4 And, this concludes my presentation. And, with that, I  
5 will turn it over to Len Wert.

6 MR. WERT: Thanks, Rob.

7 So, good morning, I'm glad to be here and to share  
8 some regional perspective.

9 The primary mission, of course, of the regions remains  
10 constant, to ensure safety and security by performing close monitoring  
11 and effective inspections. We identify and review issues and, as  
12 appropriate, challenging the licensees to comply with regulations.

13 The regions are cognizant of the current challenges to  
14 the industry relative to containing costs of maintenance and operations.  
15 And, we are being vigilant in monitoring for any unintended effects of  
16 programs to improve efficiency.

17 NRC employees continue to demonstrate their  
18 questioning attitude and technical expertise by identifying issues with  
19 safety implications. And, a few examples would be the safety relief  
20 valve issues at Pilgrim, poor control of heat up after a refueling outage  
21 at Watts Bar Unit 1, design issues with an auxiliary feedwater pump at  
22 Braidwood and inadequate extent of condition evaluations at Arkansas  
23 Nuclear One.

24 Reactive inspections in response to events such as  
25 special inspections of the Hatch safety relief valve issue and the  
26 Oconee failed startup transformer cabling incident are recent examples

1 of detailed reviews which we performed to ensure that we had a  
2 thorough understanding of the technical issues as well as the licensees  
3 actions to address those issues.

4 Other less visible activities such as reviews of licensee  
5 preparations for adverse weather. For example, in this month, in  
6 Region II, we looked at hurricane season preparations, are examples of  
7 the regional focus on safety.

8 Next slide, please. And, one more slide, please.

9 The regions ensure reactor safety by reliable  
10 implementation of the ROP, the periodic reactor oversight process  
11 self-assessments and use of operating experience continue to result in  
12 program improvements.

13 An example is the component design basis inspection  
14 change that is currently being piloted. Recent pilot inspections  
15 focused on the implementation of environmental qualification programs  
16 and led to insights into the licensee performance including findings  
17 such as inadequate environmental qualification of cables to  
18 containment radiation monitors.

19 Industry feedback on this pilot will be reviewed and  
20 considered.

21 On the topic of regional reliability and implementation  
22 of the ROP or consistency, enhancements continue to be made. The  
23 regions work together with the Division of Inspection and Regional  
24 Support to improve the consistency of the dispositioning of items of very  
25 low safety significance resulting in a revision to Inspection Manual  
26 Chapter 0612 which increased the clarity of guidance related to credit

1 for identification.

2 This change was developed in a thoughtful manner  
3 and it included significant staff engagement and was focused on  
4 ensuring that the overall Agency objectives would be supported.

5 In this case, licensees would be encouraged to find  
6 and address issues.

7 Next slide.

8 The regions are closely monitoring activities at  
9 Arkansas Nuclear One and Pilgrim, both sites in column 4 as the  
10 licensee strives to improve performance at each station.

11 The completion of the 95-003 inspection at ANO is an  
12 outstanding example of the entire Agency coming together to provide  
13 the necessary expertise and resources.

14 As you are aware, the NRC determined from its  
15 comprehensive inspection effort that ANO did not fully evaluate the  
16 causes for safety culture weaknesses. And, ineffective change  
17 management with respect to resource reductions created a number of  
18 challenges that slowly began to impact equipment reliability.

19 At Pilgrim, the licensee failed to effectively identify and  
20 resolve degraded conditions such as poorly functioning safety relief  
21 valves.

22 Watts Bar Unit 2 continues to be a resource intensive  
23 oversight effort for us. The licensee has had recent success in  
24 achieving initial criticality and progressing through power ascension  
25 testing.

26 Dedicated NRC staff continue to perform close scrutiny

1 of onsite activities. Inspector observations and other information led to  
2 the identification of a degraded safety conscious work environment  
3 within the Operations Department and the issuance of a chilling effect  
4 letter to the Tennessee Valley Authority.

5 Region II, with support from the Office of Enforcement,  
6 the Office of Investigations and NRR provided this engagement in a  
7 timely manner.

8 Region II staff assisted with inspectors from the other  
9 regions and also the Technical Training Center, continue to closely  
10 monitor TVA's efforts to improve the safety conscious work  
11 environment on the site, even as the testing program at Watts Bar Unit  
12 2 continues.

13 Next slide.

14 The regions continue to implement post-Fukushima  
15 actions by completing TI 191. Staff plans to complete 14 inspections  
16 by the end of 2016.

17 In the area of cybersecurity, inspections addressing  
18 Milestones 1 through 7 were completed in 2015. Most sites have  
19 received an extension into 2017 for completion of Milestone 8 and  
20 inspections will be completed accordingly.

21 Staff has been working with NEI to ensure appropriate  
22 types of controls are established relative to their critical digital assets.  
23 And, Jim Andersen's going to talk a little bit more about this a little bit  
24 later.

25 Next slide.

26 Of course, our employees are vital to the Agency's

1 success. The regions continue to remain focused on maintaining the  
2 capability and the expertise necessary to effectively perform our  
3 inspections.

4 This entails a constant attention to staffing levels and  
5 experience level in each area of inspection expertise.

6 Regional capabilities have long been enhanced by  
7 efforts of mutual assistance, cooperation and resource sharing,  
8 including licensed operator reactor operator examinations,  
9 supplemental inspections and the risk evaluations performed by senior  
10 reactor analysts.

11 To enhance flexibility and agility, we have encouraged  
12 inspectors to qualify and gain experience in more than one inspection  
13 area.

14 Some areas of inspection expertise are very small and  
15 the regional managers are always working to ensure that we maintain  
16 that necessary expertise.

17 For example, we remain focused on ensuring that we  
18 maintain adequate bench strength for our resident inspector program.  
19 Recruiting and training new NRC personnel dedicated to fulfilling  
20 assignment as a resident inspector is, of course, an ongoing effort.

21 But, by emphasizing cross-qualifications, we are also  
22 making the resident inspector pathway even more open to other NRC  
23 personnel.

24 Next slide.

25 On Project AIM, the re-baselining effort has defined  
26 what activities we expect to change. We will see some activities and

1 gain efficiency in doing others.

2 For example, the ROP mid-cycle performance  
3 assessments, our significance determination process and inspection  
4 report writing.

5 But, as with any complex change, the details are very  
6 important. How we will revise our staffing levels and/or change our  
7 organizations to effect these changes and activities has not yet been  
8 defined.

9 The regions are currently considering the impacts of  
10 the recent early out buyout program which also may provide  
11 opportunities to effect organizational changes.

12 Our employees have been invited to contribute and  
13 many are fully engaged in discussions of potential organizational  
14 changes.

15 So, now, I'll turn it over to Dave.

16 MR. RUDLAND: Thank you, Leonard.

17 Good morning and thanks for the opportunity to be  
18 able to discuss with you some of the research activities supporting the  
19 operating reactor business line.

20 Next slide, please.

21 Consistent with the office submission, RES engages in  
22 research deemed necessary for the performance of NRC licensing and  
23 other regulatory functions. RES supplies technical tools, analytical  
24 models and experimental data needed to support the Agency's  
25 regulatory decisions in the operating reactor business line which  
26 accounts for about 85 percent of the RES budget.

1                   This slide depicts some of the research we have  
2                   underway to confirm safety.

3                   RES focuses not only on emergent issues facing the  
4                   operating plants today, but also on forward looking or anticipatory  
5                   research that will support the needs in the future such as ensuring  
6                   safety through subsequent license renewal.

7                   Whether addressing safety significance generic issues  
8                   like probabilistic flood hazard assessment or high-energy arc fault  
9                   analyses, addressing the technical challenges associated with  
10                  converting operating nuclear power plants from analog to digital or  
11                  developing analytical tools to investigate normal operation, severe  
12                  accidents and material performance challenges, RES assesses safety  
13                  and regulatory issues by developing strong technical bases in support  
14                  of the operating reactor business line.

15                  In this presentation today, I will focus on material  
16                  performance area and specifically development and application of  
17                  integrity analysis tools such as the extremely low probability of rupture,  
18                  probabilistic fracture mechanics code, or our xLPR, as a specific  
19                  illustration of how we work in research to confirm safety.

20                  Next slide, please.

21                  Before getting into the details of xLPR, I wanted to  
22                  briefly discuss how we are using the re-baselining approved by the  
23                  Commission in SECY 16-009 to enhance the efficiency of our program  
24                  while avoiding any negative impacts of our effectiveness.

25                  This slide depicts examples of re-baselining in our  
26                  material performance research. We closely collaborated with NRR on

1 identifying and implementing these re-baselining items.

2 After considering all impacts, we identified eliminating  
3 work to develop the technical basis for emergent weld mitigation  
4 techniques and a potential update to Part 50 Appendix G.

5 Studying this work will reduce the confirmatory  
6 analyses for evaluating new weld mitigation techniques and curtail  
7 plans for updating Appendix G.

8 Moving forward, the staff will rely on expertise,  
9 judgment and past experience in reviewing emergent mitigation  
10 techniques and will continue to implement the existing requirements in  
11 Appendix G in reviewing associated licensing actions.

12 The process for shedding these items is ongoing and  
13 plan to be completed by the end of the fiscal year.

14 For the Component Integrity Branch, we shed 1.8 FTE  
15 and about 800,000 contract dollars.

16 The staff working on these items have been  
17 reassigned to other tasks within the division.

18 Next slide, please.

19 Over the last several years, the need for a robust  
20 probabilistic fracture mechanics tool for pressure boundary integrity  
21 analysis has arose due to the occurrence of primary water stress  
22 corrosion cracking in systems previous approved for leak before break,  
23 or LBB.

24 10 CFR 50 Appendix A GDC 4 allows for the removal  
25 of equipment in the mitigation of dynamic effects from large postulated  
26 breaks if analyses conducted can demonstrate an extremely low

1 probability of rupture.

2 In the early 1980s, the Agency developed deterministic  
3 leak before break analyses to demonstrate compliance with this  
4 regulation. However, these analyses included a screening criteria that  
5 dictated that no active degradation could exist and no systems  
6 approved for LBB.

7 For those previously approved systems, experiencing  
8 PWSCC, no quantitative probabilistic solution is available. The  
9 regulatory need here then is to develop guidance for demonstrating  
10 leak before break by quantifying the effects of mitigation in systems with  
11 PWSCC.

12 Next slide, please.

13 To meet this need, Research embarked on a multi-year  
14 effort to develop a robust probabilistic fracture mechanic solution. To  
15 leverage funds and technical expertise, Research developed a  
16 cooperative effort with the Electric Power Research Institute to create  
17 the xLPR Probabilistic Mechanics Code.

18 This computer code is comprehensive with respect to  
19 all known and significant challenges vetted with respect to scientific  
20 adequacy, flexible enough to permit of a variety of in-service conditions,  
21 adaptable to accommodate improved knowledge and properly handles  
22 both model and parameter uncertainty.

23 In addition, the code is developed under a  
24 nuclear-grade quality assurance program fashioned after NQA-1 and  
25 has undergone very rigorous verification validation testing.

26 The scope of this xLPR program is aligned with the

1 ongoing efforts and the risk-informed safety margin characterization  
2 pathway of the U.S. Department of Energy Light Water Reactor  
3 Sustainability Program.

4 Discussions between the NRC and DOE are ongoing  
5 to ensure alignment as their code further matures.

6 Next slide, please.

7 In addition to the leak before break application, the  
8 xLPR code is well suited for -- to support ongoing piping integrity related  
9 relief requests.

10 Also, the code has the potential to broadly support  
11 risk-informed and strategic decision making.

12 For instance, as part of the re-baselining effort,  
13 prioritization of activities is paramount. Sensitivity analyses and xLPR  
14 results produce a ranking of statistically significant models or inputs.  
15 RES can use these rankings to prioritize research efforts in order to  
16 maximize their impacts and benefits.

17 Such analyses can also provide a basis for continuing  
18 work extending research activities.

19 In addition, the code may be used in the future to  
20 reassess piping risk-informed in-service inspection intervals, develop  
21 LOCA frequencies or better understand the impacts of seismic loading  
22 on piping integrity.

23 Finally, the xLPR code has a potential of aiding the  
24 regions in their significance determination process by producing risk  
25 insights so that the NRC inspectors can determine the safety  
26 significance of inspection findings.

1 Next slide, please.

2 Upon completion of about a three and a half year effort,  
3 Research will release the production version of the xLPR code, Version  
4 2.0, in August of 2016.

5 Currently, the program team is finalizing the extensive  
6 verification and validation testing and completing the quality assurance  
7 documentation. Many of the technical basis documents are complete  
8 and Research expects the remainder of the documents to be completed  
9 by the end of the calendar year.

10 In addition, the xLPR team is developing a  
11 maintenance and release program for the xLPR code that will include a  
12 user's group. This program will support incremental modifications to  
13 the code, control distribution, ensure configuration management and  
14 provide a structure for continued code development.

15 The goal is to have this program funded by the users  
16 group with code development efforts funded by individual members and  
17 not supported by NRC funding.

18 The first application of xLPR will be the development of  
19 guidance for those LBB piping systems impacted by primary water  
20 stress corrosion cracking.

21 Research will develop the technical basis for such  
22 guidance by exercising this xLPR code in sensitivity studies through  
23 2017 with regulatory guidance coming in 2018.

24 Thank you very much for your attention. I'll now turn  
25 the brief over to Jim Andersen.

26 MR. ANDERSEN: Thank you, Dave.

1                   Thanks, Dave, and thanks for the opportunity to  
2 discuss some of NSIR's contributions and activities related to the  
3 operating business line. And, I appreciate Bill giving us a minute to  
4 discuss this important area.

5                   CHAIRMAN BURNS: You don't have to worry.  
6 Unlike him, I have greater power. And so, take what you were  
7 planning to do, Jim. Thanks.

8                   MR. ANDERSEN: Thank you, Chairman.

9                   During this meeting last year, I discussed the staff's  
10 efforts to establish a graded approach to cybersecurity based on the  
11 consequences of cyber compromise to the system function.

12                   This approach focuses resources on the most  
13 important areas while still providing protection for all assets within the  
14 scope of the rule.

15                   Since that time, the staff has reviewed and approved  
16 for use Guidance Document NEI 13-10 which I believe can significantly  
17 reduce the licensee burden for power reactor cybersecurity programs  
18 while continuing to ensure adequate protection of public health and  
19 safety.

20                   The NRC staff has recently conducted a tabletop  
21 exercise with the industry on implementing NEI 13-10. And, those  
22 lessons learned are being incorporated into the cybersecurity guidance.

23                   As Len mentioned, power reactor licensees are  
24 following two-phased approach for implementation of the cybersecurity  
25 requirements and the NRC completed the first phase of inspections in  
26 2015.

1 Over the last six months, the staff has worked with the  
2 industry and NEI to evaluate lessons learned and generic issues  
3 coming out of the inspections that need to be addressed prior to full  
4 implementation.

5 The full implementation date varies for each plant but  
6 currently, all sites are expected to have fully implemented the  
7 cybersecurity requirements by December 2017.

8 Based on this effort, the staff and industry to date have  
9 identified seven issues which would benefit from additional guidance or  
10 alignment on possible methods or processes to address the  
11 cybersecurity controls.

12 The staff plans to capture this guidance and  
13 information through the security frequently asked question process to  
14 ensure the guidance and information is available to inspectors and the  
15 industry.

16 Next slide, please.

17 The second phase, or Milestone 8, relates to the full  
18 implementation of the licensees cybersecurity plans which adds  
19 additional defense in depth including the full implementation of  
20 technical controls, monitoring and detection capabilities and instance  
21 response training and drills.

22 The NRC staff has been working with the industry to  
23 schedule a number of engagements in preparation for full cybersecurity  
24 implementation. These engagements have included our regional  
25 inspectors to improve consistency of oversight activities.

26 As I mentioned earlier, the first one was completed in

1 April and targeted the NEI 13-10 process. The next engagement will  
2 be next week on monitoring and assessment controls.

3 Future engagements will cover detection and response  
4 and implementation requirements, supply chain requirements and drills  
5 and testing requirements.

6 Lessons learned from the engagements will be  
7 captured in guidance documents, security frequently asked questions  
8 or other means as appropriate.

9 Also, in the last year, the Cybersecurity Notification  
10 rule was issued and fully implemented in May of 2016. The NRC  
11 issued Regulatory Guidance Document 5.83 at the time of the  
12 rulemaking which provided an acceptable approach for meeting the  
13 regulatory requirements.

14 NEI has developed and the NRC has approved for use  
15 additional Guidance Document NEI 1509 which provides even more  
16 examples for licensees to use.

17 As Anne mentioned -- next slide, please.

18 As Anne mentioned as part of her briefing, the staff  
19 continues to reduce the licensing inventory and NSIR has been working  
20 with the NRR project managers and branch chiefs to help us more  
21 effectively utilize resources.

22 Anne also mentioned Regulatory Issue Summary  
23 2015-16 which requested licensees voluntarily provide information  
24 regarding the licensing actions they plan to submit to the NRC.

25 Based on discussions with the NEI Licensing Task  
26 Force, an increased focus on emergency preparedness licensing

1 actions by the licensees licensing group, licensee submittals will now  
2 be more emergency preparedness inclusive.

3 NRR project managers will be maintaining this listing  
4 as a living document and updates will be made based on the inputs  
5 received from respective licensees.

6 NSIR now has access to that listing and monitors  
7 proposed emergency preparedness related licensing actions and  
8 discusses the status of licensing actions at monthly branch chief  
9 meetings.

10 Although the NSIR emergency preparedness licensing  
11 staff has historically been successful at meeting -- hit the licensing  
12 metrics, these process improvements have helped staff to more  
13 effectively use the limited resources available.

14 On a related emergency preparedness topic, there has  
15 been some confusion in the industry over the use of on-shift staffing  
16 analysis which is documented in NEI 10-05 and is used as the bases for  
17 emergency response organization staffing changes.

18 This confusion has led to several long, drawn out  
19 licensing reviews. To more effectively deal with this issue, the staff  
20 has developed a regulatory issue summary which is in the final stages  
21 of concurrence and provides clarity in this area and will help improve  
22 the timeliness of NSIR licensing reviews.

23 This concludes my portion of the briefing and I'll turn it  
24 over to Mike Johnson who will provide final remarks.

25 MR. JOHNSON: Thank you, Jim.

26 So, over the last hour, you've heard a comprehensive

1 discussion of the many activities in the operating reactor business line  
2 and I do appreciate the added minutes to complete that presentation.

3 I am particularly proud of the work of the staff and  
4 responding to a challenging environment with creativity. I think we've  
5 demonstrated that in the presentation that you have received, the many  
6 activities that are ongoing.

7 First and foremost and lastly, we remain focused on  
8 safety and security. I think the leadership team has had that focus and  
9 certainly the staff supporting the business line has had that focus as  
10 well.

11 So, with that, that concludes our presentation and we  
12 look forward to your questions.

13 CHAIRMAN BURNS: Okay, thanks, Mike.

14 And, we'll begin the questions this morning with  
15 Commissioner Baran.

16 COMMISSIONER BARAN: Well, thank you all for  
17 your presentations and for the work you're doing.

18 Bill and Mike, I want to start with a brief comment on  
19 the decommissioning rulemaking.

20 The increased number of plants transitioning to  
21 decommissioning makes the broad decommissioning rulemaking even  
22 more valuable.

23 But, as Bill noted, it also creates a management  
24 challenge because these licensees will presumably seek exemptions  
25 and the staff's work on those exemption requests could draw resources  
26 away from the rulemaking.

1 I'm glad you're focused on that challenge. I know it's  
2 something we've talked about periodically because I think it's important  
3 for you to identify the resources needed to make sure that this  
4 rulemaking stays on track for completion in early 2019.

5 It sounds like you're already doing some thinking about  
6 that and I look forward to having further conversations about it.

7 Rob, I wanted to spend most of my time asking some  
8 questions about the risk-informed approach for addressing low-risk  
9 compliance issues.

10 Technical specifications are, of course, part of a plant's  
11 licensing basis. If the licensee isn't in compliance with the tech spec,  
12 the licensee has to make an operability determination and that's a yes  
13 or no question. Systems operable or it's not.

14 As I understand it, the NRC staff is looking at  
15 developing a process to disregard the tech spec completion deadlines  
16 for low-risk compliance issues and, instead, develop compensatory  
17 measures and extended deadlines for eventual compliance with the  
18 tech specs. Is that right?

19 MR. ELLIOTT: I don't know if I would characterize it  
20 that way.

21 COMMISSIONER BARAN: You didn't characterize it  
22 that way, but is there anything about my characterization that's  
23 inaccurate?

24 MR. ELLIOTT: Okay, but, yes, we are looking at  
25 basically extended completion times.

26 COMMISSIONER BARAN: Up to four years?

1 MR. ELLIOTT: The underlying regulatory  
2 requirement is to have a system that performs to specified safety  
3 function and that --

4 COMMISSIONER BARAN: Well, let me ask, the  
5 extended deadlines you're talking about are up to four years, that's  
6 what you're contemplating?

7 MR. ELLIOTT: We -- yes, we have considered putting  
8 a backstop on it of up to four years. But, we've --

9 COMMISSIONER BARAN: I'm trying to understand  
10 what underlying problem we're trying to solve here. Is it the tech specs  
11 that we have tech specs that are unnecessarily demanding? Is it that  
12 licensees and NRC are spending a lot of time disagreeing about  
13 whether or not compliance is within the licensing basis? What's the  
14 problem here we're trying to solve?

15 MR. DEAN: So, let me help Rob out here a little bit.

16 Commissioner, the problem that we're trying to solve is  
17 that not everything that creates a potential tech spec issue is of equal  
18 significance. Right? The tech specs right now provide what I would  
19 offer, kind of a one-size-fits-all, no matter what it is that creates a  
20 potential operability concern, we have to treat it with the same degree of  
21 significance and urgency.

22 I think what Rob described earlier is that technical  
23 specifications are -- the time frames that are there for completion times  
24 and so on are oriented around, you do not have a system structure or  
25 component that is capable of performing its function.

26 What Rob is trying to convey and what we're trying to

1 look at is situations where it's really some secondary or tertiary issue  
2 that is creating a potential operability concern.

3 He talked about tornado missiles, for example. I think  
4 we would all agree that the fact that if there is a certain exhaust pipe on  
5 an emergency diesel generator that has a cross section of one square  
6 foot that could potentially be impacted by a tornado missile if you had  
7 the tornado hit the side, if you had the missile generator, if it hit that  
8 exact spot is a very low frequency, low probability event.

9 For us to declare that diesel inoperable and require a  
10 licensee to shutdown as required by tech specs really is not an  
11 appropriate use of, I believe, our regulatory processes.

12 COMMISSIONER BARAN: Well, why not --

13 MR. DEAN: In fact --

14 COMMISSIONER BARAN: Why not just risk-inform  
15 the tech spec specifications themselves instead of coming up with a  
16 whole new process to allow for delayed compliance with the tech specs  
17 on the books?

18 MR. DEAN: Right. So, one of the things I talked  
19 about, which is both a strength and an impediment is the fact that our  
20 regulatory framework is steeped in deterministic principles. Right?

21 You have these formalized events, design basis  
22 events. You have technical specifications that have been built and  
23 designed around the potential that these stylized design basis events  
24 would occur and they don't allow for the application of risk insights that  
25 would provide us the capability to be a more reasonable and  
26 appropriate regulator.

1 Your question about should we risk-inform tech specs?

2 That's happening --

3 COMMISSIONER BARAN: Right --

4 MR. DEAN: We have risk-informed tech specs.  
5 Right? But it's not an instantaneous process and it takes time to do  
6 that and you have to have a licensee that wants to commit to expend  
7 the effort to develop a PRA, Probabilistic Risk Assessment model that  
8 meets Reg Guide 1.200 and all of that.

9 COMMISSIONER BARAN: Well, let me ask this, so  
10 this new process would apply to low-risk compliance issues which leads  
11 to the basic threshold question, what's low-risk? So, how is the staff  
12 proposing to define low-risk?

13 MR. ELLIOTT: That's what's under development  
14 now. We're working with our PRA analysts to come up with a  
15 definition.

16 The problem with defining low-risk when you talk about  
17 an extended period of time, an average risk metric might not be  
18 sufficient unto itself because the risk profile can change over time.

19 So, the working group is looking at evaluating how you  
20 would factor in such things as potential changes in the risk profile.

21 COMMISSIONER BARAN: Well, can you give us a  
22 sense of where you're going? You've been working on this for six  
23 months, you've had three public meetings. What direction are you  
24 heading on what's low-risk?

25 MR. ELLIOTT: We've talked about an average metric  
26 of  $E^{-6}$  but, again, we're looking at a framework that wouldn't be

1 necessary to consider how that would -- how that could change over  
2 time.

3 COMMISSIONER BARAN: NRC's operability  
4 guidance states that, quote, the use of PRA or probabilities of  
5 occurrence of accidents or external events is not consistent with the  
6 assumption that the event occurs. It is not acceptable for making  
7 operability decisions, end quote.

8 Doesn't this initiative contradict this longstanding  
9 guidance?

10 MR. ELLIOTT: That's what drives the licensee into  
11 the tech specs. Okay? And so, that's why we're considering  
12 whether or not the actions required by tech specs are appropriate in the  
13 circumstance that the licensee's in.

14 COMMISSIONER BARAN: Well, tech specs provide  
15 safety margin and defense in depth. How would we make sure that  
16 delayed compliance with a number of individual low-risk compliance  
17 issues doesn't aggregate into larger risks?

18 MR. ELLIOTT: And, that's why the process we're  
19 considering is a risk-informed approach so it would not be just a risk  
20 number or a risk metric, we would also have a deterministic look and  
21 consider defense in depth, safety margin and compensatory measures  
22 all together in determining whether or not the extended period of time  
23 would be acceptable.

24 COMMISSIONER BARAN: The main example I hear  
25 for why this initiative is necessary is the one we heard again today  
26 which is tornado missile protection.

1                   But NRC used enforcement discretion to chart a path  
2 forward on that issue. Aren't there plenty of tools already available to  
3 address these issues, the enforcement discretion, license amendments  
4 for extended completion deadlines? Why do we need a new process  
5 to do this?

6                   MR. DEAN: So, let me interject and then Rob can  
7 follow up.

8                   Certainly that's one of the things that we need to  
9 evaluate. Part of it is, as you indicate, Commissioner, we already have  
10 the capacity within the enforcement policy to provide relief to licensees  
11 for low-risk compliance issues using risk insights.

12                   So, that's already consistent with what we're trying to  
13 do with what the Agency's enforcement policy is.

14                   Part of it is that we've built up an internal infrastructure,  
15 for example, Notices of Enforcement Discretion. Right?

16                   We have built up a framework that basically says this  
17 has to be a short-term decision and we only allow a certain period of  
18 time that a licensee can be in noncompliance and to give them an  
19 opportunity, for example, to fix a failed pump or something like that.

20                   But, the enforcement policy would allow us to provide  
21 discretion for much longer periods of time. I think what Rob is trying to  
22 describe is that, to make that determination requires a more concerted  
23 effort to bring into play risk insights and do some additional analysis to  
24 be able to build up the comfort level that we would have to allow a  
25 licensee to go longer.

26                   So, we may very well find ourselves revising the NOED

1 process to provide for, you know, short-term and long-term  
2 approaches. But, that doesn't exist right now. And so, that's part of  
3 what Rob's team is looking at.

4 And, you know, I appreciate the fact you're asking all of  
5 these questions. I will note, this is still a activity that's under  
6 development. There's certainly more work to be done and, as Rob  
7 indicated, we'll certain provide the Commission the outcome and of our  
8 assessment and share with you what our proposals are to get  
9 Commission feedback.

10 MR. JOHNSON: And, if I could add, and Bill made the  
11 points I was maybe going to make very well, so we have a framework,  
12 that framework works. Obviously, when we have the situation of  
13 tornado missiles, we were able to execute those processes.

14 Some could say we could do that more efficiently. I  
15 would say we could do that more efficiently.

16 We certainly can make the framework better,  
17 processes that we use better and this is an exploratory activity, more  
18 than exploratory, this is a developmental activity to try to flesh that out,  
19 recognizing that we need to make sure that we preserve focus on  
20 safety, making sure that we don't give up on fundamental tenets of  
21 compliance, those -- we're not giving that away. We're going to insist  
22 on compliance commensurate with the significance of the issue. So,  
23 we'll make sure that that's built in.

24 And, lastly, we'll certainly make sure that the  
25 Commission's informed before we make decisions going forward.

26 COMMISSIONER BARAN: Well, tech specs, I mean,

1 I'm not telling you anything you don't already know, tech specs are  
2 regulatory requirements. They're part of the licensing basis.

3 If there's a tech spec that says, you know, in the case  
4 of a system being inoperable, it needs to be corrected in 30 days or you  
5 shutdown.

6 If we create a process that says, well, we think that's  
7 low-risk in isolation, maybe we'll come up with some way of figuring out  
8 whether it's low-risk cumulatively with everything else we're  
9 determining is low-risk.

10 So now, you don't get 30 days, you get a year, you get  
11 two years, you get four years. I don't see how that's consistent with  
12 ensuring compliance with our regulatory requirements. We just  
13 changed our regulatory requirements and it sounds like we changed it  
14 without having a license amendment as to the deadline for completion  
15 of the tech spec efforts.

16 So, you don't have public participation in that process  
17 because it's not a license amendment process.

18 I guess, you know, I'll just stop there because I'm over.  
19 I have serious concerns about this effort. I don't think we should be  
20 spending our time coming up with a whole new process to allow for  
21 delayed compliance with the regulatory requirements and with the  
22 potential to erode safety margin and defense in depth.

23 And, you guys have been at this a while and I haven't  
24 heard anything today that convinces me that this is an idea worth  
25 pursuing.

26 Thanks.

1                   CHAIRMAN BURNS: Thank you. Let me follow up  
2                   on one -- one question on this issue. I think we teased out a lot of the,  
3                   you know, sort of the issues that are related to this, but give me an idea  
4                   in terms of the numbers of these types of things that have come up, you  
5                   mentioned the tornado missile, can you think of others, say in the last  
6                   five years, that have emerged where you have this question of  
7                   enforcement?                   Really, this all -- you can call it whatever  
8                   it is, it's about enforcement discretion, and I'll let it -- leave it at that.  
9                   But are there other issues like this you think have come up where the  
10                  question is looking at a tech spec, and, you know, let -- you know, we --  
11                  as we know, most of these tech specs are probably going back to  
12                  operability frameworks that were decided in the initial licensing, but  
13                  what other ones are there?

14                 MR. ELLIOTT: So looking over the past few years, it  
15                 has been about ten of these that we've identified that have been  
16                 resolved through the use of emergency amendments, and --

17                 CHAIRMAN BURNS: Okay.

18                 MR. ELLIOTT: -- NOED combinations. Example,  
19                 one licensee had a tech spec requirement that they be able to take --  
20                 their containment sprays need to be able to take suction from both the  
21                 refueling water storage tank and the containment sump, but they  
22                 determined that if they took suction from the containment sump, it  
23                 would cause a runout condition in the RHR pump and therefore  
24                 damage the residual heat removal pumps.

25                 So they had to declare that inoperable, and it was  
26                 preventing them from being started up. But when they looked in their

1 accident analysis, they didn't credit using containment sprays at all in  
2 their accident analysis for drawing suction from the containment sump,  
3 so it was not actually in their safety analysis that they would use the  
4 pump in that way at all, but that had to be resolved through an  
5 emergency amendment process in order to facilitate the licensee being  
6 able to start up.

7 Another situation, a licensee had post-accident  
8 monitoring instrumentation, one channel was not environmentally  
9 qualified. They actually had more channels than the standard tech  
10 specs has in it, and despite that fact, they were being pushed, because  
11 of the way their tech specs were constructed, being pushed into a  
12 shutdown track instead of, as the standard tech specs would allow, they  
13 would only have had to write a report and indicate how and when they  
14 were going to fix the -- the inoperable channel.

15 So there's been a few of these issues over time, and --  
16 and in another case, licensee, they -- we determined that they had a  
17 fuel oil transfer pump design that transfers the emergency diesel  
18 generator fuel oil from the storage tank to the day tank. Only one of  
19 the pumps had emergency power. It was supposed to be two trains  
20 physically separated and redundant, so if they lost the A diesel  
21 generator, they lost the capacity for an accident providing the fuel oil to  
22 the other emergency diesel generator.

23 However, the licensee had known about this for some  
24 time, and they actually had a procedure and a pump onsite that they  
25 could easily install and -- and transfer the oil in -- if that scenario were to  
26 occur.

1                   So as -- you know, tornadoes really has been the big  
2 issue of the day because there's so -- so much has been identified with  
3 that, but there are a number of other issues that are design compliance  
4 that end up being resolved through urgent action that's not  
5 commensurate with the safety significance of the issue given --

6                   CHAIRMAN BURNS: Okay.

7                   MR. ELLIOTT: -- given --

8                   CHAIRMAN BURNS: All right. Joe?

9                   MR. GIITTER: Joe Gitter, the Director of the Division  
10 of Risk Assessment in NRR. I just wanted to point out that a lot of  
11 times, tech specs will direct you to shut for what we characterize as low  
12 safety significant issues, but shutting the plant down in and of itself is  
13 risk significant. You put the plant through a transient.

14                   So for example, in the case of a NOED, what you're  
15 looking at is the change in risk from allowing the plant to operate with  
16 the non-conformance versus the increase in risk of shutting the plant  
17 down and putting it through a transient, so that's one of the things we  
18 look at, and in evaluating these types of situations, that's an important  
19 aspect of it.

20                   CHAIRMAN BURNS: Okay, thanks. Let me -- I want  
21 to move on to some organizational issues. Actually, Mike or Bill can  
22 address this. You know, the Commission recently received the paper  
23 for the potential or eventual merger of NRO and NRR at an appropriate  
24 time, so I'm looking for that Goldilocks moment, I suppose.

25                   But what -- what do you -- tell us -- tell me about  
26 whether the criteria you really think we should be using to determine

1           when that time is appropriate, and I acknowledge Former  
2           Commissioner Ostendorff in terms of, you know, letting us know where  
3           he stood, identified a time, so I'm trying to understand where we go with  
4           that.

5                           MR. JOHNSON: Thanks, Chairman.

6                           So we actually tried to come up with an approach that  
7           set aside criteria, criteria in the paper like policy -- resolution of policy  
8           issues. We considered for example the -- the workload that would be  
9           both new reactor workload and operating reactor workload, and a  
10          number of other criteria that we would look at, recognizing that -- that  
11          there will be a time, if you follow the current projections, where you  
12          would, in applying those -- those criteria, find the point with which we  
13          ought to move forward with kicking off the merger.

14                          I would note that Commissioner Ostendorff thought  
15          that we -- that he already figured out what that time frame was. We  
16          weren't willing to lean that far forward, I guess. But so we do have that  
17          approach. Bill, I don't know if you want to add to some of those criteria  
18          --

19                          MR. DEAN: Yes, the only thing that I would add to it  
20          is, you know, one of the factors that we talk about in the paper is, you  
21          know, sort of the combined size of the organization, so I think as we go  
22          through the budget process each year and we project, you know, what  
23          is -- what is the workload that is facing NRR, what is the workload that is  
24          facing NRO, I think that will be a key determiner in -- in terms of when is  
25          it time to seriously consider implementing the merger?

26                          I know Commissioner Ostendorff in his vote had

1 indicated the end of -- beginning of fiscal year '19 to begin. I would  
2 offer that if I was looking at my crystal ball, and if I were, you know,  
3 trying to be pinned down on a date, I would say maybe probably a year  
4 later would be the more appropriate time, given some of the significant  
5 activities that are going on, particularly with the licensing and startup of  
6 Vogtle and V.C. Summer units.

7 But, you know, the important thing that we're trying to  
8 achieve out of this is -- is if we get the Commission's affirmation, that  
9 yea, verily, NRR and NRO, you shall merger, that allows us to begin to  
10 do things now. Some of the things that were talked about earlier in  
11 terms of harmonizing processes, for example; looking at how we might  
12 exchange staff and managers, right, to cross-populate the RRPS, the  
13 Replacement RPS system; and assuring that we integrate NRO's  
14 needs into that IT system, that we can start doing those now with, you  
15 know, full confidence that yes, we're going to merge, and that's kind of  
16 what we're looking for.

17 CHAIRMAN BURNS: Okay. All right. Thanks.

18 Anne, let me talk about the -- having been put on the  
19 spot by one senator at the recent hearing with respect to an RAI -- I was  
20 able to answer it -- but what do -- and I appreciate the efforts the staff is  
21 doing in terms of to focus and tighten the RAI process, because I think  
22 it's not only a question of I think impact in industry, I think it's also a  
23 question of our focus. Are we -- and I think you all have touched on  
24 that in your presentations. Are we asking the right questions with  
25 respect to the license review? Do we have -- you know, those areas,  
26 are we hitting the gaps where we either have some uncertainties, or

1 missing items with respect to it?

2 So what I -- maybe if there is -- it may be too early, but  
3 if there is some assessment in terms of how you see it, the process  
4 going out as you go forward, whether you're seeing some progress or  
5 some positive signs in terms of where -- where things are?

6 MS. BOLAND: Yeah, I don't have statistical --

7 CHAIRMAN BURNS: Yeah.

8 MS. BOLAND: -- information for you in that regard,  
9 but I would say that the level of engagement that our project managers  
10 are having with the tech staff are effective, and then there's of course,  
11 as I indicated in the slides, additional layers of review. And so we are  
12 getting where we get to the second round of RAIs, for example, where  
13 we are determining there is really not a need for that, or we're going  
14 beyond the standard review plan, where it's really, yeah, not hitting or  
15 addressing a hole in an RAI.

16 So I would say we are making progress in that regard.  
17 We've got the PMs more engaged. The branch chiefs are engaging  
18 and asking questions, and then certainly when it gets to division-level  
19 management, you know, there is an additional barrier. So there is --  
20 there is a lot more communication and dialogue going on regarding the  
21 veracity of what's being asked and why it's being asked --

22 CHAIRMAN BURNS: Okay.

23 MS. BOLAND: -- so if that helps.

24 CHAIRMAN BURNS: Thanks for that. And maybe --  
25 oh, go ahead.

26 MR. JOHNSON: Chairman, I would just add that, as

1 we said earlier, that analogous effort is happening in -- in NRO. It is  
2 also happening in the materials and waste business line as well. So  
3 we look generically about how we can place greater management  
4 emphasis on making sure that we ask the right questions, that that  
5 process is working well, so -- .

6 CHAIRMAN BURNS: Yeah, okay. Len, very quickly,  
7 in the few moments I have left, any update with respect to TVA and the  
8 chilling effect letter or response or action in response to that?

9 MR. WERT: Well, Chairman, we continue to watch  
10 their activities. As far as an update, you know, they have definitely  
11 corrected the problem. There were some narrow scope problems  
12 within the broader --

13 CHAIRMAN BURNS: Yes.

14 MR. WERT: -- aspect. For example, the operational  
15 control center was directing the activities of license operators probably  
16 inappropriately at times. That has been corrected, and we have not  
17 seen any observations of that.

18 We're also receiving communications from the  
19 operations staff to our inspectors that they -- that they feel that  
20 managers are being more transparent and being more open and  
21 respectful in dealing with them. There have been some specific  
22 examples where TVA has deliberately not proceeded forward with  
23 some testing activities until they met with the operations staff and fully  
24 discussed problems before they moved forward, and so basically, in a  
25 nutshell, we're seeing some changed behavior, but I think the  
26 operations staff still is -- wants to make sure it's for the long haul.

1                   CHAIRMAN BURNS: Yes, I can understand.  
2                   Thanks very much. Commissioner Svinicki?

3                   COMMISSIONER SVINICKI: I was considering the  
4                   issue of advantage on one side of the table or another, and I think that  
5                   one of the disadvantages for us is that we have fewer colleagues to  
6                   cover the range of issues, and I don't think there is any meeting that we  
7                   hold annually that tees up so many high visibility issues for our agency  
8                   as a whole, as has been pointed out. This is -- this business line  
9                   consumes the bulk of our resources and the majority of our people, so if  
10                  there is something going on, it's likely to come up at this meeting, at  
11                  least in some form.

12                  I want to begin just with a high-level reaction to  
13                  everything I have heard today, and I could go down the list, and I have  
14                  this really unorganized index card of particular issues. But I think I  
15                  want to share how I hear and take in all of these different issues.

16                  It is -- we talked a lot about budgetary pressures and  
17                  other things that I -- it's not terminology that I use. I use a casting of  
18                  kind of where are we today? What are the set of issues that in my view  
19                  we should feel really solid about that we're in a really good place? And  
20                  then what are those issues that need our attention, or else they might  
21                  maybe move in directions that would be contrary to what we want?

22                  The first thing that I take away is we've talked about  
23                  where we are in terms of the developmental phase of the regulatory  
24                  response to Fukushima. For us, not for the implementers out at the  
25                  plants, necessarily, but for us, we're in a winding down phase, and  
26                  moving into inspection and ongoing activities with those measures,

1 combined also with what Jim talked about on cyber.

2 I sit here today, and I hope others do as well, really  
3 confident that because of the set of requirements that bind U.S.  
4 operating reactors, they are as safe or safer than they have ever been  
5 because of the measures that are in place today that maybe weren't  
6 here years ago when I joined this Commission, so I think that that is  
7 something that is very solid for us to kind of have as a going forward  
8 frame of reference as we address other issues.

9 But we do have this incredibly dynamic set of external  
10 environment. I think maybe I will be somewhat unique to be able to  
11 say in the time that I was with NRC, there couldn't have been a more  
12 significant sea change in the prospect of how the U.S. nuclear industry  
13 might continue to move forward. We move -- we went from a time  
14 when there was significant interest and anticipation of a lot of new  
15 reactor development in the United States to today, mentioned by at  
16 least a couple of you, was the prospect of a growing list of operating  
17 reactors moving to early plant closing, so I think that is a set of  
18 adjustments.

19 I don't so much talk about downward pressure on  
20 budgets and things like that. I think of it as a changed external  
21 dynamic, and then what I view as a very appropriate expectation that,  
22 as a government agency, we will take in and make the changes within  
23 our own operations that are appropriate to that.

24 So I know we discussed the discussion of tornado  
25 missile and whether or not that is something that would trigger a relook  
26 at some of our processes. I don't view our mission as -- well, I guess in

1 the strictest sense, it would be, but I don't think of NRC's mission as  
2 compliance with our regulations. I think of it as protecting public health  
3 and safety to a level of adequate protection. And so that's what makes  
4 this job so hard, because it is a lot of ongoing judgments based on the  
5 issues and facts and circumstances that present themselves to us: how  
6 do we keep fulfilling that mission?

7 And so when I think about tornado missile being used  
8 as an example, or tech specs as a requirement, what I hear you  
9 presenting to me is the American public expects regulatory agencies to  
10 protect public health and safety, and so whereas we assess that we are  
11 not as adaptive or agile at doing that, we are looking at ways we could  
12 possibly potentially make ourselves more active and adaptive and agile  
13 to that, and on a day like today, where the majority of the United States  
14 is experiencing a summer heat wave, and we know that because of the  
15 dynamic nature of the energy system of the U.S., the grid is stressed in  
16 certain areas, a plant needing to shut down for some requirement that  
17 we agree is not even significant enough to cause them to shut down,  
18 and then if there's potential issues with energy availability in the U.S.,  
19 well, there's your public health and safety issues.

20 People die in the heat, and that matters. So, you  
21 know, I think that my colleagues' questions about looking at tech specs  
22 and, you know, treating everyone as if it were an emergency, I think that  
23 those are very insightful and informed questions. It is my suspicion  
24 that you have been asking yourself all those same questions because  
25 I've been here long enough to know how thoroughly you vet any  
26 changes to things that are ongoing.

1                   So, you know, I think it is reasonable to arrive at  
2 different places on that, and I arrive at a circumstance of saying,  
3 consistent with Project AIM, consistent with the enduring expectation  
4 that as a regulator of something, the American people expect us to  
5 continue to assess what is happening and to make what we're doing as  
6 smart and effective of a response to that as possible, I would encourage  
7 you to move forward, but I -- you know, I -- I guess we will see.

8                   I see it as potentially having value, knowing that you're  
9 at early stages there, but again, I think in terms of priority and effect,  
10 reasonable people can differ on that. Anne has talked about a 95  
11 percent timeliness metric on 800 licensing actions. Speaking of  
12 changed circumstances, in my early years here, NRR did 1500  
13 licensing actions annually, and in some of those early years, achieved a  
14 98 percent timeliness metric.

15                   So I want to say, you know, let's not forget what we're  
16 capable of. This meeting reminded me of all of the things that we're  
17 capable of, the ways that we're innovating, even given, you know,  
18 external views that oh, NRC is ponderous and -- and it's, you know, it  
19 doesn't -- it doesn't innovate and can't be fast on its feet. That is not  
20 my experience.

21                   Decommissioning, I would -- I share some of the  
22 perspectives of Commissioner Baran, and maybe I react a little bit  
23 differently to what I heard. What I encourage the staff not to do is to be  
24 so binary about resources for the ongoing work related to perhaps a  
25 growing list of plants going into decommissioning versus competing  
26 priorities on a decommissioning rule, because I -- I think if you don't look

1 at it quite so binary, there is a case to be made that the timeliness of the  
2 decommissioning rule might be more important than ever given the  
3 changed circumstance, and some of the projections of when plants  
4 would actually prematurely shut down, there is a bit of a scatter pattern  
5 there. It spreads over a number of years.

6 So what I would ask is maybe different than my  
7 colleagues. I would ask the staff to not take off the table creative  
8 approaches that would allow us to capture maybe some rule or  
9 administrative changes to get more efficient on it while continuing to try  
10 to embrace the larger set of the broader scope rulemaking. I just  
11 encourage you to think about that because, again, it's not efficient for  
12 licensees to do the exemption process, and when that's true, it's  
13 generally true that it's not efficient for us to look again and again and  
14 again at something that meets the set of requirements, but we're going  
15 to have to do a soup-to-nuts review of every one.

16 So I think if we -- broadly, all my comments are about  
17 kind of pulling back, remembering the spirit of Project AIM, but just our  
18 spirit as a continuous learning opportunity. I have heard you talk about  
19 a lot of things you're innovating already, but I think that there continues  
20 -- there continue to be opportunities to create -- this will be my first  
21 public statement of this, but I've been calling it this in my mind -- to  
22 create NRC 2.0, which is my new thing that I think Project AIM is  
23 moving into some of the harder stages where we move beyond just  
24 looking at activities.

25 We're moving now, and NRR has been a great  
26 showcase of this today, or the operating reactor business line, we're

1 moving into the other phases of transformational initiatives, our process  
2 and structure, so we've heard NRR leaning into process and structure.  
3 Process is a number of the process improvement areas that Anne and  
4 Rob and others have talked about. Structure is leaning forward to  
5 what should the NRR 2.0 look like? What does an NRO folding into  
6 that eventually look like?

7 I may be near to Commissioner Ostendorff that, at the  
8 risk of sounding like the King of Siam, if you let it be written, let it be  
9 done, you know. I think that we are a large organization. The notion  
10 that we would grapple with it, I don't -- without a date, I am not sure. I  
11 think if we were to ask NMSS and the former FSME, they would tell you  
12 they had no Goldilocks moment when it was right to merge FSME back  
13 to NMSS.

14 But I will end with some cautions, because everything  
15 you've talked about today is very front of mind for me. I like this  
16 meeting. I think it doesn't have a sexy enough name, business line,  
17 people don't like that, so they -- they don't show up, but I think we've  
18 talked about a lot of important things today.

19 I was privileged in my time as senate staff to work for a  
20 few years for Senator John Warner of Virginia, who -- when he was  
21 Chairman of the Senate Armed Services Committee, and having been  
22 a former Secretary of the Navy, and I do this in honor of Commissioner  
23 Ostendorff since he's not here to tell a sea story, I was on the Armed  
24 Services Committee staff at a time when we were prosecuting the two  
25 concurrent wars in Afghanistan and Iraq, and the senators would  
26 routinely -- not with a lot of public notice -- but would routinely make

1 trips to the combat theater, and over, you know, three-day weekends or  
2 wherever they could fit it in on military transport, and they would come  
3 back and share their assessments.

4 And Senator John Warner, and I give his name  
5 because we currently have a Senator Warner, but it's not the Senator  
6 Warner that I'm talking about, Senator John Warner said, you know, I  
7 am a little concerned based on my recent visit that we're drifting  
8 sideways. And I never forgot that terminology -- now I think it was  
9 because he was a former Secretary of the Navy -- that drifting is not a  
10 great thing in the Navy because you want to have a purposeful  
11 movement towards a destination.

12 I think that given all of the dynamic changes, coupled  
13 externally, so the energy industry in the U.S. is in a dynamic time, we  
14 see that in the nuclear sector, we regulate, internal to us, we have this  
15 winding down of Fukushima, we have this changed circumstance  
16 externally, which makes the licensing workload forecast look very very  
17 different, and Bill Dean talked about that. NRO I think is facing this,  
18 confronting this so squarely because I know that under the leadership  
19 of Dr. Jennifer Uhle, which, again, I think one of you made mention of  
20 the fact that NRO is focusing on how we can have more safety-focused  
21 reviews and how we can bring work to completion, and I appreciate her  
22 efforts in that regard, and all of NRO. I think they are making  
23 commendable efforts there.

24 But it can create a certain anxiety, I think, with our own  
25 workforce, and that's why I want to go all the way back and end with  
26 Bill's -- Bill Dean's slide 11, which talked about using risk insights in

1 making decisions and enhancing safety focus of technical reviews. I  
2 think if I were to remember only one thing we talked about today, those  
3 items are in a nutshell I think the leadership and management  
4 challenge of every NRC manager, I think basically from the first-line  
5 supervisors on up.

6 It is hard in an agency like ours to be the person who  
7 says -- I think it is much harder than continuing to study things is to be  
8 the manager or supervisor that says I have reviewed all of this, I have  
9 listened to all of this. But at the end of the day, for reasonable  
10 assurance of adequate protection consistent with the principles of good  
11 regulation, consistent with using risk insights and making decisions and  
12 enhancing our safety focus, we will document this, and we will not find a  
13 need to take regulatory action.

14 So the things that under the broad heading of drifting  
15 sideways that -- that give me concern is the overall initiative that we've  
16 got underway, and I agree is a good one. We need to relook at our  
17 backfit requirements and where we are. We need to look closely at  
18 how and where we're invoking the compliance exception to the backfit  
19 rule, and we need to look at how is the staff going forward with a gut  
20 instinct on what the Commission considers to be adequate protection  
21 and determining that?

22 I will say that as I've asked -- continued to ask deeper  
23 and deeper questions about open phase, we have reached a point  
24 where the responses to my question -- and this is principally OGC, and  
25 I'm going to state that, I think I'm stating it fairly -- the responses to my  
26 questions are getting really tortured in the logic of this is not an

1 unreasonable view of an interpretation of what the Commission could  
2 possibly have meant.

3 The Commission is here. You can ask us. And so I  
4 encourage you to do that where you are encountering in this  
5 environment, where it's tougher to set the right calibration on things.  
6 We are here. We are open for business. We are fewer, but we are  
7 here. And so where it is a novel issue, a first impression that maybe is  
8 coming up generically for the first time -- maybe you've done a host of  
9 plant-specific issues, but as a generic matter, you're not sure if you're  
10 drawing the line in the right place -- I would encourage you to come  
11 back to us.

12 And I've run way over, but in my disconnected card, I  
13 have a way of generally hitting most of these things. A couple of final  
14 encouragements to you, not direction, just encouragements, are I like  
15 that you're looking at updating SRPs. I think we don't do that enough.  
16 I would have us -- I would propose that the agency relent on this rigid  
17 metric on updating guidance. I think for a mature regulatory system,  
18 the bang for the buck there, I don't remember if it's five years or it's  
19 office-by-office, but I think that we ought to take a much more informed  
20 approach.

21 Those resources might better be spent on updating  
22 standard review plans, on using, as NSIR is doing, frequently asked  
23 questions as a real time way to having a database, and there's all kinds  
24 of IT tools available to us now that I think -- so I'm excited about NRC  
25 2.0. I think you get a glimmer of why I think there's lots of ways that we  
26 need to do things differently. It is good for us. It is not just decline and

1 -- and Mike Johnson and I have talked about my early view of AIM, he  
2 said it's not about making NRC less than it was.

3 I think there is tremendous opportunity here, and I  
4 appreciate on GSI-191, I just want to say I have become convinced  
5 NRC is its own worst enemy on generic issues, and GSI-191 is a poster  
6 child. We continue to redefine these issues, and then we get pinged  
7 that NRC never resolves important safety issues. I think GSI-191 two  
8 previous times was closed. I think it should have been, if there was a  
9 new generic issue, it should have been opened under a new heading.

10 I know that sounds like bookkeeping, but it is actually  
11 much more important than that because we actually resolved the early  
12 issues. When I came eight years ago, it was about sump strainers. I  
13 went to Watts Bar 2 at that time and looked at it and said it's way bigger  
14 than it used to be because it was a construction site, so I ask us to think  
15 about doing better service to ourselves by -- by adopting some of these  
16 changes, so -- so I would give you a lot of latitude to think creatively.

17 And to anyone who says, well, NRC is downsizing, and  
18 that's depressing, and I had hoped to be here in five years or ten years,  
19 you know, what I would say to you is join us in creating the NRC that  
20 you want to be at in five years or ten years. I don't -- in all the time I  
21 worked at DOE, no one actively came to me and said what do you think  
22 could be improved or is stupid here, and you could do it? And so if you  
23 wanted to raise those issues, you did those at great peril.

24 I think it is liberating to work in an environment where it  
25 is actively being solicited from you, and so if you want to be here,  
26 there's going to be exciting things to work on. Nuclear may dip and

1 rise again. That seems to be its history. I don't know what's going to  
2 happen out in the larger world, but I just want us to be ready to be here,  
3 you know, adaptive and responsive and ready to go, and I think that we  
4 can look at this time as a great opportunity to do that.

5 And I am so over that I should be punished at the next  
6 meeting. Thank you.

7 (Laughter.)

8 CHAIRMAN BURNS: Well, thank you all for today's  
9 briefings. As Commissioner Svinicki said, it's a wide range of topics,  
10 and the disadvantage of the three of us is probably we didn't -- weren't  
11 able to hit some of them perhaps in depth, but I do appreciate the  
12 discussion on a couple important issues that we have -- do have before  
13 us between the -- the question on the -- this risk informing initiative, the  
14 questions on -- on backfitting, questions on organizational structure and  
15 effectiveness, and those are all important in this business line.

16 So again, I appreciate that. With that, we are  
17 adjourned.

18 (Whereupon, the meeting in the above-entitled matter  
19 went off the record at 11:19 a.m.)