

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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MEETING ON THE STRATEGIC PROGRAMMATIC OVERVIEW OF THE  
FUEL FACILITIES AND THE NUCLEAR MATERIALS USERS BUSINESS  
LINES

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TUESDAY,  
APRIL 23, 2019

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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 9:00 a.m., Kristine L. Svinicki, Chairman, presiding.

COMMISSION MEMBERS:

KRISTINE L. SVINICKI, Chairman

JEFF BARAN, Commissioner

STEPHEN G. BURNS, Commissioner

ANNIE CAPUTO, Commissioner

DAVID A. WRIGHT, Commissioner

ALSO PRESENT:

ANNETTE VIETTI-COOK, Secretary of the Commission

MARIAN ZOBLER, General Counsel

NRC STAFF:

MICHAEL KING, Director, Division of Fuel Cycle

Safety, Safeguards and Environmental Review,

Office of Nuclear Material Safety and

Safeguards

ANDREA KOCK, Director, Division of Materials Safety,

Security, State, and Tribal Programs, Office

of Nuclear Material Safety and Safeguards

JOHN LUBINSKI, Director, Office of Nuclear Material

Safety and Safeguards

PAUL MICHALAK, Chief, Agreement States Program

Branch, Office of Nuclear Material Safety and

Safeguards

JOSEPH NICK, Deputy Director, Division of Nuclear

Materials Safety, Region I

JAMES RUBENSTONE, Chief, Material Control &

Accounting Branch, Division of Fuel Cycle

Safety, Safeguards and Environmental Review,

Office of Nuclear Material Safety and

Safeguards

LaDONNA SUGGS, Director, Division of Fuel Facility

Inspection, Region II

STEVEN WEST, Deputy Executive Director for

Materials, Waste, Research, State, Tribal,

Compliance, Administration and Human Capital

Programs

A. DUNCAN WHITE, Office of Nuclear Material Safety

and Safeguards

## P R O C E E D I N G S

(9:13 a.m.)

CHAIRMAN SVINICKI: Good morning, everyone. And I call the Commission's meeting to order. This is a very quiet, it's like walking into church. Everyone is very, very quiet in here, and, by the sound of my voice, it's obviously I'm struggling a bit under this difficult spring cold and allergy season that a lot of people have. So if I need to step out, I've told Commissioner Baran he'll just recognize the next speaker for me if I have a coughing spasm of some kind so as not to disrupt the proceedings.

But I was very, very determined to be here today. First of all, we will convene to hear about a strategic programmatic overview of the fuel facilities and the nuclear materials users and nuclear materials users business lines, which is one in a series of what we call business line meetings that we do over the course of a year where we do a kind of medium to deep dive on some very important programmatic areas of the agency's work. I always really value and benefit from these discussions. It's an opportunity, it's a departure from our topical meetings and an opportunity for us to look closely at any kind of possible kind of modifications or shifting in priorities that the agency needs to do in this work and for the Commission to hear the status of all of the agency staff's really hard work on these programs that they're doing kind of day to day that we might not be deeply enmeshed in.

So I always benefit from these proceedings, but the reason that this meeting, it takes on a significant historic importance, of course, is that I know, and he just said, oh, jeez -- his mic is off but I heard it -- is that this morning is the last public convening of the Commission with the five members of which it's currently comprised, and that has to do with the fact that our

1 colleague, Commissioner Stephen Burns, well, this is the last time we will sit  
2 in public session as this five-member commission or as a five-member  
3 commission until the president and Senate should send us a new colleague  
4 to fill the seat that he currently occupies. But I know there have been various  
5 kind of tributes and commemorations, and everyone knows Steve, not just  
6 because of his dedicated service as a chairman of this Commission as a  
7 longstanding colleague to those of us who sit here today and others with whom  
8 he served on the Commission, but, of course, I first knew him as deputy  
9 general counsel. He had long service as general counsel and also just an  
10 extensive career with the agency. And we often think about what is it that we  
11 think signifies really having given of yourself in a way that is substantive and  
12 meaningful, and one of the metrics that I use is do you carry out the door with  
13 you the deep respect and esteem, and I'll say it, in Steve's case, the affection  
14 of so many people with whom you've worked day to day. And I think any one  
15 of us who could walk out of this building on our last day with even a small  
16 measure of the amount of affection and esteem and respect that our  
17 colleague, Steve Burns, has from everyone throughout the agency, we would  
18 be very successful indeed.

19 So, Steve, it's been wonderful to serve alongside you. And  
20 one of the things, amongst many, that we've shared is that you have a deep  
21 appreciation of the history of this agency, of the Commission, of our  
22 precedents and policies, and I know I've picked up some really, really useful  
23 nuggets about that over the years from you. You're always such a resource  
24 on such things, but I would open the floor if any other colleague would like to  
25 say anything. Commissioner Baran?

26 COMMISSIONER BARAN: Well, that was beautifully said.

1 Steve, I also want to thank you for your really decades of service to the  
2 agency. Kristine, we talked about Kristine setting records, you know,  
3 recently, and she may have the record for the longest tenure on the  
4 Commission, but you surely have the record for the commissioner with the  
5 longest total tenure at the agency.

6 I've been here, I've been here now four and a half years, but  
7 I was thinking about this and I've only been here for the last ten percent or so  
8 of your time at the agency, which means you've been here a really long time.  
9 But the time I've been here with you is long enough to appreciate just the  
10 integrity and the experience and the understanding of the history that you bring  
11 to all your work, both as chairman and as a commissioner. So all the best to  
12 you and Joan on your second attempt at retirement.

13 COMMISSIONER CAPUTO: I wish you the best. I think  
14 I've reached the age where I'm always a little bit jealous to see someone head  
15 off into retirement. I hope you have lots of fun planned to make up for your  
16 many, many years of service. It's a well-earned retirement, and I will dearly  
17 miss your experience with the agency and your legal expertise, and they have  
18 been just really valuable to me in my first year here. Thank you.

19 COMMISSIONER WRIGHT: So the definition of retired is  
20 actually tired again. So I just want to tell you I'm going to miss you. You've  
21 been a lot of fun to get to know. You actually represent a lot of what's going  
22 on with the loss of knowledge and expertise that we're seeing across the whole  
23 industry, and your 40 years and what you've been able to do here at the NRC  
24 in your different, you know, positions, I mean, you're within the fabric, you are  
25 the fabric of, you know, the NRC and you've got so many people here that  
26 you've mentored who are working for me and working for others and are

1 working in the business lines throughout the agency. So your imprint, what  
2 you've done here is just incredible. It's amazing, and thank you for your  
3 service.

4 CHAIRMAN SVINICKI: Did you want to say anything,  
5 Steve? You kind of have to now.

6 COMMISSIONER BURNS: Yes, I kind of have to. I didn't  
7 prepare anything. I'd like to thank you all for those kind remarks and  
8 particularly the Chairman sort of reflecting on, as they say, of us at the table,  
9 we've sort of served a long time, but, you know, obviously, I was in different  
10 roles. I said to others that, you know, when I came into the agency in 1978  
11 after graduating from law school and taking the bar, I really didn't expect I  
12 would spend my entire career here. But I really enjoyed the work. I enjoyed  
13 the people. I look back on that time, you know, particularly post Three Mile  
14 Island in terms of the agency and what it came to grips with and I think really  
15 did well in retrospect, it's been sort of interesting reflecting on that in the last  
16 year and talking with Tom Wellock, our agency historian, about some of those  
17 things and some other things, serious and some of them not so serious, which  
18 is I think also the good mark of fun at work and accomplishment there. We  
19 don't take ourselves too seriously, you know, just on those things that are  
20 important that we try to achieve, you know, our best vision of what public  
21 health and safety, what the common defense and security are. I think,  
22 overall, we do that very well.

23 And we talk about now transformation. I talked about it as  
24 reformation. We've talked about learning organizations, and probably some  
25 of us have been around and we can hear those different phrases from over  
26 the years. But they do, I think, signify this willingness to keep taking a hard

1 look at ourselves and moving forward.

2 So as they say, I wish everyone well. I wish the agency  
3 well as we proceed into the future. Thanks.

4 CHAIRMAN SVINICKI: Well, thank you very much. And  
5 with that, the staff has had a little more time to collect their thoughts. But,  
6 again, now we will begin the official purpose of the day with the business line  
7 briefings that we are prepared to have.

8 We will hear from the staff in two separate panels on each  
9 business line, but in both cases we will be led off by Mr. Steve West, who is  
10 here on behalf of the Executive Director for Operations today. But his  
11 24/7/365 title is Deputy Executive Director for Materials, Waste, Research,  
12 State, Tribal, Compliance, Administration, and Human Capital Program, so  
13 he's a busy guy. Steve, please lead us off through the staff's presentation.  
14 Thank you.

15 MR. WEST: Thank you very much. Good morning,  
16 Chairman Svinicki and Commissioners. It's great to be a part of this historic  
17 Commission meeting. And on behalf of the Executive Director for Operations  
18 and our office, I'd like to express on behalf of the staff our deep gratitude for  
19 your many years of service and your support during your time here at the NRC.  
20 We will also miss you.

21 We appreciate the opportunity to provide you with an update  
22 on the strategic considerations associated with the fuel facilities and the  
23 nuclear materials users business lines, including current activities, business  
24 line priorities, emerging focus areas, challenges, and the changing  
25 environment in which these programs are executed.

26 As the Chairman mentioned, today's briefings will be



1 provided in two panels, beginning with the fuel facilities business line. Both  
2 business lines are led by the Office of Nuclear Materials Safety and  
3 Safeguards, or NMSS. As you will hear these business lines are working on  
4 diverse issues that involve significant stakeholder engagement.

5 With respect to the fuel facilities business line, several NRC  
6 offices have a role in carrying out its functions. These partners include  
7 Region II, the primary regional office with responsibility for implementing the  
8 fuel facility inspection program, the Offices of Nuclear Security and Incident  
9 Response, Enforcement, International Programs, New Reactors, Nuclear  
10 Reactor Regulation, and General Counsel. The strong relationships between  
11 the business line partners are essential to achieving success and addressing  
12 the challenges in a changing environment.

13 Over the past year since our last briefing, there have been  
14 substantive changes in both the domestic and international fuel cycle industry.  
15 Some of those changes include the decision to terminate construction of the  
16 mixed oxide fuel fabrication facility, a decrease in the number of licensing  
17 actions submitted by existing fuel cycle facilities, and a greater than critical  
18 mass facilities, the decision by Honeywell Metropolis to idle production and  
19 the relatively low overall domestic demand for uranium.

20 Commensurate with the industry's changes, the fuel  
21 facilities business line has taken effective and timely action to better risk inform  
22 our activities. Examples of these include staff training on backfitting and how  
23 to resolve safety issues within the context of the licensing basis, continue  
24 improvements to the core inspection program, efficiencies gained in licensing  
25 reviews that resulted from our revising our internal guidance, and a  
26 restructuring of our internal organizations to better align with the changing

1 workload specifically with the Division of Fuel Cycle Safety, Safeguards, and  
2 Environmental Review, or FCSE, in NMSS, and the Division of Fuel Facility  
3 Inspection, or DFFI, in Region II.

4           Within the business line, we are maintaining our readiness  
5 to support the current fleet of fuel facilities while more proactively planning and  
6 prioritizing activities to ready ourselves for a future external environment that  
7 has many uncertainties. We continue to monitor industry indicators and  
8 when the pace of the developing technologies, such as medical isotope  
9 production, accident tolerant fuel, and fuel fabrication for advanced reactors.

10           Lastly, we continue to improve the effectiveness and  
11 efficiency of our programs and processes. As an example, the business line  
12 continues to focus on risk informing fuel facility licensing and oversight  
13 programs. To further improve the transparency of our fees, FCSE recently  
14 conducted a self-assessment of the processes and tools for managing non-  
15 fee billable work performed by the business line.

16           Additionally, we continue to look for improvement  
17 opportunities in the area of fuel cycle safety or fuel facility safety, including  
18 actions to enhance and sustain a culture that embraces transformation at the  
19 NRC.

20           Looking to the future, we seek to build a smarter way to  
21 safety. Together, we will continue to focus on our mission, implement  
22 strategies to address current challenges, leverage tools such as strategic  
23 workforce planning, and identify areas for innovation and transformation.  
24 These topics will be discussed in the upcoming presentations.

25           Our first speaker will be John Lubinski, the recently-  
26 appointed Director of NMSS, who will provide an overview of the fuel facilities

1 business line. Following John's presentation, we will hear from Mike King,  
2 Director of the Division of Fuel Cycle Safety, Safeguards, and Environmental  
3 Review, who will discuss the current fuel cycle program environment. After  
4 Mike, LaDonna Suggs, Director of the Division of Fuel Facility Inspection in  
5 Region II will discuss the fuel cycle inspection program activities.

6 We will end the first panel with Jim Rubenstone, Chief of the  
7 Material Control and Accounting Branch in FCSE. And Jim will provide an  
8 update on the International Atomic Energy Agency safeguards activities.

9 With that introduction, I'll now turn the presentation over to  
10 John.

11 MR. LUBINSKI: Thank you, Steve. Good morning,  
12 Chairman, Commissioners. If I could have slide five, please.

13 The business line is responsible for ensuring the safety and  
14 security of fuel cycle and greater than critical mass facilities. The business  
15 line leads the licensing and oversight of these facilities, as well as domestic  
16 material control and accounting and international safeguards implementation  
17 activities for the NRC. Additionally, the business line supports rulemaking  
18 and environmental review activities.

19 The business line priorities influence the work performed on  
20 a day-to-day basis, as well as long-term planning and agency budget  
21 formulation and execution. Starting this fiscal year, the business line  
22 priorities expanded to include ensuring readiness for the review of applications  
23 and/or amendments for alternate fuel designs in order to support accident  
24 tolerant fuel and advanced reactor designs. It also includes performing  
25 reviews for new technologies and medical isotope production.

26 We will work with the other NRC business lines on emergent

1 issues surrounding these activities. This includes transportation of high  
2 assay fuel designs which is part of another NMSS business line.

3 Consistent with previous years, the business line priorities  
4 include ensuring the safety and security through effective oversight of the  
5 operating fuel facilities and facilities under construction, supporting U.S.  
6 nonproliferation activities from implementation of international safeguards and  
7 domestic material control and accounting, and maintaining effective  
8 communication with our stakeholders.

9 The scope of activities in the business line includes the  
10 licensing and oversight of 11 fuel cycle licensed fuel facilities in the United  
11 States. Six of these are operating, three are licensed and construction is  
12 pending. One facility is in the final stage of decommissioning, and one facility  
13 has idled production. In the last year, we terminated a special nuclear  
14 material license for one facility that was licensed but not constructed and  
15 terminated the construction authorization for another facility that was under  
16 construction. We also provide licensing and oversight for 12 licensees to  
17 possess greater than critical mass of special nuclear material, such as  
18 universities, research, and test facilities.

19 From a budget perspective, the business line is comprised  
20 of 96 full-time equivalent, or FTE, and \$5.5 million in contract support and  
21 travel, excluding corporate support resources. The 96 FTE represents about  
22 2.6 of the agency's total FTE budget. The majority of the resources reside in  
23 the oversight, licensing, and international activity product lines.

24 We continue to proactively manage resources in response  
25 to the changing environment. Over the past decade, the work within the  
26 business line has significantly changed. As a result, we made corresponding

1 budget adjustments, as you can see on this slide. The graph on this slide  
2 provides a historical overview of the enacted budget since 2012.

3 You can see the FY 19 budget includes a resource reduction  
4 that resulted in, roughly, 7.4 percent reduction in annual fees across the fuel  
5 facilities fee class. The decrease in annual fees is a result of the budget  
6 resources decreasing by \$5.2 million or about 15 percent in comparison to FY  
7 2018.

8 Even with these resource reductions, we continue to look for  
9 efficiencies in licensing and inspection programs. We considered the  
10 changing environment of the work during the development of the FY 20  
11 proposed budget and in the formulation of our FY 21 budget and our  
12 continuing efforts to align the agency's activities with workload projections.

13 We have a focus on continuing to risk inform our activities.  
14 We recognize the need for systematic and expanded use of risk and safety  
15 insights in our decisionmaking. For licensing decisions, this includes  
16 appropriately scaling the scope of the staff review and the level of detail  
17 needed from an applicant while still meeting NRC regulations and achieving  
18 reasonable assurance of adequate protection.

19 In January of this year, my predecessor issued a memo to  
20 NMSS staff on the key principles for conducting NMSS reviews. I support  
21 this memo which reiterated some of the key principles that guide the manner  
22 in which we conduct our work and make decisions and provided additional  
23 information to support the shared understanding of expectations on what  
24 constitutes reasonable assurance of adequate protection.

25 In addition, the memo reinforces expectation that staff  
26 reviews achieve the following: First, staff resources and expertise are focused

1 on the most safety significant portions of a licensing decision. Second, the  
2 staff efforts are focused on reaching adequate protection or other regulatory  
3 conclusions based on reasonable assurance with respect to system  
4 performance rather than at an individual component level. And, third, the  
5 staff are enabled to acknowledge that a new technology may be safer than an  
6 existing technology, although operating experience with the new technology  
7 may be lacking.

8 It should be noted that this memo is an initial step towards  
9 risk-informing our decision making and that the memo is not unique to this  
10 business line.

11 Consistent with these goals, we recently launched an  
12 initiative to identify additional ways to better risk inform our licensing process  
13 in the fuel facility area. We invited the public and industry to provide feedback  
14 on the scope of the effort and to contribute ideas. NEI has already provided  
15 some initial comments and we will consider them along with additional input  
16 from members of other stakeholders, including the public, through a series of  
17 public meetings.

18 Some notable changes that were considered being included  
19 are improvements on how we, 1) make decisions on which areas to focus our  
20 reviews are getting more attention or less attention and why; 2) monitoring our  
21 progress against resource and schedule estimates and taking action when  
22 needed; and, 3) communicating the necessity and relative importance of  
23 request for additional information.

24 We intend to complete the initiative by the end of this fiscal  
25 year and implement changes early next year. However, we will not wait to  
26 implement quick wins to improve efficiency or effectiveness, as they may be

1 identified along the way.

2 With regard to improving efficiency and effectiveness,  
3 Headquarters and Region II recently implemented changes to their  
4 organizational structure in response to decrease in workload and budget  
5 resources across the business line. These changes eliminated three  
6 supervisory positions and increased the average staff to supervisory ratio. In  
7 addition, we will inform the Commission of NMSS reorganization we plan to  
8 implement at the beginning of FY 20.

9 This concludes the program overview, and I will now turn to  
10 Mike King who will discuss the current environment for fuel cycle programs.

11 MR. KING: Thank you, John. Good morning, Chairman,  
12 Commissioners. I'll be providing you an overview of significant fuel facilities  
13 business line activities from the past year in the area of licensing and  
14 oversight, highlight a few significant programmatic activities that have resulted  
15 in enhancements to these programs, describe some key stakeholder outreach  
16 activities, and finally highlight some forward-looking activities we're embarking  
17 upon to help the business line build a smarter way to safety together.

18 We continue to effectively implement our licensing and  
19 oversight programs for fuel cycle facilities by performing timely licensing  
20 reviews and conducting oversight activities in a manner consistent with current  
21 guidance while successfully achieving all of our metrics. This graph provides  
22 both the historical overview of the number of licensing actions completed by  
23 the fuel facilities business line, as well as a projection of the number of  
24 licensing activities. There has been an overall decrease in the workload in  
25 recent years.

26 In fiscal year 2018, we completed a total of 39 licensing

1 actions, which range from simple licensing actions, such as amendment  
2 request to change a licensee's name to more complex actions like significant  
3 changes to systems or security modifications. Some notable examples of  
4 these licensing actions include issuing a special nuclear materials license for  
5 the Johns Hopkins University Applied Physics Laboratory. This new license  
6 allows Johns Hopkins to possess and use special nuclear material in  
7 quantities greater than critical mass for analytical or scientific research and  
8 development to support testing of nuclear detection technologies. We also  
9 issued an order to Westinghouse approving an indirect transfer of control for  
10 NRC materials and export licenses held by Westinghouse as a result of their  
11 voluntary bankruptcy.

12 So far this fiscal year, we've completed a total of 28 licensing  
13 actions, including termination of the construction authorization for the mixed  
14 oxide fuel fabrication facility in February of this year. I'd like to highlight that  
15 we've also made significant progress on the review of two license renewals,  
16 specifically for the Westinghouse Columbia fuel fabrication facility and the  
17 Honeywell Metropolis facility. The environmental assessment for the  
18 Westinghouse license renewal was reopened following receipt of updated  
19 information on 2018 on the number of leaks at the facility. We requested the  
20 additional environmental protection information necessary to conclude our  
21 licensing renewal review and are currently evaluating the response.

22 With regards to the Honeywell renewal, we have developed  
23 a draft safety evaluation report and are awaiting the response to a recent  
24 request for additional information. Additionally, the staff is evaluating public  
25 comments that were received on the draft environmental assessment.

26 We anticipate completing the review of these renewals in



1 early calendar year 2020. I should note that we do not anticipate another  
2 license renewal for a major fuel facility until 2027.

3 Currently, we continue to manage our licensing program,  
4 meet the needs of our licensees, and deliver licensing actions on time with no  
5 backlog. Moving forward, based on the known and anticipated workload, we  
6 expect that the volume of licensing actions will remain near 2018 levels.

7 Although we do not expect any major license applications  
8 for new facilities until fiscal year 21, we continue to support the agency's effort  
9 to engage with the Department of Energy and industry to ensure we will be  
10 ready for future reviews of new fuel types for existing and advanced reactors.  
11 Given the evolving external environment, we are emphasizing the importance  
12 of communications with our external stakeholders. Frequent and early  
13 communications of future plans allows us to create a more accurate budget,  
14 ensure we have the required technical skills, and allocate sufficient supporting  
15 resources to be ready where and when needed.

16 In the area of licensing, over the past year we successfully  
17 achieved all our program objectives and metrics. However, we recognize a  
18 need to continue to assess and improve our licensing and oversight programs.

19 We have continued to perform internal process reviews to  
20 improve the effectiveness and efficiency of our program and have initiated  
21 actions to implement the identified enhancements. First, we conducted a  
22 comprehensive review and update to our internal licensing review handbook,  
23 which was issued in November of last year. The handbook provides  
24 guidance to the staff for completing various licensing-related actions and  
25 activities. The effort requires significant coordination between our staff and  
26 other internal stakeholders.

1                   As part of this update, we implemented recommendations  
2                   from a self-assessment we conducted in fiscal year 2018 of our process for  
3                   evaluating safety evaluation reports, or SERs. The self-assessment  
4                   benchmarked our processes against existing procedures and processes used  
5                   by other NRC organizations. We evaluated SERs that were developed  
6                   during the last three years. As a result, we identified opportunities to clarify  
7                   roles and responsibilities for the reviews, improve consistency of the format of  
8                   SERs, improve the coordination between project managers and technical  
9                   reviewers, and approve the documentation of meeting outcomes that inform  
10                  the development of SERs. This latest update to the licensing review  
11                  handbook is expected to significantly enhance the quality, timeliness, and  
12                  consistency of staff-generated licensing documents and implementation of  
13                  management expectations for licensing actions.

14                  Second, we issued a memorandum providing expectations  
15                  and guidance for tracking staff hours. Staff implementation of this guidance  
16                  will enhance our ability to monitor and align our resources in response to an  
17                  increasingly dynamic environment. Building upon this, we also recently  
18                  completed a self-assessment of the processes and tools we used for  
19                  managing resources expended on non-fee billable work provided by NRC staff  
20                  within the business line. This assessment evaluated the adequacy of work  
21                  controls and our effectiveness of implementing those controls.

22                  Key recommendations of the assessment included creating  
23                  and reviewing easily-accessible reports of non-billable charges to the  
24                  business line, maintaining closer oversight of resource management and non-  
25                  billable projects, and conducting an annual review of the mapping of cost  
26                  activity codes to business line products. Although we're still in the early

1 phases of implementing some of these changes, we are optimistic they will  
2 provide better planning prioritization and management of future initiatives  
3 within our business line, increased transparency of our annual fees, potential  
4 opportunities for our stakeholders to weigh in on the priority of those initiatives,  
5 and tools that demonstrate consistency with the NMSS Adequate Protection  
6 Memo and the NRC's Principles of Good Regulation.

7           Lastly, to promote continuous improvement within the  
8 licensing program and to enhance knowledge management within the  
9 business line, we conducted several licensing seminars with staff on key  
10 topics, including counterintelligence, licensing metrics, receipt of new  
11 licensing actions, request for additional information, safety evaluation reports,  
12 and web-based licensing.

13           In the area of oversight, LaDonna Suggs will highlight  
14 specific accomplishments associated with our implementation of the oversight  
15 program when she speaks. I'll take this opportunity to highlight a number of  
16 important changes that we've made to our oversight program that are aimed  
17 at improving its effectiveness and efficiency.

18           For 2018, we conducted a review of operational events at  
19 our fuel cycle operating -- as part of our Fuel Cycle Operating Experience  
20 Program, or OpE Program. The recently completed report provides an  
21 analysis of events over the past 11 years from 2007 to 2018. As part of the  
22 OpE Program, we categorize, analyze, and identify any recurring issues of  
23 safety significance that might merit changes to the inspection program.  
24 Based on the results of the OpE assessment, licensees' criticality and  
25 operational safety programs continue to be focus areas for the inspection  
26 program for 2019. Specifically, our focus includes how effective fuel facility

1 licensees are at establishing management measures for items relied on for  
2 safety, identifying problems, and implementing appropriate corrective actions.

3 In addition to developing the annual OpE report, we  
4 continue to share information with our international counterparts through our  
5 participation in fuel incident notification and analysis system. We are also  
6 continuing to engage in information exchanges with Nuclear Regulatory  
7 Authority of Japan and the Canadian Nuclear Safety Commission.

8 Over the years, self-assessments have routinely been  
9 conducted and are an important part of the inspection program. In  
10 recognition of this, we issued a new inspection manual chapter which  
11 formalized an annual self-assessment and feedback process for our  
12 inspection program. This process periodically assesses how effective the  
13 oversight program is in identifying safety, safeguards, and regulatory  
14 performance issues, maintaining technical adequacy and consistency with  
15 established agency technical positions, and complete and timely  
16 implementation of the program.

17 The initial self-assessment under this new program will  
18 conclude in early calendar year 2020 and the results will be shared with you  
19 at the subsequent agency action review meeting.

20 Lastly, we're launching an important initiative to evaluate our  
21 existing suite of safety and safeguards inspections to identify potential  
22 enhancements to make the programs more performance-based and risk-  
23 informed. We're evaluating operating experience and enforcement data to  
24 determine whether we are applying the appropriate focus on areas with  
25 demonstrated performance problems, as well as areas that provide the  
26 greatest safety benefit.

1                   As part of this effort, we're asking ourselves and our  
2 stakeholders if there's a smarter way to accomplish these inspections.  
3 Stakeholder engagement is an important component of this effort, so a  
4 sequence of public meetings will be held in order to provide sufficient  
5 opportunities for the public and industry to share their perspectives. Through  
6 this process, we anticipate programmatic changes that will make our  
7 inspection effort more effective and efficient while also making it more risk  
8 informed.

9                   In addition to focusing our licensing and oversight programs,  
10 we continue to improve regulatory activities through stakeholder outreach.  
11 First, we led the F201 fuel cycle process training class in September of last  
12 year. This annual class is open to NRC staff and other federal government  
13 employees to support continuous interagency collaboration, such as DOE  
14 employees associated with the development of maintenance activities for the  
15 nuclear materials management and safeguards system. This course  
16 provides an overview of the nuclear fuel cycle from uranium mining to fuel  
17 fabrication to spent fuel storage, as well as the associated regulations. This  
18 year, in addition to NRC participants, there were five participants from the  
19 DOE. The five-day course is taught every fall and is revised each year based  
20 on student comments. We will continue to fine-tune the course syllabus each  
21 year to ensure that future students are getting the most relevant information  
22 out of the class and that it supports our goal of increasing the consistency of  
23 program implementation.

24                   Second, after coordinating with external stakeholders, we  
25 successfully conducted five sessions at the 2019 Regulatory Information  
26 Conference, or RIC, instead of conducting our normal biannual fuel cycle

1 information exchange. This change resulted in a more efficient use of NRC  
2 staff resources. Preliminary feedback from industry stakeholders indicates a  
3 need to consider if the RIC is the most effective venue for this information  
4 exchange. We will evaluate the success of presenting fuel cycle topics at the  
5 RIC and continue to consider and solicit stakeholder feedback on the  
6 appropriate forum for future exchanges of information.

7 Lastly, we continue to manage the accumulative effects of  
8 regulation by compiling integrated time lines for regulatory issues and  
9 conducting biannual public meetings with licensees and other potentially  
10 impacted stakeholders. During these meetings, the NRC staff provides  
11 updates on the status of NRC activities and seeks feedback on the timing and  
12 resource implications of our activities.

13 Our CER efforts have improved the efficiency of how we  
14 develop regulations and guidance and have helped focus licensee resources  
15 on the most risk significant issues. Overall, we've received positive feedback,  
16 but these interactions continue to be an effective way to keep stakeholders  
17 aware of ongoing activities, help prioritize activities and resources, and  
18 provide relevant training on the nuclear fuel cycle.

19 In closing, we're focused on ensuring the safety and security  
20 of fuel facilities through effective licensing and oversight and by supporting  
21 U.S. nonproliferation activities. The business line is implementing strategies  
22 to address the current business line challenges and future opportunities.  
23 Moving forward, this entails implementing strategies to better risk inform the  
24 licensing inspection program, continuing to modernize our decision making,  
25 and preparing for medical isotope, accident tolerant fuel, and advanced  
26 reactor licensing activities.

1                   Together, as we build a smarter way to safety, we will  
2 remain focused on maintaining the safe and secure operation of fuel cycle  
3 facilities.

4                   This concludes my part of the presentation. I'll now turn it  
5 over to LaDonna Suggs, who will discuss the fuel cycle oversight program.

6                   MS. SUGGS: Thanks, Mike. Good morning, Chairman,  
7 Commissioners. My presentation will focus on the fuel cycle inspection  
8 program. In my presentation, I'll highlight several accomplishments, ongoing  
9 activities and initiatives and focus areas for the implementation of the  
10 inspection program.

11                   The fuel facilities business line inspection program plays a  
12 key role in securing the safe and secure operation of fuel cycle facilities and  
13 ensuring public trust and confidence through effective implementation of  
14 comprehensive inspections and proactive outreach with external  
15 stakeholders. We completed the fuel cycle facilities core inspection program  
16 in 2018 which included conducting approximately 54 core inspections, one  
17 event follow-up inspection related to an unexpected accumulation of uranium  
18 at the Global Nuclear Fuels-Americas facility and one supplemental inspection  
19 focused on corrective actions associated with the unidentified accumulation of  
20 material in a glove box ventilation desiccant purification system at the BWXT  
21 Nuclear Operations Group facility.

22                   These activities were comprised of multiple inspection  
23 procedures at each of the operating facilities, including information security.  
24 The core inspection program for Honeywell Metropolis Works was modified  
25 because of the facility's decision to temporarily cease operations due to  
26 uranium market conditions. In an effort to better risk inform our oversight, we

1 reduced nominal inspection efforts to a level commensurate with the  
2 applicable radiological hazards of the facility.

3 Additionally, we completed supplemental inspections to  
4 evaluate the significant event at the Westinghouse Columbia fuel fabrication  
5 facility that we discussed in great detail in our previous business line briefing.

6 A confirmatory order was issued on August 9th, 2018 as a  
7 result of alternative dispute resolution. Based on our assessment, we  
8 concluded that the licensee has shown progress during the year in the areas  
9 of safety culture, management measures, and criticality safety evaluations.  
10 We will continue to inspect the remaining open confirmatory order items which  
11 include plant modifications, implementation of additional monitoring methods,  
12 and conduct of an independent nuclear safety culture survey.

13 The Westinghouse Columbia facility also notified the NRC  
14 of an event related to its hydrochloric acid spiking station. Regional  
15 inspectors immediately engaged the licensee and conducted timely and  
16 thorough review of the event, the licensee's response, analysis, and  
17 associated corrective actions.

18 Given the low safety significance, the event resulted in a  
19 Severity Level IV violation. However, there was considerable interest from  
20 the public and local elected officials regarding the potential environmental  
21 impacts. The timing of the event also intersected with ongoing environmental  
22 reviews associated with the license renewal activities.

23 The region collaborated with the program office to develop  
24 a detailed communications plan which included developing frequently asked  
25 questions and answers related to the event, holding public meetings in the  
26 local community, and providing detailed information on the NRC's public



1 website.

2                   Region II government liaison officers also led efforts to  
3 engage state partners at South Carolina Department of Health and  
4 Environmental Control, or South Carolina DHEC. These efforts included  
5 periodic phone calls with the regional administrator and Region II senior  
6 management to discuss concerns, explain roles and responsibilities, and  
7 answer questions. Personal invitations to attend NRC public meetings  
8 related to Westinghouse and NRC joint participation in public meetings led by  
9 South Carolina DHEC and local officials. Our outreach to the local  
10 community, state partners, and local officials is an ongoing effort.

11                   Our next meeting with local officials is scheduled for the  
12 week of May 6th and will coincide with the Westinghouse Licensee  
13 Performance Review meeting. We will meet with the newly-elected  
14 councilwoman, Chakisse Newton, of District 11 and Councilwoman Dahli  
15 Myers of District 10. This level of engagement fosters transparency and  
16 builds public trust and confidence in our safety and security and environmental  
17 protection mission.

18                   The picture on the top left corner of the slide is our former  
19 senior resident inspector at BWXT, Charlie Stancil, conducting an inspection  
20 of licensee activities at that Category 1 facility. The top right corner of the  
21 slide is a photo of a senior projects inspector for the Westinghouse Columbia  
22 fuel fabrication facility, Tom Vukovinski, speaking at one of the public meetings  
23 held in Richland County, South Carolina to discuss the environmental  
24 concerns.

25                   This meeting was organized by local government officials  
26 and hosted by South Carolina DHEC. The NRC was invited to participate,

1 and Region II inspectors, public affairs, and government liaison staff  
2 supported the meeting. As you can see from the picture along the bottom of  
3 the slide, the meeting was very well attended by members of the public.

4 We also continue to proactively identify and implement  
5 strategies to gain efficiencies and transparency in the inspection process and  
6 optimize organizational effectiveness. We enhance the core inspection  
7 program to include a focus area matrix which ensures that risk significant  
8 areas of a facility are sampled and integrated into core inspection activities as  
9 part of the inspection program at least once every five calendar years.

10 To better determine if licensees have reviewed cumulative  
11 impacts of system changes, a triennial in-depth inspection has replaced the  
12 annual modifications inspection. And for our Category 1 facilities, the annual  
13 fire protection and operations inspection have been shifted to the senior  
14 resident inspectors, gaining regional efficiency and travel savings from  
15 regional inspectors.

16 In addition, DFFI has enhanced the licensee performance  
17 review process by developing criteria and guidance to conduct as-needed  
18 inspection program adjustments to address plant performance. We will also  
19 pilot conducting licensee performance review public meetings in a poster  
20 session open-house format to allow for more transparency into our  
21 assessment process and allow members of the public the opportunity to  
22 engage in one-on-one discussions with NRC technical staff on licensee  
23 performance or topics of interest.

24 As John mentioned, from an organizational effectiveness  
25 perspective, we implemented a divisional reorganization to better position the  
26 division to achieve agency goals and improve our staff-to-supervisory ratio.

1 The new structure realizes some savings in human capital, significantly  
2 improves the staff's management ratio, and better aligns the organization to  
3 achieve agency goals.

4 Borrowing from the Seven Habits of Highly Effective People  
5 by Franklin Covey, a world-renowned expert in organizational effectiveness,  
6 we must never become too busy sawing to take time to sharpen the saw. The  
7 division continues to engage and develop our greatest asset: our people. We  
8 focus on technical and leadership knowledge management, strong  
9 collaboration with program offices, and embrace available technology to work  
10 more efficiently.

11 Some specific examples include continuing to leverage  
12 cross-office communities of practice in the disciplines of material control and  
13 accounting, criticality safety, information security, and radiation protection to  
14 maintain the engineering and scientific knowledge base and bolster technical  
15 credibility. We also collaborate with our partner offices in the development of  
16 the fuel cycle annual operating experience report authorized by FCSE and  
17 incorporate insights to identify trends and best practices and inform inspection  
18 planning and implementation efforts.

19 We support a robust telework program and the majority of  
20 our staff maintain a virtual presence in the office and working remotely. We  
21 leverage available technologies, such as Skype, instant messaging, and video  
22 conferencing for knowledge management sessions, one-on-one meetings,  
23 and branch and division meetings to share seamless communications, and  
24 we're working to transition many of our business processes to the Office 365  
25 to facilitate even stronger collaboration.

26 Finally, we continue to encourage and support inspector

1 cross-qualification in several areas of fuel facility inspection and other  
2 business lines which strongly aligns with the region and agency efforts for  
3 strategic workforce planning.

4 As Mike mentioned, we, too, will continue to focus on our  
5 mission, implement strategies to address current challenges, and identify  
6 areas for innovation and transformation as we proactively plan for future  
7 opportunities.

8 This concludes my part of the presentation. I'll now turn it  
9 over to Jim Rubenstone.

10 MR. RUBENSTONE: Thank you, LaDonna. Good  
11 morning, Chairman and Commissioners. I will be presenting to you an  
12 update on activities related to the agency's international safeguards mission.

13 Within the fuel facilities business line, we continue to lead  
14 the implementation of international safeguards at NRC licensed facilities in  
15 order to fulfill the U.S. obligations to the IAEA and to our foreign partners.  
16 The implementation of international safeguards in the U.S. includes activities  
17 that derive from U.S. agreements with the IAEA and from bilateral agreements  
18 with our nuclear trading partners for the tracking and control of source and  
19 special nuclear material for peaceful uses.

20 The NRC is one of several key U.S. government agencies  
21 with responsibilities in this area, including the Departments of State, Defense,  
22 Commerce, and Energy. The NRC is concerned with nuclear material and  
23 equipment that is used in the fuel cycle by our licensees. We work with the  
24 federal partners through multiple interagency committees at the NRC. The  
25 Office of International Programs, NSIR, and NMSS each have safeguards  
26 responsibilities.

1                   In addition, the NRC contributes to the U.S. system of  
2                   accounting for source and special nuclear material known as NMMSS, the  
3                   Nuclear Materials Management and Safeguards System. The system is  
4                   operated by DOE's Office of Nuclear Material Integration with support from the  
5                   NRC.

6                   NMSS safeguards staff serve as the point of contact with  
7                   DOE for NMMSS and have recently worked with the Office of Administration  
8                   to renew our contract with DOE for NMMSS operations for another five-year  
9                   period.

10                  The safeguards staff also supports our federal partners in  
11                  the negotiation and execution of agreements for nuclear cooperation, also  
12                  known as 123 Agreements. The staff also helps ensure that the U.S. meets  
13                  its reporting obligations under its IAEA agreements with the commercial sector  
14                  and serves as the interface between the IAEA and U.S. commercial nuclear  
15                  facilities.

16                  At present, four NRC licensed facilities are selected by the  
17                  IAEA for application of limited safeguards under the U.S. voluntary offer  
18                  agreement with the IAEA. These are the three fuel facilities that produce fuel  
19                  for power reactors and the enrichment facility in New Mexico. Under the  
20                  agreement, these facilities provide current general design information to the  
21                  IAEA, as well as reports of their transactions and inventories of special nuclear  
22                  material. The reporting is done through NMMSS.

23                  Now I will highlight two areas of significant accomplishment  
24                  for the fuel facilities business line from the past year. The first  
25                  accomplishment is the implementation of the modified small quantities  
26                  protocol for the U.S. Caribbean territories as part of the U.S. government

1 agreement with the IAEA which is separate from the agreement for our fuel  
2 cycle and other facilities in the mainland. The agreement for the Caribbean  
3 territories fulfills commitments made by the U.S. to the IAEA and to the  
4 international community in connection with the treaty for the prohibition of  
5 nuclear weapons in Latin America. Under this agreement, the U.S. reports  
6 on source and special nuclear material in the Caribbean territories, which fall  
7 within the geographical area of the treaty.

8 Bringing this agreement into force has taken several years  
9 and the final implementation went very smoothly thanks to the close  
10 cooperation among the U.S. government agencies and the responsiveness of  
11 our licensees in the Caribbean territories. All of the licensees conducted their  
12 initial inventories and reported to NRC on schedule, which allowed the U.S. to  
13 complete its on-schedule inventory report to the IAEA in August of 2018.

14 The second accomplishment I'd like to highlight is related to  
15 the steps that the NRC has taken to minimize the potential disruption of  
16 nuclear trade as the United Kingdom exits Euratom safeguards and trade  
17 agreements coincident with the UK leaving the European Union. The U.S.  
18 has a longstanding 123 agreement with Euratom that covers U.S. nuclear  
19 trade with all of the current 28 Euratom member states.

20 The UK is required to leave Euratom when it exits the EU.  
21 This, in turn, requires the U.S. to establish its own bilateral 123 Agreement  
22 with the UK in order for nuclear trade to continue uninterrupted while  
23 maintaining safeguards.

24 OIP, the Office of International Programs, with the NRC lead  
25 office in the discussions with the UK on a new 123 Agreement working closely  
26 with the Department of State and the National Nuclear Security Administration

1 with support from NMSS and other NRC offices. The interagency efforts  
2 resulted in a new agreement text in early 2018, which, in keeping with the  
3 approval process, was provided to Congress in May of last year. The  
4 agreement met the congressional review period and was officially approved.  
5 It will go into effect when the UK formally leaves the EU and Euratom.

6 We anticipate that nuclear trade between the U.S. and UK  
7 will proceed without interruption through the exit date, which is now expected  
8 at the end of October this year.

9 That concludes my portion of the presentation, and I will turn  
10 back to Steve to close out this part of the briefing.

11 MR. WEST: Thank you, Jim. In closing, I would like to  
12 thank the staff for their efforts both over the past year and in preparation for  
13 today's briefing. Even though the environment around the fuel cycle business  
14 line is evolving, I have confidence in our commitment to our mission in  
15 achieving through safety-focused, effective, and efficient approaches.

16 Together, we are building a smarter way to safety by further  
17 risk informing our decision-making process, as well as continuing to seek out  
18 areas which are ripe for innovation and transformation. This illustration on  
19 this slide symbolizes our combined efforts to proactively elevate our  
20 perspective in order to enable us to see a more streamlined path to reasonable  
21 assurance of adequate protection and to be ready to address any future  
22 challenges that come our way.

23 This concludes our first presentation this morning, and we're  
24 ready to take any comments or questions.

25 CHAIRMAN SVINICKI: Thank you very much and thanks  
26 to each of the presenters and to all the staff that helped you prepare for the

1 presentations that you've given here today. We'll begin the question-and-  
2 answer period with Commissioner Caputo. Please proceed.

3 COMMISSIONER CAPUTO: Good morning. It takes a lot  
4 of effort to prepare for a meeting like this, so I appreciate all of you and the  
5 staff who supported you in preparing for today.

6 John and Mike, you noted that the fuel facility priorities have  
7 expanded to ensure readiness for future license applications and  
8 amendments for new technologies, like accident tolerant fuel and advanced  
9 reactors. When do you expect to begin receiving license amendments and  
10 applications for those?

11 MR. KING: As I mentioned earlier in my presentation, '21  
12 is as soon as we expect a brand new application and that would be associated  
13 with the X-Energy application. We expect we might receive the request to  
14 review the environmental report as soon as middle of next year, next calendar  
15 year. And we expect to receive the first actual request for license amendment  
16 probably June time frame of '21.

17 We're also monitoring closely, you know, the recent DOE  
18 announcement of a sole source contract through Centrus. We're monitoring  
19 closely the activities associated with that so that we'll be ready. And we've  
20 already anticipated the potential licensing implications and the resource needs  
21 for that, and we believe we're ready under existing resources to meet that  
22 need.

23 COMMISSIONER CAPUTO: Okay. Does the staff have  
24 adequate expertise in these areas? And if not, are you planning to develop  
25 that expertise internally or supplement with contractors?

26 MR. KING: You know, we believe we're ready for the



1           Centrus. You know, the high-assay LAU is the novel aspect of the review  
2           that we'll have to consider and the staff have already begun looking into that.  
3           In fact, at the 2019 RIC we had a session on, you know, the licensing  
4           considerations for the future of the fuel cycle, and that was a large part of the  
5           discussion is what were we going to, how does the NRC foresee the impact  
6           of some of these new advanced technologies and the needs for resources and  
7           expertise to conduct the reviews.

8                         MR. LUBINSKI: If I could add, as Mike said, looking at the  
9           expertise we have today, if we're looking at amendments to current fuel  
10          facilities and depending on how much higher an assay they want to go, if it's  
11          only a few percent, we believe we have that expertise in-house. If we're  
12          going much larger than that, that's going to be where the industry needs to  
13          come in and provide us more information. We may be looking under contract  
14          to get some additional expertise in that area.

15                        COMMISSIONER CAPUTO: Okay. Thank you. As the  
16          number of fuel cycle facilities has gone down, so has the amount of licensing  
17          and oversight work directly attributable to specific licensees. So the fees for  
18          this work are one-third what they were ten years ago and less than a quarter  
19          of the budgeted resources for fuel cycle facilities. This workload now  
20          accounts for approximately 17 FTE. Naturally, stakeholders have various  
21          questions about the nature of the work that is non-fee billable that licensees  
22          pay for through annual fees. So I compliment the fuel cycle division for  
23          conducting a self-assessment of these fees, but can you tell us what you've  
24          learned so far?

25                        MR. KING: Yes, we touched on it briefly in the  
26          presentation, but I'll try to provide a little more detail. Basically, what we

1 discovered is that we need to make it easier for us to provide the level of  
2 oversight we need, the amount of staff involved in non-fee billable activities.  
3 Making the reports readily available without expending too much effort to  
4 generate the reports that we need to drive the visibility, ensuring the staff, its  
5 easy for the staff to know where to bill their time, to provide us the necessary  
6 visibility, and to ensure that we're building reviews of that information as part  
7 of our day-to-day business processes to ensure we're providing courser  
8 corrections we can identify early if we're expending resources more than we  
9 anticipated based on the potential safety benefit and can adjust appropriately  
10 and to improve the transparency with our external stakeholders to be able to  
11 provide -- to provide some clear indication of how we're spending our time on  
12 these non-fee billable activities.

13 COMMISSIONER CAPUTO: Which gets toward my next  
14 question. You know, in my own experience, I'll just reflect, there are often  
15 disconnects between what we issue in a fee recovery role and what we  
16 actually have listed in the budget. Fuel cycle facilities is no exception. The  
17 budget in 2018 was \$24.6 million, but the budgeted resources that were  
18 collected in fees was \$35.2. So it's an \$11 million difference. I've asked for  
19 an explanation of this difference and got a very confusing answer. Don't you  
20 think we need to provide more transparency here, and will the insights from  
21 the self-assessment really provide that better level of transparency?  
22 Because I think part of that difference is probably corporate support costs that  
23 are being recovered from licensees, and are we going to, do you think we  
24 need to provide that measure of transparency?

25 MR. LUBINSKI: So I think you hit one point there. We do  
26 believe much of that or I should say some of that at least is in the corporate

1 support area and how are we measuring this corporate support. So I think  
2 that's not just transparency external but internal. We need to work more  
3 closely with our partners in CFO. We also need to look as we continue to  
4 move forward on, as we're developing our budget, how does that impact fees.  
5 And I think that's going to bring more transparency not only internally but  
6 externally as we move forward.

7 I believe the other areas that Mike talked about already from  
8 some of the annual fees, which we would look at some as some fixed cost  
9 there or infrastructure areas, having some transparency there, as well, on  
10 what is the priority of that infrastructure; working with our external stakeholders  
11 in understanding that priority. Just as we talked about your first question of  
12 being prepared for the future, applications, understanding the timing of those  
13 coming in, the priority, and how many. We don't need to build a new rule or  
14 build a new process if we're only going to get a one-of-a-kind application  
15 coming in, so we really need to balance how much infrastructure should we  
16 develop. But, again, that's based on our prioritization with the industry and  
17 understanding where their priorities are for applications. So I think that  
18 contributes to the external transparency, as well.

19 COMMISSIONER CAPUTO: Okay. We heard a fair  
20 amount this morning about better use of risk information, process  
21 improvements, and efficiency gains. And I really commend the staff for taking  
22 the initiative and making efforts in those areas. However, there wasn't a  
23 whole lot of detail on those efforts. Have you tracked these improvements  
24 with metrics to verify that you're actually seeing the results you anticipate?

25 MR. LUBINSKI: So let me start with the office overall, and  
26 then I'm going to ask Mike to talk in the fuel cycle area. As I noted, Marc

1 Dapas issued a memo back in January from the standpoint of how we're using  
2 risk insights. We really look at that as under our umbrella of transformation  
3 and agree, as Margie said many times, that one decision at a time moving  
4 forward. We're starting to have those decisions as we look at what we're  
5 doing in license renewal where licensees are looking at extended periods of  
6 license renewal and going further, and we're look at that in a risk-informed  
7 way based on performance of licensees, looking at hazards at the plant.

8 From the standpoint of metrics, I've asked the leadership  
9 team at NMSS to look more broadly in how do we come up with both metrics  
10 and indicators for all of our business lines on how do we implement those.  
11 That will be in the form of licensing, how are we doing it, and development of  
12 our reviews, requests for additional information. So we're in the early  
13 processes of developing those metrics and indicators.

14 I'll ask Mike to respond what we're done in the fuel facilities  
15 already.

16 MR. KING: Yes. I'll just add to what John said in that, for  
17 the two working groups that we recently sent as publicly available in draft form  
18 that we discussed at the CER meeting that industry and others have been  
19 providing feedback on, as an integral part of that is to look up-front at if we're  
20 successful in achieving the desired outcome of these working groups, how will  
21 we be able to tell that we're successful, what are the measures and indicators?  
22 So as part of that effort, an expected outcome is, in support of the overall  
23 furtherance of reasonable assurance memo, we will identify how we're going  
24 to measure ourselves for success at the outcome of those working group  
25 efforts.

26 COMMISSIONER CAPUTO: So in designing these

1 metrics, are you looking at that with an eye toward how that can help inform  
2 workload planning?

3 MR. LUBINSKI: I think that will be an outcome in the  
4 workload planning from the standpoint of -- because we're looking really from  
5 a risk-informing standpoint so we're starting with looking at safety and that's  
6 always at the forefront. I think an outcome of that would be what you learn  
7 from the safety and the risk standpoint will let you know from a work  
8 management standpoint and a workload what workload you're going to have  
9 in the future and what impact it's going to have on the workload. I think, as  
10 you start to do that, you'll see a positive impact where you become more  
11 efficient down the road, but it's not the initial intent of what we're trying to do.

12 I also believe that, as we do that, it's going to identify maybe  
13 some additional tools we need that can help the managers track and  
14 implement those changes as we move forward.

15 COMMISSIONER CAPUTO: So if you believe that  
16 efficiencies are going to be evident later on, it's kind of important to have a  
17 baseline now so you can tell exactly what kinds of efficiency gains you got  
18 along the way. I mean, do you have, will you have that kind of a baseline in  
19 place?

20 MR. LUBINSKI: I won't say we'll have a baseline  
21 immediately, but I also see this as being a progression as we move through  
22 the process. So we may be developing not what the baseline is today but  
23 what the baseline may be six months or a year from now and continuing to  
24 monitor off of that. Looking backwards and just to develop a baseline, that's  
25 not on our priority list right now.

26 COMMISSIONER CAPUTO: Okay. Are there any ways

1 in which you're looking at innovations or innovative technologies to help  
2 develop that approach to using metrics?

3 MR. KING: Well, we're certainly going to leverage the  
4 additional level of resolution and visibility that we have into our non-fee billable  
5 activities to feed that back into the development of the automated reports that  
6 we use to inform our decision-making, to modernize our decision-making. So  
7 we're going to be leveraging the existing IT infrastructure in partnership with  
8 our CFO and CIO partners. Specifically, I'm thinking of, you know, the recent  
9 self-assessment we need on non-fee billable activities. We've already  
10 started our initial outreach with CFO to figure out, okay, how can we leverage  
11 our existing IT infrastructure to automate the collection and generation of  
12 those reports. I don't know if that goes specifically to the --

13 COMMISSIONER CAPUTO: Yes, I think one concern that  
14 I would have is just that the nature of how you set up any set of metrics, just  
15 be that the information you're getting from those metrics can be seamlessly  
16 applied in terms of workload planning and the financial side of operating the  
17 business unit.

18 MR. LUBINSKI: I wanted Mike to go first because I wanted  
19 him to talk specifically the fuel facilities and I want to compliment Mike and his  
20 folks for what they've done in looking at the fee structure and fee charges.  
21 And I think that provides a good base as we continue to look across the other  
22 business lines in NMSS.

23 COMMISSIONER CAPUTO: I agree. I think it's  
24 significant progress, and I want to commend Mike for that. Thank you.

25 MR. KING: One thing I'll add to that is, as we're expending  
26 efforts on what is our next step in response to self-assessment, we're looking

1 to leverage those activities so that we can apply it to the other business lines.  
2 We don't want something too uniquely tailored to fuel facilities, and we're going  
3 in with that mind set.

4 COMMISSIONER CAPUTO: Wonderful. Thank you.

5 MR. WEST: And if I could just add briefly, from the bigger  
6 picture, I think what NMSS is doing, what Mike and John have been doing,  
7 when we talk about becoming a modern risk-informed regulator, this is the  
8 type of activity we're talking about, the line of questioning you would add or  
9 the things we are asking ourselves, identifying gaps in areas where we can  
10 improve and these types of actions are going to get us, take us in the direction  
11 that we're trying to get to.

12 I think, just to talk about metrics for a minute, we do put a lot  
13 of effort into trying to develop metrics. I wouldn't say we've reached a nirvana  
14 yet, but we're making progress. And it's an area where we do spend quite a  
15 bit of time as a senior leadership team looking at our metrics each quarter and  
16 making adjustments. But it's really a great question and a good effort on the  
17 part of the business line here.

18 COMMISSIONER CAPUTO: Let me just add that I think,  
19 to the extent the metrics assist within the agency and are used by the staff, I  
20 guess, as a commissioner, I haven't seen a lot of visibility into the nature of  
21 what metrics you have and what you use. So I think it would certainly be  
22 helpful to me in my work to have more visibility into the metrics that exist.  
23 Thank you.

24 CHAIRMAN SVINICKI: Thank you very much,  
25 Commissioner Caputo. Next we'll hear from Commissioner Wright. Please  
26 proceed.

1 COMMISSIONER WRIGHT: Thank you very much.  
2 Good morning. So it's great to see a lot of new faces. Well, you're normal  
3 faces around the agency but you're in a new position. So, John, this is your  
4 first Commission meeting in your new position, director. Congratulations.

5 MR. LUBINSKI: Thank you. It's nice to be called a new  
6 face after 29 years with the agency.

7 COMMISSIONER WRIGHT: Yes. And also Mike and  
8 LaDonna, this is your first in your new role, too. So, John, I guess, by now,  
9 you know you're going to get a transformation question somewhere. So I'm  
10 pleased to see that you all have started taking a closer look at programs, and  
11 I think that Mark's memo to the staff on reasonable assurance is a good step  
12 forward. And at each of the business line meetings that we've had with  
13 NMSS, I've also heard about improvements to the licensing and oversight  
14 process, but a concern I have sometimes is that things are still in silos, you  
15 know.

16 Last week, I went to NIH and one of the things that really  
17 struck me was their use of what they call intramural teams. And by getting  
18 different disciplines to work together on a team towards a single goal, they say  
19 they can make much more, take a much more holistic approach to find more  
20 innovative and effective solutions to things.

21 So we've also had similar, I guess, recommendations from  
22 industry along that line, too, to include other business lines, you know, as well  
23 as NRR and NRO and some of our improvement projects. So they can  
24 benefit from their insights.

25 So would you give me your thoughts on that type of  
26 approach and are you trying to take that kind of an approach or can you see



1 it being used more broadly across the agency as a whole?

2 MR. LUBINSKI: I'm going to ask Mike to expand a bit on  
3 the fuel facilities, but I'll go more broadly in NMSS. We currently have five  
4 business lines in NMSS. Four of them are active business lines. You  
5 mentioned the word silo. I wouldn't say that they're siloed approaches at all,  
6 but they are unique, each of them, and have some differences to them.

7 But I believe, overall, what we're looking at, and it goes a  
8 little bit to Commissioner Caputo's question, is some of what is important to  
9 monitor and track along the way is similar across those business lines. I  
10 believe also there are similarities in other business lines, as well, the operating  
11 reactor and new reactor business lines. So coming into NMSS, I've set up  
12 periodic discussions with Ho Nieh to talk about what he's doing in areas of  
13 innovation and transformation, as well as what he's doing as far as use of data  
14 to move forward.

15 Within the business line or in the office, I should say, and  
16 across business lines, we are looking for expanding the use of bringing  
17 centers of expertise together. We're looking at, as I mentioned, a  
18 reorganization within NMSS that will be provided to the Commission for  
19 information here shortly. But as part of that, we'll be bringing together people  
20 of similar expertise into an area where they may have regulated a fuel facility  
21 in one area or spent fuel storage or transportation and they can bring the  
22 insights from that area to innovate and say let's bring the best of both of these  
23 areas together and how do we become more efficient in regulating in that area.  
24 And I'll ask Mike to expand on fuel facilities.

25 MR. KING: Yes. We received feedback from the public  
26 and industry at the recent CER meeting where we introduced the working

1 group charters for improving inspection and licensing areas. And that was  
2 part of the feedback as they highlighted some good examples of successes  
3 from their perspective that occurred in different parts of the agency. And so  
4 what you'll see in the updated charter which we hope to issue by the end of  
5 the week is including working group members from those areas that they  
6 identified as providing some potentially valuable insight.

7 Now, it's always a striking a balance of how big do you make  
8 the working group, you know, compared to what you think the potential payoff  
9 will be. But we're certainly expanding the net to capture a broader view  
10 consistent with modernizing our decision-making, capturing the range of  
11 potential views early as we can.

12 COMMISSIONER WRIGHT: Steve?

13 MR. LUBINSKI: Just in the bigger picture of  
14 transformation, we are looking at the use and applications of what are called  
15 agile teams, which I think is similar to what you saw at NIH. And we see  
16 application for that here. You'll probably hear about some projects that we're  
17 looking at right now where we're going to put together an agile team to bring  
18 in the right people from wherever they are. It could include contractors, staff,  
19 and managers to do specific tasks. They help develop some of our  
20 transformational ideas. I think we have in the next meeting on innovation for  
21 the Commission, we'll probably talk about that some more.

22 COMMISSIONER WRIGHT: Thank you so much. So,  
23 Mike, you've been a busy boy. A lot of stuff and really heard some good  
24 things about you and how you're going about your approach and the direction  
25 you're taking. So congratulations on a good start.

26 So you and John spoke about the reduction of workload and

1           you kind of addressed some of the questions that Commissioner Caputo had.  
2           And the people before you were looking at right-sizing. You know, that was  
3           the term that we've heard and it came up in last year's business line meeting,  
4           as well. It's still relevant. You know, we've had reductions and changes, as  
5           you know, and you all are adjusting. Are we right-sized now? And how will  
6           we know when we get there? Can you or John --

7                         MR. KING: I think there's always opportunity for continual  
8           improvement. And, in fact, I think our recent self-assessment has highlighted  
9           that there is some potential opportunities for us to gain additional visibility and  
10          to identify areas where we might be able to right size further. So looking  
11          forward, as we gain some additional visibility into areas, I think there's  
12          opportunity there to identify some additional areas.

13                        MR. LUBINSKI: I would say, if I were to look at direct  
14          efforts that we're using in licensing and oversight, I think we're closer to being  
15          there. We've made some improvements. We're continuing to look at those  
16          improvements. You're never there. I kind of look at that as a continuing,  
17          right? You never get to the right size because the environment continues to  
18          change, you continue to get smarter, you continue to get more efficient. So  
19          it's continually improving. But I say, in looking at where you're going, you're  
20          closer to that on the direct effort.

21                        I think where we're looking at is the infrastructure and the  
22          overhead, the fixed cost. That's where I think we're a little further away. And  
23          going back to your first point about making sure we're not siloed, doing that  
24          across the entire office and across multiple business lines and how can we  
25          gain efficiencies across the board in some of those infrastructure areas is  
26          where we can definitely gain more and get to the more right size.

1                   COMMISSIONER WRIGHT: Okay. Thanks. I want to  
2 follow up on Commissioner Caputo's question about the non-fee billable work.  
3 And I know you're in the early stages of implementing some of the stuff, but I  
4 guess one thing I was interested in is what's been the feedback from the  
5 licensees on that so far?

6                   MR. KING: I'd say they're cautiously optimistic that, you  
7 know, naturally, as the size of the overall budget decreases, whatever  
8 proportion of the budget that's closer to being fixed, that's going to, you know,  
9 as you get smaller, that's going to become a more significant portion of your  
10 overall budget. And we provided, industry provided feedback to that effect in  
11 the fiscal year 19 draft fee rule.

12                   So it's an area where we need to pay attention and focus  
13 our efforts to gaining more visibility to fully understand do we have the right  
14 level of resources in the non-fee billable area? So that's certainly a focus for  
15 us going forward.

16                   MR. LUBINSKI: And I think their feedback, as I mentioned  
17 earlier, also is they want to understand more where our priorities are. They  
18 have their priorities. If you look at each licensee, of course their work is  
19 number on the list of what to get done. But they're looking, if we start to look  
20 at accident tolerant fuel, advanced reactor designs, they want to make sure  
21 that we have that as a priority, so we're ready to receive those applications in  
22 the future. So they're not looking at just saying cut your budget, cut your  
23 budget. They're looking across lines saying get to right sizing and be  
24 prepared for where we have our priorities coming in in the future and want to  
25 understand where maybe we have some work that they don't think is higher  
26 priority to seek to understand whether or not that really should be

1 accomplished or not.

2 COMMISSIONER WRIGHT: Okay. Thank you. So I've  
3 got a lot of questions that I want to get into, but I'm not going to have time to  
4 get them all. But I want to talk about the RIC conference a minute and the  
5 fuel cycle information exchange that was part of that. You mentioned that  
6 you got some early feedback. I kind of got a sense from you that it wasn't as  
7 favorable maybe as you thought, just the way you said it. You know, if you're  
8 looking at making changes or do you plan to even roll the conference into the  
9 RIC again next year?

10 And I guess, on top of that, if you were or are you looking at  
11 possibly doing other NMSS conferences, rolling them into the RIC, or  
12 something like that?

13 MR. KING: You're exactly right. We did get feedback that  
14 the normal attendees that we would see at a fuel cycle information exchange,  
15 which are typical licensing managers at fuel facilities, many of them were  
16 unable to attend. You know, there's challenges surrounding the RIC  
17 associated with coordinating drop-ins and with the other activities going on.  
18 And so this was an attempt to realize some efficiencies. There's significant  
19 staff effort involved in coordinating previous fuel cycle information exchanges.

20 So going forward, what we're looking at is, okay, maybe  
21 there's an opportunity to do perhaps a hybrid of the two. But we're in the  
22 early stages of, you know, analyzing the feedback we get and for perhaps the  
23 next public opportunity meeting we have with the stakeholders to consider  
24 what our options are.

25 MR. LUBINSKI: And, of course, RIC planning for next year  
26 starts before we even complete our RIC this year. So it's already started in

1 the planning. Moving the fuel cycle area into the RIC last year seemed like a  
2 more natural fit because we were already doing and information conference.  
3 However, across the business lines, there are other business lines that have  
4 outreach activities in the low-level waste area, materials area. We don't know  
5 if the RIC is necessarily the best environment for that and bringing it to the  
6 other to be most effective. We also don't know whether or not that we're  
7 bringing them together themselves just because they're within NMSS gives  
8 you the synergy or not or allows for better attendance. But we'll continue to  
9 look at those.

10 COMMISSIONER WRIGHT: Thank you. And just for  
11 everybody who was involved in the RIC, I speak for myself but I'm sure I  
12 represent the feelings of the commissioners, too, that was a rock star event.  
13 It was very well done, and it's a high bar for next year. Thank you.

14 CHAIRMAN SVINICKI: Thank you very much. I  
15 appreciate your responses to my colleagues. Maybe I'll just build a bit off  
16 some of the discussion that's already occurred. I appreciate, as others have  
17 expressed, the focus on transformation and the thinking on the risk-informed  
18 journey that's already been occurring. Mr. Lubinski, you got the benefit of an  
19 organization that you're stepping into a leadership role where they're already  
20 starting to think about those topics so that I'm sure will be of a great benefit to  
21 you as you come up to speed and get your arms around the status of  
22 everything going on in NMSS which is a really diverse set of activities for this  
23 agency.

24 I share the view that, in order to enable our staff to tap into  
25 the many creative and innovative ideas they have, that our obligation as  
26 leaders and managers is to get them the tools and training and things that

1 they need to be able -- because they might have great ideas, but we've got to  
2 set up, first of all, a process around which they can kind of, where they can  
3 funnel these ideas. But we do need what I call tools very broadly now, and  
4 technology is a part of that and I think LaDonna talked about, you know, we're  
5 using Skype and we're using IT, pure IT tools. That's an important part of  
6 having a further penetration of those available to employees. Commissioner  
7 Caputo talked about metrics. I broaden that to data. We kind of, even if  
8 you're a first-line supervisor or project manager, you have to have the right  
9 data and metrics that allow you to lead a team or a branch or a division here  
10 at NRC in order to kind of make the adjustments and be checking in with your  
11 team. You all need to have an agreed-upon set of data that kind of feed  
12 metrics, and then you'll know where you're headed. And if you're getting  
13 there, you need to make adjustments.

14 And so I know that under our very capable office of the Chief  
15 Information Officer, in concert with our Office of the Chief Financial Officer,  
16 we've been engaged in a multi-year effort to kind of take some of our very  
17 archaic unsupported platforms to get those into more modern platforms. And  
18 we're on that journey.

19 Something that I'm trying to monitor is, in particular, for our  
20 two really large licensing organizations, which are NRR and NMSS, and the  
21 reason I'm not including NRO as a separate element is that we're on the  
22 threshold in the next few months of the full effectuation of the merger of NRO  
23 and NRR. So pretty soon that's going to be a big mammoth organization.

24 It wasn't expressed this way by Commissioner Caputo, but  
25 if I can kind of maybe expand on what she was talking about, if we could have  
26 some opportunity to have at a high level some cross talk and some ability for

1 Mr. West and, you know, his counterpart, the other deputy EDO and the EDO  
2 and the very, very senior leadership to look across the organization, I  
3 understand that we want people to have the tools they need, but it can be in  
4 peril if there's a lot of ad hoc development. First of all, it makes it more difficult  
5 for the CIO and the CFO to get us there in an easy transition. If everyone  
6 has got a stylized set of analytics that they want, it's a little bit harder to get  
7 the system to automate that.

8 And then what it doesn't allow you to do, when they're so  
9 tailored to the individual programs, we can't get that really high-level agency  
10 performance that senior leaders might want or might be of us and it certainly  
11 is use to members of the Commission, as I think you've heard here today  
12 already.

13 So the transformation is putting a sharper point on all of this  
14 because this is the appetite that we need to feed, and we were on a multi-year  
15 journey to do this, but we might need to have a little bit more desire to do it  
16 quicker and get the tools that are tailored to our transformation because that's  
17 maybe an element that we're injecting now.

18 And so, John, I know you mentioned meeting with Ho Nieh  
19 and talking to NRR. How would you characterize for me, and maybe Steve  
20 will want to jump in on this, as well, how are we getting to something that would  
21 allow you keep could rolling it up and have a sense? And I know we've got  
22 government-wide things, performance metrics and other things, and how are  
23 we bringing coherency with that? As program people, how would you  
24 characterize it?

25 MR. LUBINSKI: Yes, I think, as program people, let me  
26 start with, I'm probably not as far as I would like to be at this point, only being



1 in the organization for, well, like I say, I'm now measuring it in weeks instead  
2 of days, which is good, so my fourth week in.

3 CHAIRMAN SVINICKI: Is it coming home for you? You  
4 spent a lot of your early time here --

5 MR. LUBINSKI: It was very much. It felt like a coming  
6 home and a lot did come back to me rather quickly, and I've appreciated the  
7 people, as well. And I have to thank, take an opportunity to thank the  
8 welcome I did get coming back into NMSS. And especially also from the folks  
9 who I didn't know and were new to the organization. So thank you for that  
10 opportunity to bring that up.

11 In working with that, we're looking at what do the systems  
12 look like. And I'm going to add, even though we're the business line owners  
13 and you talked about NRO becoming part of NRR, we're also looking towards  
14 the other offices: NSIR, Research, corporate, the regions, because, again,  
15 they need to be part of it. The regions support both programs, so they can't  
16 be looking at different sets of metrics for different programs, different business  
17 lines. So they're going to benefit from the standpoint of having a commonality  
18 between the programs. NSIR, again, is going to have that commonality.  
19 Research, if we're setting a common set of goals.

20 SO one of the goals in working with NRO is one of the  
21 objectives we're trying to get to, what are we trying to get to in not just  
22 transparency of the data and obtaining the data. I'm going to go into your  
23 point about data. I think data is very important, but what does the data mean?  
24 We just don't want to spill into it of giving someone a bunch of data and say,  
25 okay, now what does it mean? I'd rather go in foresight and saying what is  
26 important to get from the data.

1                   So before you can start to go to the CIO and say here's the  
2                   data I need to get out, you need to be able to tell them this is the data I'm  
3                   going to want, this is the format I'm going to need, the frequency, and getting  
4                   that more real time and providing the same level of information across both  
5                   business lines of that type of information.

6                   Commonalities among business lines are the same.  
7                   Rulemaking, licensing, oversight. You may do it a little bit different based on  
8                   the business line and the type of licensees, but the importance of what data  
9                   you're measuring is very common and there will be very small differences  
10                  along the line.

11                  CHAIRMAN SVINICKI: Well, and I think also another  
12                  element that will come in is it should have a benefit to our strategic workforce  
13                  planning because if we could see, you know, how are we resourcing incoming  
14                  work? What are the hours we're estimating? What are the disciplines that  
15                  we're estimating to contribute? And if, over time, we had the kind of, I use  
16                  data but I also use the term analytics. It gets to your point about what does  
17                  it mean. It's not just raw numbers. But we can be increasing the fidelity of  
18                  our knowledge of how to get our employees on to work and have it resourced  
19                  and staffed in the correct way. So I think strategic workforce planning would  
20                  ultimately be beneficiary of this, and we recently had a congressional hearing  
21                  where Commissioner Baran had made the point of how few of our employees  
22                  are under the age of 30. So as we go to look at targeted entry-level hiring  
23                  and reinvigorating the pipeline, all of this knowledge could also benefit us in  
24                  terms of what are the skill sets that we need to be bringing in.

25                  Steve, did you want to comment on that?

26                  MR. LUBINSKI: It would be very easy to turn this into a

1 very different meeting on transformation, so I'm tempted just to say yes. But  
2 there's a lot going on, and there's the agency effort initiative that we're working  
3 on from the EDO's office, using other offices. And then there's what the  
4 offices and the regions are doing.

5 And from the agency effort, I was just making a list and I  
6 want to pick out just a couple of things to mention. We do have a user's need,  
7 for example, with research. We're going to have people dedicated to be  
8 working on transformation, looking at the technology and the tools. We're  
9 going to be, right now we're developing a proposal to present to Margie that's  
10 going to have a platform we can use as the engine of transformation, trying to  
11 get some commonality and approach between all the offices so that we're  
12 more effective and efficient, a way to focus our, you know, if we want ideas,  
13 how can we focus the staff in a certain area? If we want ideas for how we  
14 become a modern regulator, to get that out there.

15 The training. There's rewards and recognition of staff that  
16 participate in our innovative, participate in the programs. The culture and  
17 mind set, we've talked about that in other meetings on this. You know, and  
18 culture and mind set is an interesting one because there's such a, there's a  
19 danger of going in the wrong direction because you're implementing a change.  
20 Change is hard for people sometimes, and you really do want metrics to help  
21 you understand, number one, where you want to get and are you going in the  
22 right direction. So we're working on developing metrics.

23 So there's a lot going on. I think it's an exciting area to be  
24 working in. I think there's a lot of staff that are interested in it, managers. So  
25 we'll see, you know, more to come, I guess.

26 But thanks for your comments. They're very supportive of

1 what we're thinking, and we take that with us.

2 CHAIRMAN SVINICKI: Okay. Thank you very much.  
3 And next we will hear from Commissioner Baran.

4 COMMISSIONER BARAN: Thanks. I want to start by  
5 asking about the two staff working groups that are being set up to examine  
6 potential changes to the fuel cycle facility licensing and inspection programs.  
7 I believe the idea of establishing these working groups was publicly  
8 announced for the first time at the April 3rd public meeting on cumulative  
9 effects of regulation. Because of the nature of that meeting, the only  
10 participants were from NRC and industry. The staff circulated draft working  
11 group charters and asked for feedback on them.

12 Based on the draft charters, the purpose of the working  
13 group seemed very open ended, looking for areas where the effectiveness  
14 and efficiency of licensing and inspections can be improved. Can you talk a  
15 little bit more about the purpose of the working groups? Are there particular  
16 problems with fuel cycle facility licensing or inspection that you're hoping to  
17 address with them?

18 MR. KING: Yes. So the working group charters are  
19 intentionally kind of open ended, so you've picked up on that. It's really  
20 they're intended to be in furtherance of the memo, reasonable assurance  
21 memo that we talked about earlier, and overall agency efforts on  
22 transformation. Also, recent Commission guidance or direction to continue  
23 our efforts to risk inform inspection and oversight.

24 So we don't really have any pre-scripted expected outcomes  
25 or changes other than we expect, in general, for us to solicit innovative ideas,  
26 not just internally but externally, so we thought it was important to use those

1 forums to really do more of an outreach. And it's unfortunate, but we did do  
2 some outreach beforehand to some non-government organizations in  
3 advance of that meeting, so we tend to be more proactive in that effort in  
4 advance of our next public meeting to get more folks outside of industry and  
5 capture their perspectives.

6 But, you know, if we're successful, the end result is, you  
7 know, we have relative high confidence that, you know, we're going about  
8 achieving reasonable assurance and added protection in about the smartest  
9 way possible. You know, so what would that look like in the end? Perhaps  
10 we have pretty high-level confidence that the amount of effort that we're  
11 expending to do inspections in different areas is appropriate for the safety  
12 benefit that inspection provides, the amount of effort we're applying to  
13 licensing reviews in different areas is appropriate for the benefit we provide.  
14 And to the extent that identifies opportunities to realize efficiencies, we hope  
15 to gain those efficiencies in addition.

16 COMMISSIONER BARAN: Okay. Well, it sounds like it's  
17 essentially going to be an open call for ideas for how to improve NRC's  
18 oversight of fuel cycle facilities, which is fine. I think it's important to hear  
19 from a broad range of stakeholders if that's the kind of effort it is.

20 Given their group of stakeholders that typically attends the  
21 cumulative effects of regulation meetings, I have a hard time seeing that as  
22 an adequate forum for gathering diverse stakeholder ideas and feedback.  
23 How are you going to make sure going forward that NRC is seeking  
24 suggestions and comments from a broader range of stakeholders?

25 MR. KING: That's a good point. You know, like I  
26 mentioned, we're going to try to do more positive outreach. We did reach out

1 to two organizations before the last one. Unfortunately, those organizations  
2 didn't attend. But we'll take that feedback and look at, hey, do we have the  
3 right venue for those engagements? Do we need to perhaps pursue  
4 alternatives or consider other alternatives?

5 MR. LUBINSKI: As you said, Commissioner, looking at the  
6 openness, we don't want to predetermine what outcomes are right now. But  
7 we take your point, and I think, from the standpoint of what more we can put  
8 out in public from the standpoint of putting out drafts of documents on our  
9 website and then actually, in the next meetings, making sure they're open to  
10 the public and actually seeking out participants and requesting that they come  
11 to the meeting. Of course, the public, it's a little difficult in picking out select  
12 members of the public. But looking at other organizations that have gone  
13 through transformation, I think about the last transformation meeting the  
14 Commission had, I felt there was a really great group of folks who were able  
15 to provide input. We should be able to find similar type folks in the fuel  
16 facilities areas that can come up with ideas.

17 COMMISSIONER BARAN: The timetable in the draft  
18 charters targets November of this year for issuing a report with  
19 recommendations. Would that end product be a Commission voting paper?

20 MR. KING: So as we take the -- as we get these ideas,  
21 we're going to be measuring them again. So principle is a good regulation  
22 and the impact to our mission. And prioritizing the efforts that we think are  
23 worth our focus and potential action on. And as we evaluate those, any of  
24 those that have potential policy implications will, of course, wrap those into an  
25 engagement with the Commission. But for other activities, and we mentioned  
26 them earlier, you know, the quick win opportunities, we don't want to

1 necessarily wait until the end to formalize our process and get to the end  
2 before we take action on some of the easy ones.

3 Now, if those are policy issues, obviously, those would have  
4 to go to the Commission.

5 MR. LUBINSKI: And, again, the report that comes in  
6 November, that report itself will not be. But if there's aspects to it that need  
7 to come to the Commission before we go implementing, we'll be coming to  
8 you. And if some come early, maybe you'll be seeing something early to the  
9 Commission.

10 Also, I put a second level that one is coming to the  
11 Commission for approval, but the other would be informational. And I would  
12 say that, at some time along the way, depending on what we're doing, we  
13 would be keeping the Commission informed of what actions we are taking, so  
14 it might be in the form of an information paper.

15 COMMISSIONER BARAN: On the reactor side we actually  
16 spent a lot of time I guess a couple or a few years ago, you know, with NRR  
17 kind of developing a fair bit of Commission guidance on the kinds of changes  
18 or decisions that would come to the Commission for a vote, the kinds of  
19 changes and decisions that would come for information, and the kind the staff  
20 should just go off and implement.

21 You don't really have anything like that on the materials or  
22 fuel cycle side. Do you feel like you have the guidance you would need to  
23 get a sense of what comes up and what doesn't and in what manner?

24 MR. LUBINSKI: At this point I am going to speak across  
25 NMSS in total because I think your question is not just with regard to this  
26 business line.

1 I don't believe in the passing going forward that there has  
2 been anything that the staff has moved forward with that would have needed  
3 Commission involvement that we made a mistake and didn't come to the  
4 Commission.

5 I believe from the judgement of the background of the senior  
6 leaders within the office as well as senior leaders of the agency we have a  
7 good sense of what requires Commission involvement.

8 And I think providing information to the Commission in the  
9 form of information papers or other type gives the Commission an opportunity  
10 and to barometer whether or not we are actually in the right area.

11 Again, if we were to send an information paper up where the  
12 Commission thought it was actually a policy issue I believe the Commission  
13 would quickly turn that into a vote paper and inform us that that was something  
14 you would want to engage in.

15 So I think we have the information we need to do that and  
16 at least I feel comfortable.

17 COMMISSIONER BARAN: Okay. LaDonna, you  
18 mentioned that annual fire protection and operations inspections have been  
19 shifted from regional inspectors to the resident inspectors of the two CAT 1  
20 fuel cycle facilities. How has that been working out?

21 MS. SUGGS: We implemented that change actually about  
22 mid last year so there hasn't been an opportunity for us to fully get into doing,  
23 having the senior resident inspectors do the new inspections.

24 And that's really somewhat nuanced because the senior  
25 residents already had operations and fire protection inspections that they were  
26 doing under their core inspections.



1                   However, we had additional inspections that the regional  
2 inspectors were doing that we were able to fold into and slightly expand the  
3 scope of what the senior residents were doing, thereby saving the industry on  
4 travel dollars and additional hours from the regional inspectors, the  
5 inspections that the regional inspectors were doing.

6                   So from the perspective of them doing some of those  
7 inspections they are continuing to do the ones that they would normally be  
8 doing. The scope expansion is going fairly well but we have not had an  
9 opportunity for the senior residents to do the full breadth of the combined  
10 inspections as of yet.

11                   COMMISSIONER BARAN: Okay. And, you know, in a  
12 recent letter responding to the draft working group charter NEI suggested  
13 transferring several additional inspections to the resident inspectors.

14                   How would the staff assess whether that's a good idea for  
15 any particular inspection?

16                   MS. SUGGS: So the regional staff is actually pretty well  
17 involved in the efforts that Mike and FCSC have in terms of looking at ways  
18 that we can improve our inspection program.

19                   As a part of that we are looking at are there, asking  
20 ourselves are there other opportunities where we may want to fold in some  
21 regional inspections into some of the senior resident inspections.

22                   Right now we don't have anything on the books. Some of  
23 the things that were mentioned in the NEI paper as it relates to administrative  
24 matters or fairly straightforward event notifications and event follow up, the  
25 residents are already engaged in those things, we already leveraged them in  
26 that way.

1                   So from that perspective we think we are covered but we  
2                   are completely open to continuing to look for ways that we can incrementally  
3                   change our inspection program to gain efficiencies, so we are open to that.

4                   COMMISSIONER BARAN: Okay. I would imagine that  
5                   there are certain specialized inspections that would just be challenging to have  
6                   the residents do, there may be other inspections that would be easier to have  
7                   them do.

8                   I mean how -- You know, as you kind of look at the nature  
9                   of the different inspections are there ones that are obviously really hard to  
10                  have the residents and others that would be pretty easy for the residents to  
11                  do?

12                 MS. SUGGS: Yes. And so when we made the decision to  
13                 transition the fire protection and the ops inspection that was the reason why  
14                 was because they already had procedures looking at those areas.

15                 COMMISSIONER BARAN: Okay.

16                 MS. SUGGS: And we will also provide additional training if  
17                 needed for some specific nuanced things that maybe the residents were  
18                 picking up. However, in, for example, the fire protection inspection, we still  
19                 maintain a triennial deep inspection in that area.

20                 That would be reserved for the regional inspectors that have  
21                 specific expertise in those areas.

22                 COMMISSIONER BARAN: Okay.

23                 MS. SUGGS: And so to the other part of your question, are  
24                 there other areas within the inspection program that require very specialized  
25                 expertise, absolutely.

26                 And those would remain with the regional staff that have that

1 specific training, background, and expertise, and we would not be looking at  
2 transitioning those to the resident inspectors.

3 COMMISSIONER BARAN: Thank you.

4 CHAIRMAN SVINICKI: Thank you, Commissioner Baran.

5 Next we will hear from Commissioner Burns.

6 COMMISSIONER BURNS: Thank you. And thank you all  
7 for the presentations and the overview of the business line and, again,  
8 congratulations to John as you are getting into the weeks and then months,  
9 maybe years.

10 MR. LUBINSKI: Thank you.

11 COMMISSIONER BURNS: But I think you are off to a good  
12 start. And actually Steve, too, from coming back from the region and taking  
13 on the DEDO role.

14 My colleagues -- I know Commissioner Wright says this all  
15 the time and how right he is in terms of when you get at this point, a lot of good  
16 questions from my colleagues and touch on a number of the areas that I was  
17 interested in and I appreciate the responses on that.

18 Just maybe a couple of ones I have left, I kept crossing them  
19 off here, but a couple of them -- One, Mike, you talked about cooperation with  
20 some foreign counterparts, particularly I think the Canadian Nuclear Safety  
21 Commission, and I think you may also have mentioned the Japan Nuclear  
22 Regulation Authority.

23 Could you tell me what the nature of that cooperation is and,  
24 you know, what insights we are getting from that or any others that there might  
25 be?

26 MR. KING: I know from the operating experience

1 perspective, through the FINAS system, we do, you know, share a lot of  
2 operating experience through the two groups.

3 Since my time onboard I haven't had a whole lot of  
4 opportunity to explore that area and, unfortunately, my lead staff member in  
5 that area is not here to assist.

6 COMMISSIONER BURNS: Okay.

7 MR. KING: So, I don't know, Jim, do you have any insights  
8 in that area?

9 MR. RUBENSTONE: I don't have that level of detail, but I  
10 think Mike is right, it's mostly on the operating experience side where we share  
11 things.

12 We also participate in several, you know, multilateral  
13 international activities where we gain expertise on the safety side through NEA  
14 activities and IAEA activities, but I think maybe we need to get back to you  
15 with some more detail on what you are asking.

16 MR. LUBINSKI: Jim, would it be accurate to say that I think  
17 a lot of the coordination internationally where we are getting a lot of  
18 consistency really comes on the security and the MC&A side of the house  
19 from a safety standpoint where we're not in a position to answer that today.

20 COMMISSIONER BURNS: No, I think that's good and I  
21 appreciate that it's on the operating experience because, you know, if we go  
22 way back that was a key lesson learned from Three Mile Island in terms of the  
23 lack of good international cooperation, really the international cooperation in  
24 terms of reporting of operating experience developed in that context.

25 And so I mean I can understand that and I appreciate that is  
26 an important area where we have lessons to, or there are things we can

1 evaluate and put in and I know we have had from some of the experience  
2 LaDonna spoke to in terms of some of the facilities where we have challenges  
3 I know we reported it to the international system.

4 So I mean that's really what I think, a good one I am looking  
5 for. I am going to talk -- And another aspect in terms of in the -- a couple  
6 things in the material counting and control area, one, I guess is there anything  
7 in that area that either a new challenge or a perspective or a way we will be  
8 needing to look at things coming from the high assay LEU?

9 MR. RUBENSTONE: I think there are some challenges,  
10 especially as a plant goes to producing high assay LEU. It depends on if they  
11 are doing it in sufficient volume and keeping enough material on to move from  
12 Category 3 to a Category 2.

13 We do have specific rules at MC&A for Category 3  
14 enrichment facilities. There is not an analogous specific rule for Category 2.  
15 So if it comes to that we will be needing to, looking specifically how we would  
16 make sure that you have accurate accounting.

17 As material gets up closer to 20 percent enrichment there  
18 are additional concerns.

19 COMMISSIONER BURNS: Right.

20 MR. RUBENSTONE: Some of the other areas where we  
21 are looking at for material control and accounting is especially in advanced  
22 reactors. Accident tolerant fuel does not in my mind present a lot of the  
23 challenges for MC&A because it is very similar in how you account and control  
24 the material to our present fuel cycle.

25 But as we get into let's just say different sorts of fuels going  
26 into different configurations and reactors and also being produced in

1 difference with the facilities, there may be some sort of new ways to approach  
2 it, especially things like pebble bed fuels, and when you get to even more  
3 advanced designs such as molten salt where the fuel is an integral part of the  
4 cooling and heat transfer system.

5 There are some real challenges there. We are doing some  
6 work through a program coordinated through NRO which has some funds for  
7 advanced reactor and advanced fuel examinations.

8 We have currently a project going with a DOE lab looking at  
9 MC&A concerns for pebble bed reactors for in this current year and we hope  
10 to have future MC&A activities in coming years on other aspects of that fuel  
11 cycle.

12 COMMISSIONER BURNS: Okay. Thank you for that.  
13 That's very interesting. I am going to turn you one other question. So, you  
14 know, you spoke to and acknowledged a number of our treaty obligations  
15 under various instruments and so, yes, and we lawyers in the international  
16 sphere we will call in to the hard law and there is a lot of other stuff that NEA  
17 or in particular IAEA does, which we might call soft law or advisory or things,  
18 and I was just wondering if there are any particular initiatives within IAEA  
19 particularly that bear on the material counting and control.

20 And that's not just, you know, guidance documents or things  
21 like that, but they are sometimes working parties or other efforts that are under  
22 way. I would just be interested what sort of the status on those types of things  
23 are.

24 MR. RUBENSTONE: Right now I think what IAEA is doing  
25 just in the past several years they have completed a broader guidance  
26 document, what they call Nuclear and Material Accounting and Control,

1 NMAC, essentially MC&A in our lingo, and what's been happening in the past  
2 two years has been training on that.

3 They have run a number of workshops, either specialized  
4 for a few countries or larger groups coming together and we have supported  
5 those.

6 Staff members from my group have been involved with  
7 developing that training over the last five, seven years, and then participating  
8 as instructors in that, and I think that's very useful. We also work with --  
9 NNSA has a number of outreach activities.

10 We work through the Office of International Programs to  
11 support some of those outreach activities for training countries that are  
12 interested in perhaps entering into, you know, more advanced nuclear  
13 programs to make sure that the safeguards are in place, they have the correct  
14 regulations, they have, you know, the sufficient kind of material control and  
15 accounting programs that can keep material where it should be and keep track  
16 of it.

17 So I think right now IAEA is not doing much more than  
18 training on NMAC.

19 COMMISSIONER BURNS: Okay, all right. Well, thanks  
20 for that, Jim. And one last question I have, Mike, you noted basically the  
21 shutting down of the MOX facility and giving up the construction -- I guess we  
22 were at the construction --

23 MR. KING: Construction authorization.

24 COMMISSIONER BURNS: Yes. My recollection, are  
25 there other facilities that are sort of in that limbo state, if you will?

26 MR. KING: Yes. There are a number of facilities which

1 we, which currently have licenses but are pending construction.

2 COMMISSIONER BURNS: Yes.

3 MR. KING: Now the difference with MOX was they were  
4 actively under construction.

5 COMMISSIONER BURNS: Right.

6 MR. KING: But there is not currently any facilities that are  
7 in the similar situation where they are actually under construction.

8 But, you know, for example Centrus is an interesting case  
9 in that, you know, we currently in hand have a termination request, but since  
10 DOE has signaled the potential for, you know, giving them a contract, you  
11 know, it's likely they will come to us and cancel, assuming the contract is  
12 issued they would come to us and cancel that termination request and, you  
13 know, essentially, you know, commence construction now.

14 COMMISSIONER BURNS: What I don't recall is are there  
15 specific time periods on terms of the license term on these?

16 MR. KING: I'm not aware of any, you know, we'll give you,  
17 for example, a 40-year license with the condition that you have to construct  
18 within a 10-year period or something like that, unless one of my staff has any  
19 knowledge of that.

20 I believe once you issue the license it's good for the term.  
21 Now you won't necessarily pay fees until you reach the status to where you  
22 are operating, annual fees.

23 COMMISSIONER BURNS: Yes.

24 MR. KING: But the license is good --

25 COMMISSIONER BURNS: Or active construction.

26 MR. KING: Active.



1 COMMISSIONER BURNS: Yes, okay, because we, you  
2 know, construction oversight is --

3 MR. KING: Right.

4 COMMISSIONER BURNS: Yes, okay. John --

5 MR. LUBINSKI: No, I was just agreeing with what you said.

6 COMMISSIONER BURNS: Okay. So how many are  
7 there other than Centrus --

8 MR. KING: Well, we've got a total of 11 total facilities. Six  
9 are in operation, three have a license issued but haven't started construction.

10 COMMISSIONER BURNS: Okay.

11 MR. KING: And then, of course, Honeywell is in idle  
12 production status.

13 COMMISSIONER BURNS: Right, right. That's right, yes.

14 MR. LUBINSKI: So you have three of them out there right  
15 now that could be in that situation.

16 COMMISSIONER BURNS: Yes.

17 MR. LUBINSKI: We continued to monitor what they are  
18 doing and keep in contact. If they were to start construction we would  
19 implement plans for oversight.

20 Looking at -- Since Mike mentioned Honeywell, that's an  
21 area where it went to idle production and we made sure that we changed our  
22 program and what the oversight was to appropriately capture what needs to  
23 be done in that type of oversight.

24 COMMISSIONER BURNS: Right.

25 MR. LUBINSKI: So in this area it would be case-by-case  
26 depending on what the facility status is.

1 COMMISSIONER BURNS: Okay, thank you. Thank you,  
2 Chair.

3 CHAIRMAN SVINICKI: All right. Thank you very much.  
4 We have another very content-rich panel to come so I am going to ask that we  
5 take only a quick break until 11:05 and we will re-set the table for the next set  
6 of presenters. So we will see you in six minutes. Thank you.

7 (Whereupon, the above-entitled matter went off the record  
8 at 10:59 a.m. and resumed at 11:07 a.m.)

9 CHAIRMAN SVINICKI: And we will now begin with the  
10 second of the two business lines we are hearing about today, the Nuclear  
11 Materials Users Business Line, and, once again, I believe that Steve West will  
12 lead us off. Thank you, Steve.

13 MR. WEST: Good morning again. We will now transition  
14 to provide our strategic overview of the Nuclear Materials Users Business Line  
15 with a focus on the National Materials Program, highlights of the Agreement  
16 State and Tribal Liaison Programs and activities associated with the Materials  
17 Licensing and Inspection Programs.

18 The strategic focus areas in the Nuclear Materials Users  
19 Business Line are driven by our emphasis on innovation and transformation  
20 of our regulatory approaches. We engage extensively with our internal and  
21 external partners to gain our strategic focus areas.

22 Over the last year we have continued to work closely with  
23 the Agreement and non-Agreement States, the organization of Agreement  
24 States, the conference of radiation control program directors, tribes, and  
25 federal and international counterparts.

26 Internally we continue to coordinate and collaborate with our

1 partner offices, our regional counterparts, and the Advisory Committee on the  
2 Medical Uses of Isotopes.

3 We use the input from these interactions to inform where we  
4 may need to innovate to continue to be successful in a changing environment  
5 while meeting our mission.

6 For example, we are evaluating the appropriate roles and  
7 responsibilities within the National Materials Program to emphasize the  
8 Agreement States' role as a co-regulator and co-champion.

9 We are also continuing to look for different ways to  
10 accomplish our mission more efficiently and effectively. Since our last  
11 Commission briefing a year ago the Nuclear Materials Users Business Line  
12 completed a focused self-assessment of the Integrated Materials  
13 Performance Evaluating Program, or IMPEP.

14 The staff concluded that the IMPEP is effective in fulfilling  
15 the core objective of evaluating the adequacy and compatibility of Agreement  
16 State and NRC materials activities and made several recommendations that  
17 will enhance the way we complete IMPEP reviews.

18 Based on the results of our IMPEP reviews the staff believes  
19 that the collective regulatory and oversight work of the NRC and the  
20 Agreement States continues to successfully protect the public health and  
21 safety and the environment in the United States.

22 We are also ensuring that our oversight activities  
23 appropriately evolve such that we remain focused the most safety significant  
24 aspects of our works through revisions to our inspection procedures and  
25 manuals related to our programmatic oversight function.

26 Lastly, we continue to engage stakeholders to ensure that

1 we are prepared to address the increase in the number of emerging or new  
2 technologies to enable the safe and secure use of these within our regulatory  
3 framework.

4 In accordance with 10 CFR 35.1000, Other Medical Uses of  
5 Byproduct Material, we are preparing to issue licensing guidance for new  
6 medical technologies that do not squarely fit under other sections of our  
7 medical regulations.

8 The presentations this morning will provide you with more  
9 detail regarding these key strategic focus areas. Again, John Lubinski will  
10 provide an overview of the business line.

11 Andrea Kock, to his right, the Director of the Division of  
12 Materials Safety, Security, State and Tribal Programs, will provide an update  
13 on the state of the National Materials Program.

14 Paul Michalak, Chief of the State Agreement and Liaison  
15 Programs Branch, will discuss trends in the IMPEP program and topics of  
16 interest in the Agreement State Program.

17 And, lastly, Joe Nick, Deputy Director of the Region I  
18 Division on Nuclear Materials Safety, will discuss regional materials licensing  
19 and inspection program activities.

20 So this concludes my opening remarks. I will turn the  
21 presentation to John.

22 MR. LUBINSKI: Thank you, Steve. As we talk about the  
23 overview of the Nuclear Materials Business Line I want to note that NMSS  
24 works closely with the regions to ensure the safe and secure use of radioactive  
25 materials.

26 During our earlier discussion when we talked about the Fuel

1 Facilities Business Line we highlighted the Region II's implementation of the  
2 oversight and licensing programs.

3 In the Nuclear Materials Users Business Line the Divisions  
4 of Nuclear Materials Safety in Regions I, III, and IV implement the majority of  
5 the licensing and all of the inspection activities for NRC.

6 The work within the Nuclear Materials Users Business Line  
7 is significant in terms of its breadth and scope. The work includes NRC  
8 activities to ensure safe and secure beneficial uses of materials in medical,  
9 industrial, and academic applications.

10 Our work includes licensing, inspection, security,  
11 Agreement State program oversight, federal, state, and tribal liaison programs  
12 and rulemaking activities.

13 We will discuss the National Materials Program today but  
14 the Nuclear Materials Users Business Line only includes the work the NRC  
15 staff does to support these programs.

16 In Fiscal Year 19 the business line is comprised of 215 full-  
17 time equivalent, or FTE, and \$21 million in contract and travel. This is a  
18 reduction of eight FTE from Fiscal Year 18 due to changes in workload and  
19 adjustments to budget to align with historical expenditures.

20 We continue to focus on enabling the safe and secure use  
21 of radioactive materials for approximately 2500 specific materials licenses.

22 Next slide.

23 The business line continues to meet its mission through  
24 effective implementation of both headquarters and regional materials,  
25 licensing, and inspection programs, implementation of Agreement State and  
26 tribal programs, and activities related to source security.

1                   The business line priorities influence the work performed on  
2 a day-to-day basis, long term planning and the budget formulation and  
3 execution.

4                   This year we expanded our business line priorities to include  
5 the completion of the State of Vermont's Agreement State application, better  
6 defining and prioritizing the activities of and evaluating the roles and  
7 responsibilities within the National Materials Program, and expediting the safe  
8 use of new, emerging medical technologies through guidance development  
9 and evaluation of training and experience requirements for  
10 radiopharmaceuticals.

11                   Consistent with the memorandum to NMSS staff on the key  
12 principles for conducting reviews we are promoting a shared understanding of  
13 expectations on what constitutes reasonable assurance of adequate  
14 protection.

15                   These efforts include focusing on the most safety significant  
16 aspects of our work and utilizing risk insights to inform our activities. I  
17 discussed those in the earlier panel today and I won't repeat those because,  
18 as I said earlier, they apply across all business lines, not just the fuel facilities.

19                   Also as previously mentioned today by Steve we are  
20 undertaking revisions to the inspection manual chapter which covers the  
21 performance-based inspection approach and establishes relative priorities or  
22 inspection frequency for routine inspection of all materials licenses.

23                   The revisions will further risk inform our inspection program  
24 and are being completed in a phased approach. Phase 1 allows the  
25 extension of inspection frequencies based on proven good licensee  
26 performance and provides for grace periods for inspectors to complete routine

1 inspections.

2 This provides flexibility and focuses our inspection efforts on  
3 the areas where they are most needed. Phase 1 was completed in  
4 September of 2017 and resulted in modest savings.

5 In Phase 2 the staff is considering additional risk-informed  
6 changes to the inspection manual including revising inspection frequencies for  
7 various types of materials inspections and reevaluating the sample size of  
8 reciprocity inspections to take credit for inspections performed by other  
9 regions or Agreement States.

10 Phase 2 is expected to be completed at the end of this fiscal  
11 year and implemented in Fiscal Year 20. Phase 3 will start in Fiscal Year 20  
12 and will build upon the work in Phases 1 and 2.

13 Phase 3 will re-focus the procedures to define the essential  
14 inspection elements or minimum inspection areas necessary to ensure safety.

15 The procedures will also define supplemental inspection  
16 elements beyond the minimum required. This will provide the flexibility to  
17 adjust inspection scope based on the risk of the activity.

18 Phase 3 will focus our efforts on the most risk-significant  
19 aspects of licensee operations and will provide the construct for considering  
20 licensee performance in determining scope of inspections.

21 We are also using risk insights and operational experience  
22 to provide additional flexibility in our regulatory approaches for new  
23 technologies.

24 One example of that is we are evaluating the regulations  
25 related to industrial radiography to permit the use of new technologies to  
26 measure dose. We are considering the use of multifaceted devices to

1 measure doses a means for meeting the regulations rather than requiring the  
2 use of multiple devices as currently prescribed by the regulations.

3 This slide shows photos of the new device and some of the  
4 older forms of dosimetry. Our work in this area emphasizes enabling rather  
5 than prohibiting future technologies that may have safety or operational  
6 benefits while continuing to ensure safety.

7 This concludes my remarks and I will not turn it to Andrea  
8 Kock.

9 MS. KOCK: Thank you, John. Good morning, Chairman  
10 Svinicki and Commissioners. Today I am going to cover the status of the  
11 National Materials Program, including our interactions with our state, tribal,  
12 and federal partners on issues such as source security and emerging medical  
13 technologies. Next slide, please.

14 We are continuing to meet our mission while effectively  
15 responding to a changing environment and one way we accomplish this is  
16 through continuous engagement in coordination with our stakeholders to  
17 ensure that we see early any external factors that are changing.

18 For example, we are working with the Food and Drug  
19 Administration to exchange information on emergent radiopharmaceuticals.  
20 We are finalizing revisions to the Memorandum of Understanding between the  
21 NRC and the Food and Drug Administration regarding matters that are of  
22 mutual interest between both agencies.

23 Under the MOU the agencies plan to work together to share  
24 information, leverage expertise, and explore the possibility of streamlining our  
25 respective processes to avoid duplication of efforts while still fulfilling the  
26 missions of both agencies.



1                   We have also been working collaboratively with the  
2 Agreement States to ensure a common understanding of and prioritize  
3 activities associated with the National Materials Program and also assess the  
4 appropriate roles and responsibilities of the NRC and the States within the  
5 program.

6                   In January we issued for comment a procedure on the  
7 oversight of the National Materials program. The objectives of this procedure  
8 include promoting consensus on regulatory priorities with the States and  
9 establishing a single point of contact as the NRC champion for the National  
10 Materials Program.

11                   The procedure also indicates that the States also plan to  
12 establish a co-champion for the program.

13                   Implementation of the concepts and the procedure will  
14 address longstanding issues regarding the definition, priorities, and goals for  
15 the program as well as a State's request for a single point of contact at the  
16 agency.

17                   The staff is currently addressing comments on the  
18 procedure and we plan to finalize it next month. Back in January we formed  
19 a short-term working group to formulate innovative ideas regarding the  
20 appropriate roles and responsibilities of the States and the NRC under the  
21 National Materials Program.

22                   This evaluation is prudent at this time given the interest by  
23 some States in becoming Agreement States in the future and the fact that 80  
24 percent of our licensees are regulated by the States.

25                   It is expected that this group will make recommendations on  
26 whether any roles and responsibilities need to be reevaluated and then a more

1 detailed evaluation including implementation plans and timelines for any  
2 recommended changes will be assessed by a longer term working group that  
3 will be established at the end of this fiscal year.

4 Any policy issues that are identified in these efforts will be  
5 raised to the Commission. Next slide, please. We have significant  
6 engagement with our federal partners to ensure that the infrastructure for  
7 security of risk significant radioactive sources continues to be robust.

8 In October 2018 the Radiation Source Protection Security  
9 Task Force which evaluates source security within the United States  
10 submitted its report to the President and Congress in which the 14 task force  
11 member agencies concluded that there are no gaps in the area of radiation  
12 source protection and security that are not already being addressed by the  
13 appropriate agencies.

14 We have also comprehensively reviewed and responded to  
15 a recent GAO report recommending that the NRC take additional actions to  
16 secure radioactive materials.

17 The GAO made three recommendations: that the NRC  
18 consider socioeconomic consequences and fatalities from evacuations in  
19 determining what security measures should be required for radioactive  
20 materials, that we require additional security measures for quantities of  
21 Category 3 materials, and that the NRC require additional security measures  
22 when licensees have multiple quantities of Category 3 americium-241 at a  
23 single facility that in total reach a Category 1 or 2 quantity of material.

24 The NRC staff concluded that the GAO's report lacked  
25 significant context and that it focuses on the potential consequences of an  
26 event involving the dispersal of radioactive material without considering other

1 aspects of risk and that the references that the GAO used to support its  
2 finding, specifically a panel discussion and two studies conducted by Sandia  
3 National Laboratory, do not provide a sufficient basis for the GAO's  
4 recommended regulatory and policy changes.

5 As such, the NRC staff disagreed with the first and third  
6 recommendations in our response to the GAO, and with regards to the second  
7 recommendation the staff indicated that the agency was already considering  
8 the issue with security and accountability for radioactive materials at or below  
9 the Category 3 level based on the staff's 2017 re-evaluation of Category 3  
10 source security and accountability.

11 As you are aware the staff concluded that there is no threat,  
12 vulnerability, or consequence information suggesting the need to include  
13 Category 3 sources in the National Source Tracking System to require license  
14 verification of Category 3 sources through the License Verification System or  
15 to impose additional physical security measures on licensees possessing  
16 Category 3 sources.

17 However, the staff did recommend for the Commission's  
18 consideration a rulemaking to require that safety and security equipment be in  
19 place before granting a license to an unknown entity and to clarify license  
20 verification methods for transfers involving quantities of radioactive material  
21 that are below the Category 2 thresholds.

22 Our response also highlighted several important messages,  
23 including that the NRC along with the Agreement States have established a  
24 strong regulatory framework that ensures safe and secure use of sources.

25 The framework is complimented by those of several other  
26 federal agencies to ensure that the United States is appropriately positioned

1 to protect the country from potential terrorist threats.

2 We have also comprehensively reviewed the effectiveness  
3 of our regulations pertaining to source security and concluded that our  
4 requirements are effective in ensuring the security of risk-significant sources.

5 We continue to proactively reach out to tribes through  
6 successful implementation of the Tribal Policy Statement. Since our last  
7 Commission meeting the Tribal Protocol Manual was published.

8 The manual reflects the six overarching principles in the  
9 Tribal Policy Statement. Implementation of the Tribal Policy Statement and  
10 the manual has resulted in positive enhancements to our level of engagement  
11 with the tribes.

12 For example, the NMSS procedure for the preparation and  
13 review of rulemaking packages now provides guidance to ensure that  
14 rulemakings are conducted with the appropriate early and substantial  
15 involvement of the tribes.

16 Since the last time we've briefed you we have initiated  
17 several enhancements to the tribal program that are anticipated to assist the  
18 staff in effectively consulting with the tribes.

19 In the Spring of 2018 we initiated a revision to our internal  
20 procedures to clearly define the tribal liaison's roles and responsibilities.

21 We also established qualification requirements for the tribal  
22 liaisons and training requirements for other NRC staff. We anticipate  
23 completing these activities by Fiscal Year 2020.

24 In addition to the finalization of the 10 CFR Part 35  
25 rulemaking activities in 2018 we continue to evaluate our regulatory  
26 approaches to enable the safe use of new emerging medical technologies.

1                   As Steve noted the emergence of new medical technologies  
2 will require that the staff develop licensing guidance. In anticipation of an  
3 increase in the number of new medical technologies we continue to engage  
4 the industry as well as the FDA to solicit information on these new  
5 technologies so that we can be prepared to safely license them.

6                   The NRC's regulatory framework for the review of new  
7 medical technologies provides a flexible approach that provides for an efficient  
8 review of the new technologies.

9                   This slide illustrates some of the new medical technologies  
10 that we are reviewing, the CivaSheet and P-32 OncoSil on the left hand side  
11 of the slide, and on the right hand side of the slide there are two new gamma  
12 stereotactic devices that we are reviewing as well.

13                  Due to the increase in the uses of therapeutic  
14 radiopharmaceuticals that have unique characteristics we are engaging with  
15 the medical community along with the ACMUI to determine whether tailored  
16 training and experience requirements for different categories of different  
17 radiopharmaceuticals could be implemented.

18                  The staff has solicited extensive comments on this issue  
19 and we are currently evaluating the comments to determine whether a change  
20 to the training and experience requirements for radiopharmaceuticals  
21 requiring a written directive should be recommended or whether the current  
22 requirements should remain in place.

23                  This concludes my remarks. I will now turn the briefing  
24 over to Paul Michalak to discuss trends in the IMPEP Program and topics  
25 related to Agreement State Program. Thank you.

26                  MR. MICHALAK: Good morning, Chairman Svinicki and

1           Commissioners. The NRC's agreement state program has successfully  
2           carried out its mission for 57 years.

3                       Starting with the first agreement signed with the  
4           Commonwealth of Kentucky in 1962, the NRC's program has matured and  
5           evolved in the last five decades.

6                       Currently, 38 states have signed formal agreements with the  
7           NRC and have the regulatory authority to license and regulate byproduct  
8           materials, source materials and certain quantities of special nuclear materials.

9                       It's important to note that our oversight and liaison activities  
10          in the agreement state program support the national materials program.  
11          Under the national materials program, the NRC and the agreement states  
12          function as regulatory partners.

13                      The IMPEP program continues to be an effective means of  
14          evaluating both an agreement state and regional materials program  
15          performance.

16                      Contributing to this strong performance is the act of  
17          participation of the agreement state management and technical staff in the  
18          IMPEP program. Including participation in IMPEP reviews, an associated  
19          management review board meetings and IMPEP related training.

20                      Between Fiscal Years 2017 and 2018, we saw a 50 percent  
21          increase in agreement state technical staff participating in IMPEP reviews.

22                      For the recently completed February 2019 IMPEP team  
23          member training, 14 agreement state technical staff participated. This is a  
24          significant increase from the previous year and bodes well for future increases  
25          in agreement state participation and IMPEP reviews.

26                      Agreement state participation and IMPEP reviews provide

1 the benefit of obtaining a different perspective from that of the NRC Staff.  
2 Overall, the NRC and agreement state performance, as measured by the  
3 IMPEP reviews, indicates public health and safety are protected.

4 All the state programs reviewed in Fiscal 2018 were found  
5 adequate to protect public health and safety, and all but one was found  
6 compatible with the NRC's program. In that case, the state is taking action to  
7 address this finding and the NRC is monitoring the state's progress.

8 The IMPEP process provides a graded approach in cases  
9 where the review finds the program weaknesses exist regarding the adequacy  
10 or compatibility of the agreement state's program, yet the weaknesses or not  
11 so serious as to find the program inadequate to protect public health and  
12 safety.

13 In these cases, monitoring, heightened oversight or  
14 probation of the agreement state program by the NRC may be implemented.  
15 Of the 38 agreement states, three are on monitoring, one is on heightened  
16 oversight. At this time, none of the 38 agreement state programs are on  
17 probation.

18 In terms of trends, over the last six years, the program is  
19 showing a decreasing number of states in increased oversight status. IMPEP  
20 reviews are also performed on the NRC's regional materials programs.

21 Regions I, III and IV, and headquarter sealed source and  
22 advice evaluation program. All four programs were found adequate to protect  
23 public health and safety in their previous IMPEP reviews.

24 Although IMPEP has been successfully implemented since  
25 its initial pilot in 1994, we continue to look for ways to improve the program  
26 and ensure its implemented consistently.

1                   In the Fiscal Year 2018, a team composed of NRC and  
2 agreement state staff, completed a focus self-assessment of IMPEP. The  
3 self-assessment examined the effectiveness of two IMPEP performance  
4 indicators that agreement states have historically found to be among the most  
5 challenging: technical staffing and training, and the status of materials  
6 inspection program.

7                   The self-assessment team concluded, that IMPEP is  
8 effective in fulfilling its basic objective of evaluating the adequacy and  
9 compatibility of agreement state and NRC materials activities, under the two  
10 performance indicators evaluated.

11                  The team did not recommend any changes to either  
12 performance indicator. However, it did develop several recommendations,  
13 including enhancements to IMPEP related training.

14                  We have anticipated several of the team's  
15 recommendations, we have implemented rather, several of the team's  
16 recommendations and planned to complete our follow-up actions this fiscal  
17 year.

18                  To ensure continuous improvement of the program, the  
19 NRC Staff is finalizing a revision to the primary guidance document used at  
20 IMPEP. The revision includes a refinement in the evaluation criteria used in  
21 IMPEP reviews, providing clearer guidance to IMPEP review team members  
22 and helping maintain consistency in the evaluation process.

23                  The Staff is also exploring, including a change in the  
24 management review board process, which would provide an equal role  
25 between the agreement states and other members on the Board, while  
26 maintaining the NRC's congressionally mandated oversight role in the national



1 materials program.

2 As you have heard during last month's meeting with the  
3 Organization of Agreement States, this is an area of great interest to the  
4 states.

5 In early 2019, in an effort to ensure efficiency in our process  
6 for documenting and reviewing IMPEP findings, we established a group of  
7 headquarters regional and Agreement State representatives to examine  
8 whether there are aspects of the IMPEP that can be streamlined.

9 The working group plans to finish its work early next month,  
10 and we will then evaluate the working groups findings.

11 In terms of IMPEP training, the NRC Staff is now conducting  
12 an annual IMPEP team leader workshop. The objective of the workshop is  
13 to promote greater understanding of how IMPEP review indicators should be  
14 reviewed and the criteria to be emphasized in IMPEP. Thereby ensuring that  
15 consistent IMPEP review outcomes are sustained in the future.

16 The NRC works collaboratively with the agreement states to  
17 address areas of interest to the states. One of the primary interests of the  
18 agreement states is ensuring that their staff is adequately trained.

19 We continue to be successful in meeting these training  
20 needs. For example, in Fiscal year 2018, working in close coordination with  
21 the technical training center in Chattanooga, Tennessee, we provided 37  
22 training courses to Agreement States, including five online courses with 496  
23 slots filled with Agreement State personnel. We project to exceed that  
24 number in Fiscal 2019.

25 With the technical training centers implementation of  
26 several online and blended training courses, these training courses are now

1 more accessible to the states with the added benefit of travel savings costs.

2 There is significant Agreement state participation in the  
3 national material activities. In addition to the IMPEP review participation I  
4 discussed about earlier, Agreement State managers regularly participate as  
5 liaisons in the IMPEP management review boards.

6 Agreement State staff also participated in NRC working  
7 groups. With Agreement States regulating over 80 percent of the material  
8 licenses in the nation, their view point is essential in the development of  
9 informed regulations and associated guidance.

10 In order to fully inform the Commission's rulemaking  
11 decisions, we have also facilitated earlier involvement of the Agreement  
12 States in the rulemaking process. Through the development of a new  
13 procedure that ensures early Agreement State input into the, those rulemaking  
14 processes.

15 The significant interactions and support that the agency  
16 provides to our Agreement State partners underscores that. With the number  
17 of Agreement States increasing, there remains a need for a robust and  
18 comprehensive assistant provided by the NRC's Agreement State program.

19 On September 20, 2018, the Commission approved an  
20 agreement with the State of Wyoming.

21 Chairman Svinicki and Governor Mead signed the  
22 agreement on September 25, 2018 and Wyoming became the 38th  
23 Agreement State on September 30th, 2018. According to the Wyoming  
24 Department of Environmental Quality, the agreement process was completed  
25 two years ahead of their estimate, saving the state \$2.5 million.

26 Review and approval of the agreement was a significant

1 accomplishment given several technical, legal and policy challenges with the  
2 agreement.

3 The agreement involved a transfer of 14 uranium recovery  
4 licenses to the state of Wyoming. Immediately following the implementation  
5 of the agreement, Staff notified 104 material licensees in Wyoming, that  
6 consistent with the State's request, they remained under NRC jurisdiction.

7 We have completed the transfer of all agency records  
8 related to the Agreement State, to the agreement, to the State of Wyoming,  
9 and have scheduled a June 2019 meeting with the Wyoming Department of  
10 Environmental Quality to get an understanding of the state's initial  
11 implementation of their agreement program.

12 The first IMPEP review of the Wyoming Agreement State  
13 program will occur in the Spring of 2020.

14 The Staff is currently working with the State of Vermont on  
15 its application to become an Agreement State, and significant progress has  
16 been made.

17 Earlier this month, Vermont Governor Philip B. Scott  
18 certified that Vermont has a program to regulate byproducts sourced and  
19 certain quantities of special nuclear material and submit it in its formal  
20 application to become an Agreement State.

21 In preparation to become an Agreement State, Vermont has  
22 aggressively taken advantage of NRC training courses and worked with  
23 Region I by participating in inspector accompaniments and in-house licensing  
24 training to prepare for the orderly transfer of licenses once the agreement goes  
25 into effect.

26 In January 2019, Vermont's legislative committee on

1 administrative rules, approved the states radioactive materials regulations.  
2 That approval is the final administrative hurdle for their regulations to support  
3 an agreement.

4 The Staff is currently documenting its assessment of  
5 Vermont's final application. Staff will provide its assessment, with the draft  
6 agreement, in the paper to the Commission, for review and approval.

7 Vermont has requested an effective agreement date of  
8 October 1, 2019. This concludes my remarks. I'll now turn the briefing over  
9 to Joseph Nick.

10 MR. NICK: Thank you, Paul. Good morning, Chairman  
11 and Commissioners.

12 The regional staff continue to support the Agency's mission  
13 to ensure the safe and secure use of radioactive materials with a mature  
14 inspection and licensing oversight program. And continued emphasis on  
15 openness and efficiency.

16 Today I'll be discussing our current activities, our recent  
17 accomplishment, trends and -- I'm sorry, recent initiatives -- to ensure our  
18 inspection and licensing processes continue to be as effective and as efficient  
19 as possible.

20 In 2018, the regions collectively conducted licensing actions  
21 with a relatively stable workload, as compared to the past few years.

22 In the last five years, the average number of licensees in  
23 Region I, for example, was stable at approximately 840, plus or minus 40, or  
24 a five percent variation from year-to-year.

25 In licensing, the number of actions is also currently stable,  
26 however, a request for amendments or renewals may increase in the short-

1 term based on the recent process and regulatory changes, including 10 CFR  
2 Part 35 requirements for the associated radiation safety officers.

3 During Fiscal Year 2018, the regions collectively completed  
4 1,420 licensing actions. I'll provide highlights of our licensing efforts over the  
5 past year in a later slide.

6 The regions collectively conducted inspection enforcement  
7 and allegation activities, also with the relatively steady workload as compared  
8 to previous years.

9 During Fiscal Year 2018, the regions completed 787 total  
10 inspections. The sufficient number of allegations for materials licenses did  
11 not present itself in order to discern a trend of upward or downward.

12 On the left part of this slide you can see one of our Region I  
13 inspectors in the field. And on the right, the figure shows the number of  
14 escalated enforcement actions in the nuclear materials business line from  
15 calendar year 2013 through 2018.

16 During calendar year 2018, the regions collectively issued a  
17 total of 30 escalated enforcement actions. This compares to 50 total  
18 escalated enforcement actions in 2017 and 64 in 2016.

19 Many of our escalated enforcement cases continue to  
20 involve security controls required by 10 CFR Part 37. However, the number  
21 of violations is decreasing as licensees further develop their programs to  
22 implement these security requirements.

23 In addition, although we continue to cite violations involving  
24 controlled portable gauges, we are further risk informing our characterization  
25 to violations and consistency in application of the enforcement policy.

26 Our inspection and licensing activities include the review of

1 new and emerging technologies. We work with NMSS in developing  
2 successful strategies that enable licensing and safe use of these technologies  
3 through innovative and flexible regulatory approaches.

4 One example involving emerging technology discovered  
5 during an inspection involved the use of the direct ion storage dosimeter. The  
6 direct ion technology is a new technology that involves remote data extraction  
7 using vendor supplied software that transmits data in an electronic form to an  
8 accredited vendor for calculation and validation of the dose measurements.

9 Several inspections were completed in 2018 in the region  
10 that utilizes the new issued enforcement guidance memorandum, under which  
11 the NRC applies safety criteria to accept the use of this new technology.  
12 Consistent with the Commission's direction, NMSS has initiated rulemaking to  
13 enable the safe use of this technology.

14 Another recent example involved a license request for the  
15 use of tin-117 for the treatment of arthritis in pets. While the NRC has  
16 guidance for the release of pets, we did not have guidance for this therapy  
17 type.

18 Based on the proposed release criteria provided by the  
19 licensee, our licensed reviewers calculated the planned treatment of the pet  
20 and subsequent release from the licensed facility could easily exceed the  
21 allowable dose to the public.

22 Headquarters effectively supported regional efforts to  
23 evaluate the licensee's request and provided guidance on acceptable draft  
24 released criteria for pets treated with tin-117. Including clarification of  
25 whether the licensee could take credit for specific verbal instructions in  
26 developing their release criteria, since the current NRC guidance only includes

1 specific guidance for release of pets following radioactive sodium iodine  
2 therapy treatments.

3 In a coordinated effort with the Agreement States, NMSS  
4 staff planned to finalize the guidance on acceptable release criteria for pets  
5 treated with this tin-117. And will look for opportunities to make the guidance  
6 more performance-based so that it can be applied to more than one therapy  
7 type.

8 Some recent accomplishments have added value to the  
9 NRC mission to protect the health and safety of the public in the regions.

10 One example is the Agency's initiation of a source  
11 collection, or source roundup, in Puerto Rico after the recent hurricanes,  
12 resulting in the proper disposal of over 400 sources and over four curies of  
13 radioactivity from 43 separate facilities.

14 We coordinated with the Department of Energy and the  
15 Conference of Radiation Control Program Directors Source Collection and  
16 Threat Reduction Program, which is an initiative to help reduce the amount of  
17 unused radioactive material in a very vulnerable environment following the  
18 natural disasters.

19 The regional staff continued to coordinate with each other  
20 fostering consistency and knowledge transfer.

21 Recent examples including pairing up regional inspectors  
22 across the regions. Regions share inspection plans and assignments and  
23 assignments and identified candidates for accompaniment and team  
24 inspections.

25 For example, Region I will be sending in an inspector to an  
26 industrial licensee in Region III this year as part of this effort.

1                   The regions also work together on licensing actions and  
2 coordination of event response. A recently reported event involved a  
3 shipment of radioactive material across state lines in two different regions.

4                   The issue was quickly identified as requiring effective  
5 coordination for the most efficient outcome. Timely efforts resulted in  
6 effective cooperation to assign the inspection follow-up and to ensure that  
7 future inspections could update in the regions, would scope the event  
8 information appropriately.

9                   This concludes my remarks, and I'll turn it back over to Steve  
10 West for closing remarks.

11                  MR. WEST: Thank you, Joe. Looking forward to nuclear  
12 materials user's business line strategic focus areas are the continuous efforts  
13 to become a modern risked informed regulator to continue to enrich our  
14 partnership with the Agreement States as co-regulators of the national  
15 materials program. And they continue to look for a smarter, innovative and  
16 transformative ways to accomplish our day-to-day work and our mission.

17                  In closing, I take this opportunity to thank the Staff who  
18 helped prepare our presentations today and the Staff who support the work  
19 and the many accomplishments in the programs within the nuclear material  
20 users business lines. We are ready for your questions.

21                  CHAIRMAN SVINICKI: Well, thank you for that. Thank  
22 you for the presentations.

23                  And as you noted, Steve, to all those of your colleagues who  
24 helped you compile and present and prepare this information for presentation  
25 here today. We will begin, once again, with Commissioner Caputo.

26                  COMMISSIONER CAPUTO: Good morning. John, I'm



1 going to start with you. I know Commissioner Wright mentioned earlier a  
2 memo that was produced by your predecessor, Marc Dapas.

3 MR. LUBINSKI: Yes.

4 COMMISSIONER CAPUTO: Certainly, with the help of  
5 NMSS management. In providing key principles for improving NMSS  
6 reviews, I think this is a good example of transformative thinking.

7 Included in these principles was a proposed "back-fitting  
8 evaluation or other structured approach." Would you please describe in more  
9 detail what guidance and training you think there should be for Staff to  
10 evaluate how to factor in back-fit type considerations?

11 MR. LUBINSKI: Thank you. Appreciate that question.  
12 When the Agency rolled out its back-fitting training, everyone who worked in  
13 an area that had licensees subject to back-fit were required to take the  
14 training. And people in other areas were given the opportunity to attend the  
15 training, but it was not required.

16 The areas of nuclear material users do not have back-fit  
17 protection, therefore it was not a requirement for them to take the training.  
18 However, I agree with what Marc put in his document, we should be following  
19 the same type of analysis as we're going forward with those licensees, even  
20 though there is not a specific requirement in the regulations.

21 I brought up recently in an all hands meeting that we do  
22 need to rollout the training. Feedback I received was, for those who took the  
23 training already, it seemed to be slanted a little more towards examples of  
24 reactors and fuel facilities and needed guidance that was more tailored to their  
25 area.

26 So, we need to, number one, work on that training and the

1 development. And I plan to reach out to CRGR who had the task of  
2 developing the initial training, to do a modification of that module.

3 I'd like the initial training to be in person, so a lot of people  
4 to ask more questions where a refresher training can be online. Also related  
5 to that, there's training in the area of using risk-informed decision making.

6 We just had a session yesterday, and I was talking to one of  
7 the coordinators, we're already starting to develop modules that are more  
8 appropriate with examples towards the materials area, rather than the reactor  
9 area. To put that into to this, that would be, again, another training coming  
10 out of that memo.

11 So we're just initiating what that training would be and what  
12 it would look like.

13 COMMISSIONER CAPUTO: Okay, thank you. Paul, the  
14 Staff conducted nine IMPEP reviews last year. So clearly this took a great  
15 deal of effort and coordination, both internal to the Staff and with the  
16 Agreement States. So kudos to you and the Staff for all of that effort and  
17 work.

18 So, I guess this question, perhaps Andrea can contribute as  
19 well, there was a 50 percent increase in Agreement State technical staff  
20 participating in the IMPEP reviews. Between 2018 and 2017.

21 Why do you think that is and do you expect the trend to  
22 continue?

23 MR. MICHALAK: That trend was developed by us. So we  
24 select who the agreement, who will work on the IMPEP teams.

25 And with the Agreement States holding 80 percent, 80  
26 percent plus of the licenses, it just seems important that we look forward in

1 the future. What we are we going to do when there are 90 percent, 95  
2 percent.

3 So if we're going to have this oversight role, we have to start  
4 bringing in Agreement State people. So we made a concerted over the last  
5 year to increase Agreement State participation.

6 So that was taking the pool that was provided by the  
7 Agreement States and selecting them. We selected those.

8 But then we were worried the pool was too small, so then at  
9 last year's OAS annual meeting we solicited and said, we really need more  
10 Agreement State people to participate in the IMPEPs. And we got 14 people  
11 in the IMPEP team member training this last January.

12 And so, I think this trend will continue. And it really brings  
13 a different perspective to the IMPEPs. Because part of it is, we're the feds  
14 and we're telling a state, and we're trying to provide feedback. Even when  
15 it's constructive feedback. I mean, they look at us like we're feds.

16 But when it comes from an Agreement State partner, it has  
17 a different tone to it. Or at least they hear it in a different tone.

18 And so, it's really been successful. We're really happy with  
19 bringing in more Agreement State people into the IMPEP process.

20 COMMISSIONER CAPUTO: Okay.

21 MS. KOCK: I don't have anything to add. That was all  
22 Paul, all of his effort. And its kudos to him for putting out the word last year  
23 and getting additional Agreement States into the IMPEP program.

24 COMMISSIONER CAPUTO: But I have a separate  
25 question for you on --

26 MS. KOCK: Good.

1 COMMISSIONER CAPUTO: -- source security. The  
2 GAO report is fair recent, but have you had any feedback from Agreement  
3 States on it or any sense of their views?

4 MS. KING: The Agreement States did take a look at the  
5 GAO report, they didn't provide any comments. We have talked to them  
6 extensively.

7 Historically the Agreement States don't support any  
8 additional regulation of Category 3 sources. So that's where they stand on  
9 that issue.

10 COMMISSIONER CAPUTO: Okay.

11 MS. KING: And they've reiterated that, I think at the last  
12 Commission meeting and at the board meeting we attended more recently.

13 COMMISSIONER CAPUTO: Okay, thank you. And,  
14 Paul, back to you with one more question on Agreement States.

15 So, a lot of training and good work going on at the technical  
16 training center. Is there an opportunity here, given the breath of that training,  
17 to pursue some sort of train the trainer strategy, to begin the education sum  
18 of the Agreement State personnel to do some fundamental training of their  
19 own people?

20 MR. MICHALAK: We actually have an opportunity with  
21 that, later this summer. We've had a little bit of a backlog in our technical --  
22 our inspection class.

23 And Pennsylvania is offering, they took the training material  
24 and they're offering the program, the training program, in Harrisburg. And  
25 they've actually given us some seats in their training for other Agreement  
26 States.

1                   Because we had a little bit of a backlog. We were thinking  
2 we had to offer another class and then PA stepped up and said, look, we're  
3 offering, we're going to train our own people, will give you, I think we're getting  
4 five seats, Joe, yes. And so they're giving us five seats to kind of knock our  
5 backlog down on inspections.

6                   So we're starting to do that. We're making the material  
7 available to the states and PA has jumped in. And they're actually doing that  
8 later this summer.

9                   COMMISSIONER CAPUTO: All right, wonderful. Good  
10 work.

11                  MS. KOCK: I'd like to add to that. One of the priorities that  
12 we develop with the states, at the board meeting this spring, is moving toward  
13 a center of expertise concept in the states.

14                  So where states have expertise in certain technical areas.  
15 Can they step up to do things like guidance development and training.

16                  So I think what you're suggesting is also in line with the  
17 priorities of the states that we developed collectively this spring.

18                  COMMISSIONER CAPUTO: Okay, wonderful. Thank  
19 you.

20                  CHAIRMAN SVINICKI: Thank you. Commissioner  
21 Wright.

22                  COMMISSIONER WRIGHT: Thank you very much. So,  
23 good morning again, and to the new ones here.

24                  John, in both panels today you spoke about greater use of  
25 risk insights. And you kind of addressed it a little bit with Commissioner  
26 Caputo.

1 Help me understand what that really means on a practical  
2 level for you and, I guess, how is it implemented, what does success look like,  
3 and then I guess between maybe you and Andrea, is there an example where  
4 you've used it?

5 MR. LUBINSKI: So, I ask Andrea as I'm talking to think of  
6 a specific example that she can provide for us, but when I look at it, it's really  
7 how you ask the questions during, whether it's a license review and an  
8 inspection, and starting to get the people to think of, what are the  
9 consequences of what can happen. What could happen, how likely is it.

10 I think too many times they're thinking of the, what can  
11 happen, how bad is it, but not thinking of the likelihood associated with that.  
12 And not looking at the layers of controls that are in place.

13 We talk in the reactor arena about defense-in-depth, we  
14 don't necessarily use that terminology in the material side, but we do have  
15 layers of protection that we have in certain areas. And getting people to think,  
16 from the standpoint of not just the consequences of what can occur, what are  
17 the layers that are already in place at this point, and then with respect to each  
18 layer how effective it is.

19 Someone may look at one layer and say, I think this layer  
20 may not be as robust as it may have been at another site and getting them to  
21 think, well, that's okay because that's in combination with three or four layers  
22 of protection we already have and therefore overall, what is the overall  
23 likelihood of the bad thing occurring.

24 When you start to ask those questions, I think that gets the  
25 mind-set started on what risked informed thinking really looks like.

26 MS. KOCK: Thanks for that question because I think

1 sometimes it's a little bit more difficult for folks in the materials area to really  
2 put that concept of risk in the practice, and the question comes up a lot.

3 And actually, we just talked last week at our all hands  
4 meeting, as well as I was out in Region III last week, and we talked about this  
5 to try and put it in some terms.

6 And for me the big one is focusing on what's really  
7 important. And I think what we're looking at in terms of Phase 3, looking at  
8 our inspection procedures and trying to identify what are really the essential  
9 parts of an inspection.

10 And it differs by licensee. For inspectors, I think is one  
11 thing that I would point to.

12 The other thing I usually point to is flexible regulatory  
13 approaches, performance-based regulation. And people will say we do that.

14 We do it. I think we need to do it a little bit more and think  
15 more creatively about how to do it.

16 In the one area that I'll point to, in the medical area where I  
17 see that playing out is under our 35.1000 provision for review of new medical  
18 technologies. It's kind of open ended. It's very high-level.

19 And it points to other parts of our regulations for just some  
20 high-level concepts of what's important when you license new medical  
21 technologies. And actually, living through the transformation effort.

22 It was one of the areas in our regulation that I see as a  
23 success. So, to me, as this high-level performance-based regulation, I think  
24 we can take that concept and apply it in some other areas.

25 And we're trying to do that, for example, in the example that  
26 John gave in radiography regulations as well.

1 COMMISSIONER WRIGHT: Thank you for that. So, it's  
2 good to see you again.

3 MS. KOCK: Good to see you.

4 COMMISSIONER WRIGHT: New position. I'm starting to  
5 see a theme. Change. And I see that as an opportunity too, so I'm looking  
6 forward to the positive stuff you're going to be doing and the business line that  
7 you're working with here.

8 So, last week I mentioned I went to NIH, and I want to thank  
9 you and Joe for everything that you all did to help out. And it was fascinating  
10 for me to see the emerging new technologies and to think about just what's  
11 happened in the short decade since I was treated myself. So, it's amazing.

12 And I know we have an important role in protecting radiation  
13 workers and the public from exposure. And we got to balance all that with  
14 potential benefits to the patients.

15 So you were addressing a little bit, just a second ago, about  
16 some of the activities the NRC has in this area. Are we doing, are we making  
17 sure that we're doing everything possible not to be an obstacle to some of  
18 these things and are the things, is there more that we can do in this area to  
19 make sure that we're not an obstacle?

20 MS. KOCK: So I think we're doing some. I think there is  
21 more work to be done. I think, again, pointing back to the area of medical  
22 technologies, I think that's a very good example. It's working well.

23 We're looking at training and experience to make sure we're  
24 not an obstacle. We've heard from some perhaps we are, but we're getting  
25 some feedback to see, is that an area of our regulations where we need to be  
26 more involved, less involved.



1                   And I think we need to strike the right balance. So, if you  
2 look at the medical policy statement, our goal is to make sure that radiation is  
3 administered in medical practice in a way that ensures radiation safety.

4                   But we shouldn't cross the line in the medical practice. And  
5 I think that's what we always need to keep in mind.

6                   So I think we're a good bit along the road. I think we're  
7 finding areas of our regulations where we can be more performance-based  
8 and make sure that we're not an obstacle.

9                   And the most recent examples are the ones that John talked  
10 about in radiography. There is, in materials like so many other areas, there  
11 is areas of our regulation that are very compliance based, they're very  
12 technology specific. And as those come up, we're trying to address them  
13 very quickly.

14                  MR. LUBINSKI: If I can add, and I want to compliment  
15 Andrea, we're looking right now at the training and experience for  
16 radiopharmaceuticals. The Commission was recently briefed by ACMUI  
17 about that. And they provided the view that they felt that the current  
18 requirements are appropriate.

19                  We're still looking at that though because we're looking at  
20 the number of hours and asking ourselves, is that really appropriate, based on  
21 the hazard associated with all of the use of these isotopes.

22                  And where I'm complimenting Ms. Andrea, she's  
23 recommended, and we're going forward with, issuing a federal register notice  
24 to get some additional stakeholder input on whether or not there is a concern  
25 in being an impediment in this area and whether or not, and we'll focus it very  
26 much on that, what is the use out there, what would be an impediment, with

1 the underlying question of, what really is adequate to ensure that they're being  
2 used correctly.

3 From my own view, just focusing on number of hours may  
4 not be appropriate. Looking at really what are the training objectives, what  
5 are the qualification of objectives may be another way to go. And that would  
6 be something else that would be asked in the federal register.

7 So getting that broader stakeholder input before we re-  
8 engage the Commission in that area we think is appropriate.

9 COMMISSIONER WRIGHT: Yes. I just noticed that, so  
10 much is happening and there is so much advancement in just the creation of  
11 isotopes and other things that are so, I mean, are we prepared with our own  
12 review people and stuff.

13 And I see can where we could get behind. It could happen.  
14 Because it's moving so fast.

15 MR. LUBINSKI: Yes. The regulations provided, as  
16 Andrea said, in 35.1000. But being able to move forward in the training  
17 experience, there's certain subsets of the regulation that allow for the simple  
18 one dose that you get.

19 But there may be certain variations that we don't want to  
20 have to go through a rulemaking or evaluation each time and how do we make  
21 that more performance-based --

22 COMMISSIONER WRIGHT: Sure.

23 MR. LUBINSKI: -- using another term here, in setting that  
24 objective first of a risk informed approach to the training and experience, and  
25 then allow for more performance-based and how its implemented.

26 COMMISSIONER WRIGHT: Thank you. So, Andrea, I'm

1 going to leave one more question for you.

2 And this, I hope I don't surprise you with this, but last month  
3 we heard from ACMUI on its analysis of medical event trends. And you know  
4 the Commission is currently reviewing the Abnormal Occurrences report to  
5 Congress.

6 And I know the Staff presented a paper to the Commission  
7 a couple of years ago about the AO criteria. Do you think it's time for us to  
8 look at that again?

9 MS. KOCK: I think we can look at it again. Obviously  
10 you've read the paper, and the Staff's perspective in that paper was that we  
11 should re-look at what's reported to Congress.

12 And I go back to our role. Our role is to ensure that medical  
13 uses are applied in a manner that ensures radiation safety.

14 And there's a difference between what should be reported  
15 to us, to us through an event, so that we can follow-up on it and make sure,  
16 through inspection, that appropriate actions are taken and what should be  
17 reported to Congress, which should be, in my mind, at a much higher level.

18 So I think the Staff position back in 2015 was that we should  
19 take a re-look at it. I think given that it's been a couple of years since then  
20 we'd have to look at, is there any new information we didn't have then or are  
21 there new perspectives.

22 But that impediment still remains, about what is the  
23 appropriate threshold for reporting to Congress.

24 COMMISSIONER WRIGHT: Okay, thank you. And, Paul,  
25 I got to come quickly to you.

26 So, thank you for your leadership in the Agreement State

1 stuff. I've heard on several occasions that the relationship between the states  
2 and the NRC is the best it's ever been, so you should be proud, and your staff  
3 as well, for what you're doing there.

4 Vermont, very quickly. They're making progress, and  
5 apparently, we're making a lot of progress on that, their application.

6 Are there any complexities to the application or are there  
7 policy decisions that need to be made or do you foresee any challenges to  
8 meet their --

9 MR. LUBINSKI: We have not identified --

10 COMMISSIONER WRIGHT: -- October 1st --

11 MR. LUBINSKI: -- any significant challenges with the  
12 Vermont agreement. Now, it's going to look a lot like the Wyoming schedule  
13 this summer.

14 I mean, if you think about it, right, we have two Commission  
15 papers that will be coming your way. One Commission paper will be for  
16 approval to issue the draft assessment and agreement for public comment.  
17 And that's four weeks.

18 Wyoming came to you guys, came to the Commission  
19 rather, in late May. So we're going to look at the same kind of late May, early  
20 June for the Vermont paper. If we're going to hit an October 1st deadline, like  
21 we did with Wyoming.

22 Of course, the second paper would be sometime in the  
23 August time frame.

24 COMMISSIONER WRIGHT: Okay.

25 MR. LUBINSKI: And that's assuming that there isn't some  
26 comment that blows something up. But we don't anticipate that. This is a

1 standard agreement.

2 Wyoming had some twists and turns. Vermont really  
3 doesn't. It's a standard agreement. We have 37 other examples of this and  
4 so we feel pretty good.

5 Now, we're still, we're going through their formal application,  
6 we have not identified anything. We've worked hard with them --

7 COMMISSIONER WRIGHT: Sure.

8 MR. LUBINSKI: -- leading up to this. So we're not  
9 expecting any surprises in there.

10 COMMISSIONER WRIGHT: Okay, thank you. I'm going  
11 to stop there so Steve doesn't mark off any more questions.

12 MR. LUBINSKI: Okay.

13 (Laughter.)

14 CHAIRMAN SVINICKI: Well, thank you all very much.  
15 Maybe I'll just follow-up on that point.

16 I'm not asking you to kind of speculate out loud, Paul, but  
17 are there any other states that have expressed, either privately or publicly, an  
18 intention to tee up for requesting Agreement State status, beyond Vermont?

19 MR. LUBINSKI: We've heard some from Indiana and from  
20 Michigan.

21 CHAIRMAN SVINICKI: Okay.

22 MR. LUBINSKI: Okay. But nothing in terms of letters  
23 have been sent.

24 CHAIRMAN SVINICKI: And at least Michigan, I think I've  
25 been hearing that --

26 MR. LUBINSKI: Yes.

1 CHAIRMAN SVINICKI: -- for the entirety of my service on  
2 the Commission, which is over ten years now. So I know some have been  
3 contemplating it for a long time, but I just wondered if there were, if we had  
4 like budgetary planning for another one on the near horizon.

5 MR. LUBINSKI: Um --

6 CHAIRMAN SVINICKI: No, okay.

7 (Laughter.)

8 CHAIRMAN SVINICKI: Okay. All right, thank you.  
9 Thank you. It's maybe just too speculative at this point.

10 And maybe just to continue on the topic of IMPEP and  
11 Agreement State issues. One of the things, when we look at that program, is  
12 that often state agencies are not entirely in control of the ability to make timely  
13 changes to state regulations. Sometimes it requires legislative steps.

14 As a result of any of the broad look that was done at the  
15 health of the program, did the Agreement States themselves have any  
16 thoughts or best practices on anything they could do for the states that are  
17 challenged in that way to help maybe have more timely adoption of needed  
18 updates?

19 MR. LUBINSKI: Not off the top of my head, but I have to  
20 smile because the NMP short-term working group, one of the priorities is to  
21 look at, is there a way we can risk inform the process so that simpler  
22 amendments that aren't as safety focused, they would have more than three  
23 years to enact. And so, there is a set of Agreement States that still bristle at  
24 the three years.

25 And some states, I mean, they're so bureaucratic. I won't  
26 name on in particular, but they just, they have a hard time meeting the three

1 years because it's such a laborious process. I guess --

2 CHAIRMAN SVINICKI: Now I kind of have to laugh  
3 because if they can promulgate something that we had to adopt too in three  
4 years, I think we'd be hard pressed to do it.

5 So I don't know if, I think if states and the federal  
6 government start throwing the term bureaucratic around, that could go  
7 nowhere good, okay.

8 (Laughter.)

9 CHAIRMAN SVINICKI: And then, but thank you for that.  
10 For that update.

11 And I do think, I think I had inquired about a similar thing  
12 with our state partners and they had said they were also looking at maybe  
13 writing kind of model templates for each other, that they could at least have a  
14 work product to go to their authorities respectively and say, at least I'm not  
15 developing it from a blank sheet of paper. So I know they were looking  
16 amongst themselves at other opportunities.

17 MR. LUBINSKI: In a lot of states, Vermont being one  
18 example, and New York is implementing this, is to adopt our regulations by  
19 reference.

20 CHAIRMAN SVINICKI: Okay.

21 MR. LUBINSKI: And that is a much simpler process.

22 CHAIRMAN SVINICKI: Yes.

23 MR. LUBINSKI: And I think you've seen, were seeing  
24 some movement to do that. And that course, they can usually be three years  
25 on that one.

26 CHAIRMAN SVINICKI: Okay, thank you. And I was

1           wondering, when the slides were released in advance of the meeting, why  
2           there was a picture of a dog and now I know.

3                       I'm not a pet owner. I didn't realize that there were  
4           radiotherapies and radiopharmaceuticals for pets.

5                       As much as we worry about patients following patient  
6           instructions, obviously an animal isn't going to be able to, the owner, a  
7           responsible owner, would have to figure that out. But that was interesting  
8           that that was highlighted here. That's got to provide a lot of unique  
9           complexities.

10                      I'm not sure that I had a question on that, but I just found it -  
11           -

12                      COMMISSIONER BURNS: We're going to need a pet  
13           advocate on that.

14                      CHAIRMAN SVINICKI: We will need a pet advocate on the  
15           Advisory Committee for the Medical Uses of Isotopes or maybe an animal  
16           ethicist or something like that.

17                      As I think the only vegetarian on this Commission maybe I  
18           would qualify for that role.

19                      (Laughter.)

20                      CHAIRMAN SVINICKI: In any event, like I said, I don't  
21           really have a question about that.

22                      And then on risk informing, generally, it's interesting, like  
23           many things in life, you can look at it as a challenge or an opportunity when I  
24           think about the materials area largely and I think about risk informing.

25                      One on the one hand, a lot of this work for the staff does not  
26           benefit from the homogeneity of the reactor side where much of what they



1 encounter is the nth of a kind of a license amendment or something and they  
2 can have, if they can agree to a risk informed paradigm then they can simply  
3 apply it over and over again.

4 There are a lot of uniqueness to our work in the materials  
5 area. But the opportunity there though is I think that perhaps in these  
6 business lines, the staff is already accustomed to having to step back and  
7 frame the issue in terms of what John was mentioning, what we call the risk  
8 triplet of what can happen, what's the consequence of it and how likely is it.

9 And so, maybe they already have kind of the reflex to do  
10 that anyway because they don't have nth of a kind templates for assessing the  
11 risk of something. So I do see that as both a challenge that you can't have a  
12 standardized one from your colleague who works next to you, but on the other  
13 hand, maybe you're just more accustom to thinking that way.

14 So, I'm not sure there's any question there as well unless,  
15 John, would you like to make a comment?

16 MR. LUBINSKI: I appreciate that recognition and I'll add to  
17 that. Just even the diversity, when you talk about it, the diverse set of  
18 applicants that we have, diverse set of licensees.

19 But even within classes, if you look at a radiographer, you  
20 look at a gauge user, there's such a variety in the types of facilities. You may  
21 have a radiographer one device, you may have some with several devices,  
22 you may have a very large corporation.

23 And, again, from the standpoint of the type of risk that you'll  
24 be dealing with in those situations, it could be very different or very different  
25 culture in that area. So even if you have an inspector who has a lot of  
26 experience in one area, radiography, medical inspections, they're dealing with

1 that kind of risk assessment every day.

2 CHAIRMAN SVINICKI: Andrea.

3 MS. KOCK: That was a very astute observation that you  
4 had, and I think it's correct. In some sense in the materials area where we're  
5 used to having to take that step back. And more of it is intuitive than in the  
6 reactor area.

7 But I think there's still a benefit to move forward in some  
8 areas with regard to bringing in the new inspectors, new generation of  
9 inspectors, and helping, giving them the tools to be able to see what maybe  
10 some of our inspectors who've been around for 20 years do see intuitively.

11 And so, I see that as one benefit. And the other thing that  
12 I think is really positive is, we have a staff that doesn't stop at good enough.  
13 They keep looking for other opportunities.

14 And I'll just give an example from my visit out to Region III  
15 last week. We had a presentation from a new inspector who had a  
16 perspective of how we can focus licensing reviews in the materials area and  
17 take our very voluminous guidance, that's in the NUREG of about 200 pages,  
18 and kind of boil that down into a page and a half of what's important to keep  
19 in mind.

20 And maybe where some of the pitfalls have been in licensing  
21 space. And we thought that was really creative and something that we want  
22 to move forward with.

23 So I think that's really positive that we have staff who are not  
24 satisfied at good enough but want to just constantly strive for that excellence.  
25 And that was really positive development.

26 CHAIRMAN SVINICKI: Do you remember the name of that

1 individual?

2 MS. KOCK: Her name was Laura Cender.

3 CHAIRMAN SVINICKI: Okay. Well, I think we can  
4 mention her by name, so that's good work. All right, thank you very much.

5 And next we will turn to Commissioner Baran.

6 COMMISSIONER BARAN: Thanks. I did a lot of X'ing on  
7 my questions as we went through, so.

8 (Laughter.)

9 COMMISSIONER BARAN: John talked about phased  
10 changes being made to the inspection manual for materials licensees with the  
11 goal of further risk informing inspections. I want to dig into that a little bit to  
12 better understand it.

13 The initial revisions were made in September 2017 and one  
14 of the revisions made at that time allows latitude in the scheduling of safety  
15 inspections for materials licensees, inspections of the most risk significant  
16 materials licensees, which are referred to as Priority I and II licensees, can  
17 vary around their due date by 50 percent.

18 For example, a broad scope inspection of a Priority II  
19 medical institution, possessing and using a wide range of radionuclides, is  
20 supposed to be routinely conducted every two years. As I understand it, this  
21 first revision would allow the inspection to be performed up to three years after  
22 the most recent inspection.

23 A second revision, made in 2017, allows the Staff to extend  
24 the due date for a particular inspection if the Staff determines that the licensee  
25 is a high performer. For Priority I and II licensees, the manual now says that  
26 the safety inspection interval can be extended up to 50 percent with this

1 revision.

2 Are these two potential delays in inspections cumulative?

3 MS. KOCK: Yes, they are.

4 COMMISSIONER BARAN: So, if we were using the  
5 example of the kind of broad medical institution licensee, if the inspection  
6 would have been conducted every two years, you could get every three years  
7 from just flexibility and scheduling and then an extra, what, year or year and a  
8 half, if that institution were determined to be a good performer?

9 MS. KOCK: And that's correct. We have asked the  
10 regions to see how that change is being implemented. And what we found  
11 out is that the regions are taking advantage of the first provision, to extended  
12 inspection frequencies.

13 This is more for travel and geographic efficiency purposes.  
14 They're taking advantage of that first step. And the regions haven't really  
15 moved forward to give a second extension for licensee performance.

16 And the feedback that I got was, they're trying to gauge how  
17 that first step is going to work, is that working for us, is it positive, are we  
18 seeing any impacts from that before we move to the second stage.

19 So, the procedure does allow both of those. It could be  
20 cumulative. But I think the regions are taking a cautious and kind of phased  
21 approach into that to gauge how it's going first.

22 COMMISSIONER BARAN: In the 50 percent for those  
23 determined to be good performers, what's the, what is the baseline that 50  
24 percent taken off of, it's off the two year, the original two years or --

25 MS. KOCK: Yes.

26 COMMISSIONER BARAN: -- the up to three years?

1 MS. KOCK: In the original procedure offer for 25 percent  
2 flexibility, so that was always in the procedure. And so this was, and it was  
3 through Project Aim, just an extension of that flexibility.

4 So it made sense then to take a step up to 50 percent, see  
5 how that goes and then see where we are.

6 COMMISSIONER BARAN: The extensions for licensees  
7 determined to be high performance are characterized in the manual as one-  
8 time extensions. What does that mean in that context, one-time extensions?

9 MS. KOCK: It's one-time during the inspection frequency.  
10 It's not one-time forever.

11 COMMISSIONER BARAN: So for the example, medical  
12 institution, it could be a year for every time they need to do an inspection?

13 MS. KOCK: Theoretically.

14 COMMISSIONER BARAN: So it would be up to four years  
15 gap each time versus two years under --

16 MS. KOCK: Theoretically.

17 MR. LUBINSKI: And I think, when you say the one-time,  
18 you'll do that evaluation based on the results of the first inspection. That  
19 doesn't mean it becomes their new baseline going forward.

20 COMMISSIONER BARAN: Okay.

21 MR. LUBINSKI: Right. So they're baseline is always back  
22 to the, after you do the next inspection where you've given them more time for  
23 good performance, you're going to re-look at that performance to determine  
24 whether it still holds or not. But going in position would be they'd go back to  
25 their baseline again.

26 COMMISSIONER BARAN: I see. And does a licensee

1 request an extension or does the Staff just factor this into its own scheduling?

2 MR. LUBINSKI: Staff just factors it in schedule. The  
3 licensee doesn't go through and make a request or a recommendation, it  
4 would be based on us.

5 And as Andrea said, that aligns with the first part too  
6 because you're looking at doing your up to 50 percent based on scheduling  
7 your inspections.

8 Different in this area. You're not talking necessarily one  
9 week at one site. You might go out for a week and hit eight, nine sites,  
10 depending on how, which area you're going to.

11 So, you want to make sure as you're traveling to a certain  
12 county in a state that you can get as many inspections done as possible.

13 So it's really in allowing the flexibility for the inspector to  
14 make that determination for the up to 50 percent. And then the good  
15 performance, again, is based on what the inspector observes, if the site makes  
16 that call.

17 COMMISSIONER BARAN: And it sounds like the second  
18 provision on licensee is determined to be good performance hasn't really been  
19 used much. Do we know whether it's been used at all since --

20 MS. KOCK: Feedback I got is it has not been used. And  
21 that's because the regions are kind of, like I said, they're taking the first  
22 flexibility that we gave to kind of gauge how that's working and then we may  
23 take another step forward, depending on what they find.

24 COMMISSIONER BARAN: Joe, is that your sense?

25 MR. NICK: Yes, that's correct. We also haven't really  
26 looked at what would be a good performer exactly. Is it just one clear

1 inspection or is it that they had minor problems. What would really be the  
2 best use of that extension.

3 COMMISSIONER BARAN: Okay.

4 MR. LUBINSKI: I think Phase 3 of our approach, we talked  
5 about providing more of a construct for that right now.

6 COMMISSIONER BARAN: Yes.

7 MR. LUBINSKI: And that's based on the regional feedback  
8 of what does that really look like. So, Phase 3 is going to look more at that  
9 from a good performance standpoint and provide more, I'm not going to say  
10 structure, because, again, it's going to be based on insights from the inspector  
11 but help provide more information to them to ensure consistency in this  
12 application.

13 COMMISSIONER BARAN: And what's the compatibility  
14 associated with this provision in the manual for reducing inspection frequency  
15 based on whether the regulator determines that the entity is a high performer,  
16 are Agreement States required to have that?

17 MS. KOCK: That's not an area of compatibility, to my  
18 knowledge.

19 COMMISSIONER BARAN: Oh.

20 MR. MICHALAK: We have a ringer.

21 COMMISSIONER BARAN: Okay.

22 MS. KOCK: Here comes the expert.

23 MR. MICHALAK: Introduce yourself.

24 MR. WHITE: Hi, my name is Duncan White and I work for  
25 Paul. The compatibility for this area is compatibility category C.

26 The state is required to have this as part of their inspection

1 program but they have flexibility. So they choose, they have to be at least as  
2 restrictive as us, or they could be more restrictive.

3 COMMISSIONER BARAN: So if an Agreement State  
4 wanted to just not have this additional good performer delay in inspections,  
5 they could decide not to do that?

6 MR. WHITE: That's correct.

7 COMMISSIONER BARAN: And do we know how many  
8 Agreement States have opted to take this approach?

9 MR. WHITE: I don't know.

10 COMMISSIONER BARAN: Okay. So, I'll be honest on  
11 this. This initiative was included as part of Project Aim to save money. It  
12 was one of the Project Aim initiatives I voted against because I don't believe  
13 that reducing inspections is the right way to save money.

14 I agree it makes sense to consider risk insights in the  
15 materials inspection program, but doing less frequent inspections to reduce  
16 cost is not the same as being risked informed.

17 And so, I think a little bit, we don't have PRAs for materials  
18 licensees, but as we're thinking about risked informed thinking and decision  
19 making, if you think about, say the reactor context for a minute and you have  
20 a PRA that produces numbers on risk. If the licensee at a power plant has a  
21 good couple of years performance, it doesn't change those risk numbers, the  
22 numbers are the same coming out of that PRA.

23 So it's not true that the risk is going down if you had a couple  
24 of good years or a couple of good inspections. So, having a provision in here  
25 that says, if you had a couple of good inspections, we're just going to inspect  
26 you less.



1 Potentially up to half as often as we would otherwise do, I  
2 think is really not an example of risk informed regulation it's just an example  
3 of doing less to save money. Do you disagree?

4 MR. LUBINSKI: Actually, I do. Because I have to start  
5 with the bottom premise. We wouldn't do this if it was providing reasonable  
6 assurance of adequate protection. That's number one.

7 I think many times when we're talking about gaining  
8 efficiencies in our programs, we don't always make that statement right up  
9 front that that's the basis. And we're not going to improve anything that we  
10 think would not meet reasonable assurance of adequate protection.

11 With respect to license, or materials facilities being different  
12 than reactors and PRAs, a lot of what happens at the materials facilities is very  
13 much performance-based, based on individuals. And that's what we're  
14 looking at is the performance of the individuals, they don't have PRAs.

15 But we're not looking at the equipment itself and how reliable  
16 the equipment is. As you said, you walk away from the equipment, it's going  
17 to be the same no matter how good the performance of the individuals are, to  
18 an extent.

19 But if you're looking at it from the standpoint of a  
20 management program and they have in place the performance of the  
21 individuals in doing their task every day, the culture within the organization,  
22 that does lend itself to say that you have a better performance and a better  
23 safety record.

24 COMMISSIONER BARAN: But does our oversight have  
25 anything to do with that?

26 I mean, does our oversight have any impact on their

1 performance?

2 MR. LUBINSKI: I believe it does. And when we look at --

3 COMMISSIONER BARAN: So would performing less  
4 oversight have an impact on their performance?

5 MR. LUBINSKI: But if you're looking from the standpoint of  
6 what's required from reasonable assurance of adequate protection, we're  
7 talking about licensees that well exceed the reasonable assurance and  
8 whether or not we need to continue to provide oversight of those individuals  
9 when they well exceed what the minimum is required.

10 COMMISSIONER BARAN: So there's a determination as  
11 part of this manual that they well exceed?

12 MR. LUBINSKI: That would be from a good performance.  
13 And that's what Joe was saying earlier, that we think the regions are looking  
14 at that right now and saying we need more guidance on that.

15 But we're looking at the margin. If I use that term. The  
16 margin above reasonable assurance. And that's, we're saying that, they  
17 being the upper end of the margin and therefore even our impact, positive  
18 impact of our inspections on safety, if there's a decrease it's going to be  
19 decreasing that margin but still be above reasonable assurance.

20 And we believe even if there were a downgrade in that  
21 margin, or cutting into that margin I should say, there's still going to be an  
22 acceptable level. And maybe in the range of other licensees that are still  
23 being inspected at the routine frequency.

24 COMMISSIONER BARAN: All right. Well, that's a lot to  
25 think about there and more phases of this process apparently, but I guess I  
26 just ask you to think hard about and what are we doing there and what are we

1 saying about the value of our oversight and what effect is this going to have  
2 for reducing the frequency on the licensee, you know.

3 I mean, do we think that's going to have no impact on their  
4 performance and, you know, I take your point that while if they're well above  
5 what's necessary for adequate protection, maybe it's okay if they're  
6 performance declines.

7 But I think we got to be pretty straightforward, if what we're  
8 saying is to save a little bit of money, we're going to see hundreds of materials  
9 licensees performance potentially decline. But we think it's not going to  
10 decline enough to be worried about. I mean, we should really think that  
11 through if that's really the direction we're headed.

12 MR. LUBINSKI: As we're looking at Phase 3, we'll take  
13 those comments into consideration. And I also heard another comment there  
14 about making sure we're effectively communicating, both internally and  
15 externally, on what the goals of the program are.

16 COMMISSIONER BARAN: Okay, thank you.

17 CHAIRMAN SVINICKI: Thank you very much.

18 Commissioner Burns, take us home and come up with a really --

19 COMMISSIONER BURNS: Okay.

20 CHAIRMAN SVINICKI: -- really great question.

21 (Laughter.)

22 CHAIRMAN SVINICKI: But no pressure.

23 COMMISSIONER BURNS: I'm the last one in mind.

24 (Laughter.)

25 COMMISSIONER BURNS: Actually, let me sort of divert  
26 from the, some of the facilities or areas that you talked about specifically in

1 the presentations, but one might ask for any perspectives or insights of the  
2 master material's licenses that we issue for, for example, the Veteran's  
3 Administration, which I remember ten years ago was, I think it was ten years,  
4 was a big, was a big issue for us. Big problem for us. With the Navy, Air  
5 Force and all that.

6 So I'd just be interested in sort of status of perspectives on  
7 where that stands.

8 MS. KOCK: I certainly don't think we've seen the problems  
9 that we had at the VA back in 2010, thank goodness. From everything I  
10 know, things are going very well.

11 We're actually looking at a potentially new master materials  
12 license for the --

13 COMMISSIONER BURNS: Okay.

14 MS. KOCK: -- for the Department of, I'm going to mess this  
15 up, Health Agency. So there's a part of the defense agency that's pulling all  
16 the medical facilities together --

17 COMMISSIONER BURNS: I see.

18 MS. KOCK: -- under one organization. So we're actually,  
19 that's something for us to be considering in the next couple of years, kind of  
20 exciting.

21 From a performance issue, I'm not aware of any big  
22 performance issues in the master materials licenses.

23 COMMISSIONER BURNS: Okay. Thanks, Andrea.  
24 And the other one, the other area which has been an interesting one for the  
25 last few years is the, basically the retrospective looks on former radium sites,  
26 which of course were, existed long before, I think anybody in this room was

1 born and long before there was even an Atomic Energy Commission.

2 But I know there's been some interesting work that's been  
3 done. Just any kind of update on that? Joe, you got this.

4 MR. LUBINSKI: It's actually, let me just start with this, Joe  
5 is going to respond, is it's really outside his business line --

6 COMMISSIONER BURNS: Yes.

7 MR. LUBINSKI: -- but I think Joe can provide some  
8 perspectives on what we've done in that area.

9 COMMISSIONER BURNS: Okay.

10 MR. NICK: Yes. So we had a lot of locations in Region I,  
11 particularly in Connecticut.

12 COMMISSIONER BURNS: Right.

13 MR. NICK: We've made substantial progress on reviewing  
14 those sites and doing confirmatory surveys on some of the sites. And there  
15 are a couple that are being cleaned up still.

16 So we're working with the state of Connecticut. And I  
17 believe it's DOE, I'm sorry, EPA, on one cleanup at one of the sites. So good  
18 progress, but it's not complete yet.

19 COMMISSIONER BURNS: Okay. And for the ones in  
20 basically our jurisdiction, my recollection from a briefing I had up in Region I  
21 was we were pretty well long on those and so a lot of it was working with the  
22 Agreement States to try to get that locked up.

23 MR. NICK: Yes, that is correct.

24 COMMISSIONER BURNS: Okay. All right, thanks. The  
25 interesting -- on the discussion on prescriptive versus risk informed regulation  
26 or more performance-based regulation, particularly in the, I think in the

1 materials, you touch on some of the challenges in the materials area.

2 And I appreciate, a number of instances, examples are  
3 giving, are looking at, for example, the technologies in terms of dosimetry and  
4 other things where the regulation has been the way it has been for a long time,  
5 but as the devices get changed and all that.

6 What kind of insights are we getting from the Agreement  
7 States given that they have most of the licensees, about approaches in this  
8 area in terms of the risk informed?

9 I'm sure that probably some of the things, like in dosimetry  
10 and all that, where we see that kind of disconnect, there is a lot of probably  
11 positive feedback. But any insights that they're giving since they are, in many  
12 ways, almost more on the front line, in terms of percentage wise, then we are?

13 MS. KOCK: I haven't heard that the Agreement States see  
14 anything in terms of new technologies that we're not currently addressing. It  
15 doesn't mean they're not out there.

16 We have had discussions recently about how to bring those  
17 to the forefront. We have a monthly call with the states. We're going to add  
18 that as a standing item.

19 We also talked internally about, there could be some new  
20 technologies in the radiography area that we need to keep on top of. And so  
21 we're making sure we ask those questions when we're out at conferences.

22 But we haven't come up with any ah-ha moments of  
23 something new that we need to address right at the moment. It doesn't mean  
24 they're not out there, but we're continuing to look for that.

25 COMMISSIONER BURNS: Okay. Okay, good.

26 MR. LUBINSKI: I believe in general also, their response

1 has been, as we move forward in promulgating new regulations, they've really  
2 looked at making sure that we're providing the flexibility and not being as  
3 prescriptive as we move forward.

4 Because they're looking at the same struggles we do, as far  
5 as going through, updating the regulations.

6 COMMISSIONER BURNS: Right.

7 MR. LUBINSKI: So they'd rather, they like the concept  
8 under 35.1000 that allows for this catch-all category that allows for specific  
9 licensing guidance so that they're not a very prescriptive way. And they'd like  
10 to see that in other areas as well.

11 COMMISSIONER BURNS: All right. Now, I think that  
12 was a good example and probably something we can continue to learn from.

13 Because that, it is, you know, this is the one area, and I think  
14 the Chairman touched upon that, where it's the complexity, I think of our  
15 relationships with other organizations, other regulatory bodies that have co-  
16 equal, really a co-equal role in the oversight of the systems is extraordinarily  
17 important. So, getting them all together.

18 I know Commissioner Wright and I went to the OAS meeting  
19 last year and, some of these themes we heard, and we heard a lot of positives  
20 too in terms of, I think, our interactions. The interactions that they were  
21 having with the NRC.

22 And also, I'm going to stop there. And, again, thank you all  
23 for the presentations and continue the good work.

24 As I said, across my career. And the material stuff was far  
25 more interesting than those reactor guys, but thanks.

26 CHAIRMAN SVINICKI: All right, thank you very much,

1 Commissioner Burns. If there are no final questions or comments from my  
2 colleagues, we'll again, thank you all.

3 And to all the teams who participate in this important work  
4 every day, appreciate it all very much. And with that, we are adjourned.

5 (Whereupon, the above-entitled matter went off the record  
6 at 12:27 p.m.)

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