

UNITED STATES
NUCLEAR REGULATORY COMMISSION

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BRIEFING ON RESULTS OF THE AGENCY ACTION REVIEW MEETING (AARM)

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THURSDAY,

JUNE 20, 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 10:00 a.m., Kristine L. Svinicki, Chairman, presiding.

COMMISSION MEMBERS:

KRISTINE L. SVINICKI, Chairman

JEFF BARAN, Commissioner

ANNIE CAPUTO, Commissioner

DAVID A. WRIGHT, Commissioner

ALSO PRESENT:

ANNETTE VIETTI-COOK, Secretary of the Commission

MARIAN ZOBLER, General Counsel

NRC STAFF:

BILLY DICKSON, Acting Deputy Director, Division of Inspection and Regional
Support, Office of Nuclear Reactor Regulation

MARGARET DOANE, Executive Director for Operations

DANIEL DORMAN, Deputy Executive Director for Operations, Reactor Preparedness
Programs

VICTOR HALL, Branch Chief, Construction Inspection Programs Branch, Division of
Licensing, Siting, and Environmental Analysis, Office of New Reactors

JOHN LUBINSKI, Director, Office of Nuclear Material Safety and Safeguards

CHRISTOPHER MILLER, Director, Division of Inspection and Regional Support,
Office of Nuclear Reactor Regulation

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PROCEEDINGS

10:00 a.m.

CHAIRMAN SVINICKI: Well, good morning, everyone, and I call the Commission's public meeting this morning to order.

Today, the Commission will hear a briefing on the results of the Agency Action Review Meeting, which is always a confusing title for this meeting because it sounds like it's a meeting about a meeting. And it is kind of that because the Agency Action Review Meeting is something that is conducted by the Agency's staff and it is an annual kind of review of the effectiveness of our oversight process for both operating reactors and materials issues as well.

And today, the Commission will be briefed on the conduct of that meeting and the content of that meeting and hear about a couple of other related topics. So, I always look forward to this. This is a kind of rubber-meets-the-road meeting for a safety regulator because we're going to talk about kind of what we found in terms of the regulated community and an annual look at the effectiveness of what we're doing and the regulatory responses that our system turns out as we process different things that happen throughout the course of the year. So, I look forward to this and it's a very important discussion we'll have this morning.

And I wondered if any of my colleagues want to make any comments before we start.

(No response.)

Hearing none, I will turn the meeting over to our Executive Director for Operations, Margie Doane.

MS. DOANE: Okay. Good morning, Chairman and Commissioners.

1 As the Chairman was saying, today we are here to discuss the results
2 of this year's Agency Action Review Meeting, or AARM, that was held on May 7th.

3 Next slide, please.

4 So, this meeting is one of the most important in our calendars each
5 year, I agree with you, Chairman, as it is an opportunity to reflect on the actions that
6 the NRC has taken throughout the year in providing oversight for reactors and materials
7 licensees with significant performance issues. Also, it's an opportunity to reflect on
8 whether our oversight processes are effective and appropriate and where there may
9 be areas for improvement.

10 Senior Agency management from the EDO, program offices, and all
11 four Regions contributed to the discussions, drawing from their vast and diverse
12 experiences. OGC was also at the meeting, providing advice as necessary.

13 The first objective of the AARM is to review the appropriateness of
14 the Agency actions taken for power reactor plants, power reactor plants under
15 construction, and nuclear material licensees with significant performance issues, and
16 to confirm that coordinated courses of action are developed and implemented for these
17 licensees.

18 One operating reactor plant, Pilgrim Station, was discussed at the
19 May 7th AARM. In confirming the Agency's actions for this licensee, the staff noted
20 that improved performance was sustained and had been thoroughly discussed during
21 last year's Commission briefing on the results of the AARM. The staff also noted that
22 Pilgrim was scheduled to shut down no later than June 1st, and we now know that the
23 plant permanently shut down on May 31st. And these were important facts that we
24 took into consideration.

1 I'll now turn the presentation over to John.

2 MR. LUBINSKI: Thank you, Margie.

3 Good morning, Chairman and Commissioners.

4 The purpose of my presentation this morning is to provide an
5 overview of the FY18 Annual Report on the significant nuclear materials issues and
6 licensee performance trends in the Nuclear Materials and Waste Program.

7 Next slide, please.

8 Our performance evaluation process includes a review of the
9 significant licensee performance issues and operational performance trends in order to
10 determine whether regulatory actions or policy changes are needed.

11 With regard to licensee performance, Margie discussed earlier that
12 one licensee was discussed at the May 7th AARM. That was the San Onofre Nuclear
13 Generating Station. The participants confirmed that the licensee's corrective actions
14 were appropriate and that the existing regulatory tools are sufficient to address the
15 identified issues. I'll discuss operational trends in future slides.

16 Next slide, please.

17 Based on the staff's evaluation of the event information, no significant
18 negative performance trends were identified. In fact, not only are the number of NRC-
19 regulated events declining, but there continues to be a statistically-significant decrease
20 in NRC-regulated events over the last 10 years. On this slide, you can see that
21 represented by the red line overlaid on the red bar chart of NRC-regulated events.

22 The statistically-significant decrease in NRC-regulated events may
23 be a result of us transferring authority for three states to Agreement States. However,
24 if you look more closely at the data, you'll see that, looking at a more narrow

1 range -- that is, the last five years on the total number of events -- there actually
2 continues to be a statistically-significant decrease in the total number of events for both
3 NRC and Agreement States. So, there was no conclusive reason for the trends.

4 Next slide, please.

5 This slide provides information on trends in operational events at
6 materials facilities. I note on the left is the fuel cycle operating experience event data.
7 As a reminder, fuel facilities are regulated just by the NRC. So, this is NRC data, not
8 Agreement States.

9 There is a declining trend in the number of events from 2014 through
10 2018. And we note that, while there was an increase in 2018 over 2017 events -- that
11 is, six in '18 and four in '17 -- it is still less than the five-year average. And also, all of
12 the events noted in 2018 were of low safety significance.

13 The pie chart on the upper right includes escalated enforcement
14 actions issued by the NRC in 2018. The total of 32 actions in FY18 is fewer than 59
15 actions that were issued in 2017. Escalated enforcement actions in 2018 were
16 predominantly cases involving gauge users, radiographers, and hospitals, and this is
17 consistent with trends we've seen in recent years.

18 A single cause was not identified for the decrease in the total number
19 of escalated actions. However, some factors that may have contributed to this
20 decrease are increased communications with our licensees, better adherence to the
21 Part 37 regulations which are relatively new, and the issuance of enforcement guidance
22 memoranda that take a more risk-informed approach to enforcement.

23 On the lower right, the pie chart represents abnormal occurrences for
24 both NRC and Agreement State licensees. There were 11 abnormal occurrences in

1 FY18, which is consistent with recent years. And although the abnormal occurrences
2 are mostly for medical -- that is, 9 of the 11 -- it is not indicative of a negative trend.
3 That's consistent with previous years.

4 With respect to all the data, I'd like to note that the Nuclear Materials
5 and Waste Safety Program includes a broad range of activities at a large number of
6 licensees. So, when discussing trending, the numbers of events are a very small
7 proportion of the millions of activities performed each year under the program.

8 Next slide.

9 Next, I'd like to discuss our strategic performance measures. For
10 FY18, there was one occurrence of a radiation exposure that significantly exceeded
11 the regulatory limit. It involved an overexposure during radiography operations. The
12 licensee does not expect any adverse effects due to this overexposure, and the
13 licensee took appropriate corrective actions, including alerting personnel of the event
14 that occurred as well as restating to the staff their operating and safety requirements.
15 Since there was only one event noted, it did not exceed our safety target of less than
16 or equal to three.

17 We also had one occurrence of a theft of significant quantities of
18 radioactive material. This involved the theft and recovery of a truck transporting an
19 industrial radiography camera. We have no reason to believe that the people stealing
20 the truck were looking for the camera. They may have just been looking for the truck.
21 The truck was actually recovered less than three hours later. The camera and its case
22 were intact. So, there was no radiological impact to the public or any of the employees.
23 However, this occurrence does exceed our target of zero for the year. We did conclude
24 that these occurrences are non-indicative of a deficiency in our requirements nor a

1 programmatic issue.

2 Next slide.

3 The staff determines each year whether a special study is needed of
4 any aspects of our program. In addition, the Advisory Committee on the Medical Use
5 of Isotopes, or ACMUI, also routinely evaluates medical events. So, last year, the staff
6 performed a study to determine whether there were trends in the number of medical
7 events caused by inadequate training. Of the 86 events reviewed over the past two
8 years, only one event specifically identified inadequate training as a cause. However,
9 the study noted that the reference documents do not contain sufficient detail to identify
10 the exact causes of events. Specifically, there are inconsistencies in the event
11 documentation with respect to a single direct root cause versus multiple indirect causes
12 and how types of human error, such as inadequate training, are reported. Therefore,
13 we believe the results are inconclusive.

14 The ACMUI, however, did an evaluation of medical events reported
15 between FY14 and FY17 and identified some common themes to inform a discussion
16 of possible ways to decrease medical events. The two overarching themes were that,
17 first, the performance of a timeout immediately prior to an administration of radioactive
18 material could have prevented some medical events. Second, the lack of recent or
19 frequent performance of specific administration may contribute to the occurrence of
20 medical events. The ACMUI recommended that the NRC issue an information notice
21 to share these insights with the community. The staff agrees and has the information
22 notice and concurrence at this time and expects to issue it by October.

23 Next slide, please.

24 Based on a review of the event data, enforcement trends, abnormal

1 occurrences, and strategic performance measures, the staff concluded that the Nuclear
2 Materials and Waste Safety Program is functioning effectively to protect public health
3 and safety. No significant trending issues were identified that warrant regulatory action
4 or policy changes in the program.

5 All safety strategic goal targets were met for FY18, and a single event
6 occurred that resulted in not meeting the security strategic goal in FY18, but we don't
7 believe this is indicative of a broader programmatic challenge.

8 Thank you, and I will now turn to Billy Dickson.

9 MR. DICKSON: Good morning, Chairman and Commissioners.

10 I will be discussing the results of the 2018 reactor oversight process,
11 ROP, self-assessment, the plan for the 2019 ROP self-assessment, and provide a short
12 overview of the ROP Enhancement Initiative.

13 Next slide, please.

14 As depicted in the slides, the Annual ROP Self-Assessment Program
15 consists of three elements. First, the staff measures the effectiveness and
16 implementation of an ROP using objective metrics and evaluation of the four main ROP
17 program areas: the Inspection Program, the Performance Indicator Program, the
18 Significance Determination Process, and the Assessment Program.

19 For Element 2, the staff monitors ROP Program revisions and
20 evaluates whether recent changes are effective.

21 Under Element 3, the staff performs focused, in-depth assessments
22 of specific program areas and conducts peer reviews of the Regional Offices.

23 As I'll discuss in more detail later, the staff is conducting a holistic
24 review of the ROP Self-Assessment Program, which aims to streamline the program

1 and better utilize oversight program data for program evaluation and trending.

2 Next slide, please.

3 The results of this year's self-assessment indicate that the ROP
4 remains an effective oversight process. I will walk you through the 2018 results by
5 program element.

6 First, Element 1. The results indicate that in 2018 the green
7 performance criteria were met for 25 of the 26 ROP performance metrics. The metrics
8 measuring the staff timeliness and disposition and feedback on ROP governance
9 documents, what we call the feedback forms, were red for the second year in a row.
10 This was the second year we used this data as a performance metric. As part of the
11 staff holistic review of the Self-Assessment Program, the staff plans to implement
12 process improvements designed to, first, appropriately address historic feedback
13 forms; second, better prioritize feedback forms as they are received, and, lastly,
14 effectively track the staff progress in resolving accepted feedback forms.

15 Under Element 2, the staff completed an effectiveness review of
16 three recent changes to the ROP. Specifically, the staff reviewed recent changes to
17 the supplement and inspection procedure for licensees entering column 2 of the ROP
18 Action Matrix; recent changes to the significance determination process, the SDP,
19 implementing a management tool to more efficiently and effectively process potentially
20 greater-than-green findings. And finally, we looked at the implementation of the Safety
21 Culture Common Language Initiative. The staff found that all three changes were
22 effective and confirmed that there were no unintended consequences as a result of the
23 changes.

24 Finally, under Element 3, the staff performed a regional peer review

1 and a baseline inspection procedure assessment. The regional peer review was done
2 in Region III and found that Region III is implementing the ROP consistent with ROP
3 governance documents, with some suggested areas of improvement and some
4 strengths. The peer review team also identified some areas where clarification or
5 improved guidance is needed from the program office, and those items are being
6 addressed.

7 Also under Element 3, though not required for the calendar year
8 2018, the Office of Nuclear Security and Incident Response conducted a focused
9 assessment of the Emergency Preparedness SDP, which found that the process is
10 effective, while providing a number of recommendations for improvements. Some of
11 these recommendations are being evaluated under the ROP Enhancement Initiative,
12 which I'll discuss later in my presentation.

13 Overall, the self-assessment confirmed that the ROP is effective and
14 that the ROP meets the program goals of being objective, risk-informed,
15 understandable, and predictable. Additionally, each year the AARM is required to
16 discuss any approved deviations to the ROP Action Matrix. There were none for the
17 calendar year 2018.

18 Next slide, please.

19 In SECY-19-0037 -- that's the Annual ROP Self-Assessment
20 SECY -- the staff notified the Commission of its intent to perform a limited ROP self-
21 assessment in the calendar year 2019 in order to prioritize resources for the ROP
22 Enhancement Initiative and for a holistic review of the Self-Assessment Program. This
23 notification is consistent with the Commission direction regarding changes to the ROP
24 that require Commission approval or notification.

1 The limited ROP self-assessment will consist of the ROP
2 performance metric data collection and analysis, the ROP Program area reviews, and
3 an effectiveness review of changes to the Cross-Cutting Issues Program. This limited
4 ROP self-assessment will still meet the requirements of the NRC's Strategic Plan.

5 The holistic review of the Self-Assessment Program is focused on
6 increased efficiencies through streamlining all elements of the program, increased
7 flexibility to tailor self-assessment activities in terms of review frequencies and content,
8 and increased use of the ROP Program execution data in the self-assessment
9 activities. The staff plans to provide an info paper SECY which details the changes
10 that the staff plans to implement as a result of the ROP self-assessment holistic review.

11 Next slide, please.

12 The ROP Enhancement Initiative was established in October of 2018
13 to review and disposition 72 recommendations received from the NRC Transformation
14 Team, as well as 27 Nuclear Energy Institute recommendations for possible
15 enhancements to the ROP.

16 It is important to note that the staff believes, and our external
17 stakeholders continue to state, that the fundamentals of the ROP are sound, but that
18 enhancements are always possible. As one of NRR's highest priorities, the overall goal
19 of this initiative is to make the ROP more risk-informed and performance-based.

20 Given the breadth of the recommendations considered under this
21 initiative, the regional engagements through a Regional Advisory Panel, and external
22 stakeholders' engagement via monthly ROP public meetings since the beginning of this
23 project have been keyed to the project team's analysis and conclusions. The staff plans
24 to forward a paper to the Commission which is currently in concurrence with the

1 recommendations for three areas.

2 The first area is improving NRC's response to White Findings. The
3 second area is optimizing the baseline inspection program. And the last area is
4 improving the significance determination process.

5 While the staff saw early opportunities for early alignment and actions
6 in these three areas, there are a number of ROP enhancement recommendations that
7 require additional review time. As these reviews are completed, the staff anticipates
8 that there will likely be additional ROP changes that will require the staff to notify the
9 Commission or seek Commission approval prior to implementation. The ROP
10 Enhancement Initiative is not a one-and-done activity.

11 So, this concludes the ROP self-assessment portion of this
12 presentation. I'll turn it over to Vic Hall for his presentation.

13 Thank you.

14 MR. HALL: Thank you, Billy.

15 Good morning, Chairman. Good morning, Commissioners.

16 So, if you've been the Vogtle construction site more than once, which
17 I think you all have, you've seen change in action. From one week to the next, the site
18 transforms as millions of pounds of equipment and structure are put into place. Today,
19 I have the privilege of presenting an update on the NRC's role in overseeing this project
20 of national importance, which is a very exciting time as we get closer to completing the
21 first-ever Part 52 process.

22 So, the theme for today's presentation on the construction reactor
23 oversight process has changed. This year's self-assessment Commission paper is
24 different than last year's, and I'll highlight the improvements that we've made and offer

1 a preview of how next year's paper might look.

2 Before I talk about what's different, I'll cover what has not changed,
3 and that's licensee performance. Since Southern Nuclear Operating Company began
4 construction in 2012, the NRC has not had any findings of greater-than-green
5 significance. This past year was no different, as our Region II inspectors identified only
6 three green findings.

7 For the purposes of the Agency Action Review Meeting, the meeting
8 inside the meeting, Southern remained in the licensee response column and the staff
9 concluded that the construction reactor oversight process continued to be effective in
10 its oversight.

11 While the 2018 self-assessment conclusion is straightforward, today
12 is a great opportunity to look ahead and talk about the exciting work that the staff is
13 doing to ensure that the NRC will be successful in fulfilling its regulatory responsibilities
14 as the Vogtle construction project nears completion.

15 In the next couple of slides, I'll step through how in the construction
16 reactor oversight process the staff is reaffirming our commitment to our safety mission,
17 enhancing the quality of our communications, and how we are modernizing our
18 decisionmaking and exploring what it means to be transformative as we complete the
19 following regulatory steps of Part 52.

20 Next slide, please.

21 We are just 17 months out from the first-ever notification from
22 Southern that all ITAAC are complete. It's the licensee's declaration that the plant has
23 been built to its approved design and is, therefore, safe to operate. The gears on this
24 slide represent the different parts of our organization working in lockstep to ensure that

1 we are focused on what's significant and working together to achieve regulatory
2 success.

3 In 2018, the staff formed the Vogtle Readiness Group, which has
4 successfully brought together the Office of New Reactors, the Office of Nuclear Reactor
5 Regulation, and Region II, with significant support from the Office of Nuclear Security
6 and Incident Response and the Office of General Counsel.

7 Through frequent meetings and the use of sophisticated tools, such
8 as the Integrated Project Plan, the Vogtle Readiness Group is ensuring that we are
9 aligned in our mission. The Integrated Project Plan is an advanced project
10 management tool based in Oracle Primavera, which is the same platform that Southern
11 Nuclear Operating Company uses to manage all of its construction activities. This
12 allows the staff to match our schedule directly to the licensee's dynamic construction
13 schedule. As their day-to-day operations change, the Integrated Project Plan allows
14 us to keep focus on the inspection and licensing activities necessary to support a
15 52.103(g) finding.

16 A feature of the Vogtle Readiness Group is the ability to maintain
17 continuity, despite some big changes, including the merger of the Offices of New
18 Reactors and Nuclear Reactor Regulation or changes like the retirement of senior
19 managers like my boss, mentor, and cofounder of the Vogtle Readiness Group, Tim
20 McGinty, whose vision set us all up for success.

21 At the last meeting in May, which was the group's 10th meeting, the
22 staff revised the group's Charter to account for a merged organization, adding Chris
23 Miller from the Office of Nuclear Reactor Regulation as a Co-Chair, who joins Rob
24 Taylor from the current Office of New Reactors and Bill Jones from Region II's Division

1 of Construction Oversight.

2 The revised Charter accounts for the merged offices and includes
3 reference to the Vogtle Project Office, which will report to the Director of the Office of
4 Nuclear Reactor Regulation, Ho Nieh. The Vogtle Project Office will be responsible for
5 ITAAC, licensing, and continued support of our inspectors in Region II at the Division
6 of Construction Oversight.

7 In ITAAC space, this past year we completed all of the actions from
8 an ITAAC Demonstration Project which looked at different variations of a potential
9 ITAAC surge and offers confidence that the NRC is well-positioned to handle different
10 surge scenarios.

11 The ITAAC Demonstration Project led to improvements such as the
12 development and public release of Office Instructions on the ITAAC clarification
13 process and the creation of metrics to ensure accountability, which I'll cover in my next
14 slide.

15 Next slide, please.

16 Returning to the theme of change, this year's Commission paper on
17 the construction reactor oversight process is several pages shorter. To offer a counter
18 to the famous Mark Twain quote, we took the time to write a short letter this time. We're
19 including much of the information that used to be in the paper on the NRC's public
20 website, such as ITAAC data and direct inspection hours, and we're updating that
21 information on a much more frequent basis.

22 So, next click, please.

23 Out of the ITAAC Demonstration Project we began reporting ITAAC
24 metrics to track our progress. The latest metrics paint a picture of an increasing tempo

1 of ITAAC closures from the licensee. We are meeting our goals, and our inspectors in
2 Region II and the ITAAC closure staff here at headquarters are well-positioned to match
3 the licensee's space. The metrics have been a valuable tool and have helped us
4 ensure that we share timeliness responsibility across the Agency and we work as a
5 unified team toward regulatory success of 52.103(g).

6 So, next click, please.

7 In our self-assessments, the staff has been reporting annually on
8 direct inspection hours estimates since 2011, per Commission direction. This year we
9 posted data on direct inspection hours on the NRC's website. This summer we'll
10 increase communication with our stakeholders and update these numbers quarterly,
11 more in line with the licensee's billing cycle.

12 On direct inspection hours, there is no significant change from last
13 year. We have continued a linear trend of direct inspection hours and we are managing
14 to the same estimates as provided to the Commission in 2017.

15 Next slide, please.

16 So, this timeline is from one of the staff's accomplishments this past
17 year, which was the development and publication of the Office Instruction on the
18 52.103(g). I know the publication of an Office Instruction may not seem too forward-
19 leaning or exciting, but the Office of New Reactors, Nuclear Regulation, and Region II
20 embraced the transformative philosophy to collaborate and simplify our processes.

21 One simple example is how we previously planned to document
22 successful completion of all ITAAC inspection. Our Inspection Manual Chapter used
23 to mandate a formal memorandum from the Regional Administrator to the Program
24 Office Director making a declaration of completion of inspection activities. Our IT

1 systems already track the completion of inspections and link them to the verification of
2 ITAAC closure. We broke down the artificial barrier by deleting the formal memo and
3 relying on our IT tools.

4 Two things to highlight in the timeline above is just how close we are
5 to the final stages of all ITAAC being complete and the extent of communications that
6 we have built in with the Commission. With Southern's recently-published fuel load
7 date of November 23rd, 2020 for Unit 3, we anticipate the all ITAAC complete
8 notification earlier that same month.

9 The proposed Commission meeting and two Commission
10 memorandum will highlight four items: the status of all ITAAC near ITAAC completion;
11 the status of inspection, including ITAAC construction and operational programs; the
12 status of any outstanding licensing actions, and any challenges to completion of the
13 Part 52 process for the first time.

14 From the day zero that was pictured above in the green circle, this
15 staff's goal is to issue the 52.103(g) finding as soon as possible, assuming that
16 Southern has met all of its regulatory requirements. The commitment and the Office
17 Instruction is that we will take no more than 17 days between the all ITAAC complete
18 notification from Southern to the 52.103(g) finding. If all the prerequisites are met, we
19 are confident that we will beat the 17 days.

20 Next slide, please.

21 Because of the extensive communication and the fact that we are so
22 close to the first-ever 52.103(g) finding, next year's construction reactor oversight
23 process self-assessment is primed to look even more different. Previous years' papers
24 have focused on oversight at multiple sites for different designs of large lightwater

1 reactors. This year's paper is clearly focused on completion of just one site, Vogtle.

2 Through the means described earlier, we'll be updating the
3 Commission with the staff's progress on Vogtle frequently. And by this time next year,
4 we will likely already have held a Commission meeting for Unit 3 and will be preparing
5 the initial Commission memorandum. So, a construction reactor oversight process self-
6 assessment can start looking at life after Vogtle, which I would offer is the cROP 2.0.

7 The cROP 2.0, which will apply to small modular reactors and
8 advanced reactors, will benefit from the lessons learned from past completion of Watts
9 Bar and the future completion of Vogtle. This staff has formed a Small Modular Reactor
10 Oversight Working Group. That group is looking at how today's cROP would work with
11 a NuScale design and is beginning to address questions such as manufacturing and
12 assembly of safety-significant components done entirely at vendor facilities.

13 The staff is totally focused on the successful completion of the first-
14 ever Part 52 process with Vogtle, but it's not too early to start planning and applying
15 insights that we're learning now. For small modular reactors and advanced reactors,
16 the staff will continue to perform environmental scans to be prepared for what the future
17 of construction might hold.

18 Thank you for your attention. I'll look forward to your questions, and
19 I'll turn it back to Margie.

20 MS. DOANE: Okay. Thanks, Vic.

21 Okay. In conclusion, again, we met all the objectives of the Agency
22 Action Review Meeting process, and our discussions confirm that the completed and
23 planned actions of the Agency are appropriate and consistent with our oversight
24 processes. Additionally, you've heard today that we're taking steps to improve our

1 oversight processes now to prepare for the future.

2 And I'd like to thank all of the Office Directors that fed into the AARM
3 the information and supported the AARM; also, the staff that helped us put these
4 presentations together, and then, of course, the agencies that have contributed much
5 to these activities, including the Office of General Counsel.

6 Okay. And that concludes my presentation. We're ready for
7 questions.

8 CHAIRMAN SVINICKI: Well, thank you very much, and thanks to
9 each of you for your presentations. And, Margie, I add my thanks and the
10 Commission's to the hard work of all the NRC staff who contribute to the processes
11 that we've summarized here today.

12 We rotate the order of questioning, and for today's meeting we will
13 begin with Commissioner Baran. Please proceed.

14 COMMISSIONER BARAN: Thank you.

15 Well, thank you for your presentations and for all your work. I agree
16 with Margie that this is one of the most important meetings we have each year.

17 And the meeting is a little different this year because it's the first time
18 in a while that we haven't had a plant in column 4, which is a good thing, obviously.
19 Last year, we discussed the challenges that the Grand Gulf Plant was having, even
20 though it wasn't in column 4. The plant has had significant operations, equipment
21 reliability, and human performance challenges. But what is the staff's current
22 assessment of performance at Grand Gulf?

23 MR. DICKSON: So, Grand Gulf is currently in the regulatory
24 response column of the NRC Action Matrix. As you recall, the plant has been in its own

1 self-identified recovery plan since 2013. Based on what we've seen, while there have
2 been a number of improvements at Grand Gulf, there's a lot of work that still needs to
3 take place. Over the last two years, there have been a number of plant transients and
4 plant forced outages, which has resulted in non-smooth operations by the site. The
5 licensee also has some efforts to correct their corrective action program. And based
6 on what we've heard from Region IV, they continue to have some work to do in the
7 corrective action area.

8 COMMISSIONER BARAN: And putting aside what column of the
9 Action Matrix plants are in, are there other plants for which the staff has concerns about
10 overall performance?

11 MS. DOANE: I think there are plants that have had additional issues
12 this year, like Clinton, and there are some others. I think we had some issues at River
13 Bend and some others.

14 I don't know, Billy, do you want to --

15 MR. DICKSON: It looks like Chris Miller is up, too.

16 MS. DOANE: Good.

17 MR. MILLER: So, we do a monthly review of the plants and look at
18 performance indicators that may be close to tripping a threshold. So, of course, we
19 don't have any plants in column 3 and column 4 now. And you pointed out the column
20 4, so that's a good thing. But we don't have any that we have identified that we think
21 are going to move quickly through the columns to make us concerned that we're going
22 to have a column 4 plant anytime soon.

23 COMMISSIONER BARAN: Okay. Thank you.

24 For several years, the number of SCRAMs across the power reactor

1 fleet was dropping, which was a positive safety trend. Since 2017, it looks like the
2 SCRAM numbers have been climbing. Are we seeing a negative trend now? And if
3 so, what do we think is causing it?

4 MS. DOANE: Go ahead, Billy.

5 MR. DICKSON: So, you're correct, since 2017, which I think there
6 were about 39 SCRAMs or so, in 2018 there were a total of about 46 SCRAMs or so,
7 which is an increase of about seven. And we have been looking at the trend over the
8 last year, which indicates, if you do a linear interpretation, that we will be at the 2016
9 level. So, there's a slight increase. We've looked at the number of SCRAMs. Our
10 Operating Experience Branch, they've looked at the trend and tried to discern some
11 reasons why that's occurring. It looks like 75 percent of the SCRAMs have been due
12 to balance-of-plant issues, feedwater system, condensate system, some turbine
13 generator issues.

14 But there's not been any discernible human performance or
15 equipment issues on the safety side that we can discern at this point. But we continue
16 to look at this and we continue to work with the Office of Research to look at it from the
17 Accident Sequence Precursor Program perspective. And we haven't found any
18 discernible trend, but we will continue to look at that.

19 COMMISSIONER BARAN: At last year's meeting, we also discussed
20 the steep decline in NRC power plant inspection findings nationwide. That decline has
21 continued. In 2015, there were a total of 821 findings nationwide. In 2016, the number
22 of findings dropped to 704. In 2017, the number of findings fell further to 560. Then,
23 in 2018, the total number of NRC findings declined to 475. So, that's a 42 percent
24 reduction in just three years.

1 Has the staff performed a thorough analysis of what factors are
2 driving this trend?

3 MR. DICKSON: So, this was a topic of a conversation during the last
4 AARM. And the staff has performed the preliminary analysis to look specifically at the
5 trend in inspection findings. There were no discernible changes in the Inspection
6 Program guidance documents or in the Inspection Program procedures. So, we
7 haven't been able to identify any specific cause related to the program.

8 We did do a survey of some of the inspectors to indicate -- because
9 there's a little confusion or a little bit of -- there has been some ratcheting of the more-
10 than-minor questions and how conservative those questions are answered, associated
11 with the Inspection Manual Chapter 0612, Attachment B. There's a list of an amount
12 of questions. So, that may be driving some of -- the conservative nature that the
13 inspectors are answering the questions, that may be driving some of the documented
14 inspection findings and inspection reports.

15 COMMISSIONER BARAN: Does the staff plan to continue to
16 conduct analysis in this area? You characterize it as preliminary. Are you going to go
17 in further depth to figure out what's driving this? Because a 42 percent drop in
18 inspection findings over three years, that's a really significant drop. It may be a positive
19 thing; it may be a negative thing; it may be neither. But really understanding what's
20 driving that I think is important. That's a really significant change in a short period of
21 time.

22 MR. DICKSON: Right.

23 MR. MILLER: So, we are continuing to look at it, Commissioner.
24 That's a great question. As Billy noted, there isn't a specific item -- and we don't gather

1 that kind of information. You know, "Why did you decide to make it minor?" or "Why
2 did you decide to make it more than minor?" We don't have those markers.

3 So, we do know that the trend is across all inspection areas, you
4 know, RP, EP, across all seven cornerstones. So, we know that it's not just one
5 particular area that's driving this to go down. We know that there is some
6 guidance -- there's some inconsistency in how Regional Inspectors look at the guidance
7 in 0612, as Billy has talked about, and we do have something to improve that guidance.
8 Hopefully, that will bring that about. And it's not to drive it either up or down, the number
9 of findings. It's just to provide clarity, so people will make the same decision every time
10 and we can have that reliability/ repeatability feature in there.

11 But it is something that we continue to look at. As Billy mentioned,
12 we do pulse the inspectors and we have pulsed them in the past. We have it on our
13 topics for the Division Director Counterpart meetings as they come up biannually.

14 And so, we will continue to look at it, but we don't have a smoking
15 gun. We know some of the things in the background, you know, the additional focus
16 on backfit. There's a lot of pushback from licensees over the last couple of years
17 because of feeling like they're challenging findings. That causes us to take a good,
18 hardy look at, do you really have a solid basis for that? So, there is more questioning
19 on the basis for the findings. That doesn't necessarily mean it should drive them down.
20 But it is something that we continue to look at.

21 COMMISSIONER BARAN: Okay. Thank you.

22 In 2014, NRC made some significant changes to the Cross-Cutting
23 Issues Program. With this program, NRC oversight can gradually increase at a plant if
24 a cross-cutting issue persists. But the threshold for identifying a cross-cutting theme

1 at a plant is very high. For example, it would take 20 overall human performance
2 findings during a one-year period. I don't think that threshold has ever been met, even
3 at plants that had major performance problems.

4 Is the staff looking at whether the current thresholds for identifying a
5 cross-cutting issue are reasonable?

6 MR. DICKSON: I think there actually has been a couple of plants
7 that have actually crossed the threshold for 20 in a year.

8 COMMISSIONER BARAN: Dan Dorman is nodding yes.

9 MR. DICKSON: Yes.

10 COMMISSIONER BARAN: So, you must be right then.

11 (Laughter.)

12 MR. DICKSON: Okay. Sorry.

13 The significant CCI moniker comes when you have plants that cross
14 two years in a row. I think it's three consecutive six-months quarters.

15 But we are looking at that. We're looking at it as part of the
16 effectiveness review that we're doing on the Cross-Cutting Issues Program.

17 COMMISSIONER BARAN: Okay.

18 MR. DICKSON: And so, that's one of the things we talked about in
19 the project planning for that effectiveness review.

20 COMMISSIONER BARAN: Okay. So, the staff is doing an
21 effectiveness review of the program?

22 MR. DICKSON: Of that change in the program.

23 COMMISSIONER BARAN: And can you talk a little bit -- is kind of
24 the really high threshold for triggering it, is that what's driving the effectiveness review?

1 Are there other issues you're looking at as part of that?

2 MR. DICKSON: Well, again, I think I mentioned in the presentation,
3 we do select recent changes to the ROP, and this was a change that we based out of
4 that program, the Self-Assessment Program.

5 COMMISSIONER BARAN: Okay.

6 MR. DICKSON: Yes.

7 COMMISSIONER BARAN: No, that's good. All right. Thank you.
8 That's all I have.

9 CHAIRMAN SVINICKI: All right. Thank you very much,
10 Commissioner Baran.

11 Next, we will hear from Commissioner Caputo. Please proceed.

12 COMMISSIONER CAPUTO: Thank you.

13 Thank you for being here this morning and all the work that goes into
14 preparing your presentations. I've really appreciated your remarks so far.

15 I'd like to start with John. On slide 6, he discussed the trends analysis
16 with regard to sources. In looking at the Nuclear Materials Events Database, given the
17 tens of thousands of transfers and shipments of IAEA Code of Conduct Category 1 to
18 3 sources -- that's a mouthful -- in the U.S. by both NRC and Agreement State
19 licensees, there were only six significant events involving lost, abandoned, or stolen
20 materials in the U.S., all of which were recovered.

21 I think this is a remarkable testament to the rigor of the source
22 security regulations for all categories of sources, the licensees' performance in
23 adhering to regulations, but, most importantly, the inspectors' hard work in ensuring
24 that the regulations are met. So, I would just like to say, job well done. I think you and

1 your team should take pride in achieving these results, even though I'm sure that they
2 are all striving to be even better next year.

3 So, I guess the question that I would have is, given how concerns are
4 periodically raised about source security from other sectors of the government, like
5 perhaps DOE, NNSA. Is there a practice of sharing these results with other sectors of
6 the government to keep them informed?

7 MR. LUBINSKI: Yes. But let me start with thank you for the
8 compliment, and I would go back to the inspectors. I think they deserve a lot of the
9 credit here. They're the first line in communicating with --

10 COMMISSIONER CAPUTO: Absolutely.

11 MR. LUBINSKI: -- our licensees.

12 A little different when you're dealing with sources than you are with
13 the reactors that have a little more regulatory savvy. So, I think the effective
14 communication with our inspectors is very much a key, and is even more important
15 than any written communication we can provide.

16 As far as sharing with other sectors, yes, we've been working mainly
17 with DOE. We're trying to set up more routine meetings with them to talk about how
18 we align better on our source control activities and what the data is telling us, not just
19 where some of the desires may be or the one-off incidents, right? When you get a one-
20 off incident, people look at that as being an example of a problem with your program,
21 and there may be extensive root causes that go well beyond. So, we have been sharing
22 that data with DOE.

23 We do have a Source Task Force. We're kicking off the next review
24 of that. There's a meeting at the end of July. And this is the type of information we

1 share with our federal partners about the data collection we've had so far and what we
2 see as the positive trends as well as what we see as the causes for those trends.

3 COMMISSIONER CAPUTO: Okay. Thank you.

4 Mr. Dickson, on slide 12, you described how the ROP Self-
5 Assessment Program contains an element to conduct deep-dive reviews of ROP
6 programs. I would say that environmental qualification inspections probably qualify as
7 such a deep dive. It's my understanding that one of the next deep dives is into power-
8 operated valves.

9 So, considering one of the objectives for this meeting is to ensure
10 that trends in industry and licensee performance are recognized and appropriately
11 addressed, can you tell me, is there a negative trend that would suggest that POVs be
12 selected for a deep dive, considering the wealth of operating experience and the well-
13 established surveillance and maintenance programs that already exist? I mean, is this
14 an effort -- is this effort based on a risk-informed approach?

15 MR. DICKSON: I believe it is. And we have had conversations about
16 the power-operated valve inspections. In particular, we've recognized that power-
17 operated valves are high-risk in specific systems. And when we do surveillance testing,
18 power-operated valves are not the focus of the surveillance testing.

19 And there are some latent issues associated with power-operated
20 valves. We've had issues associated with the LaSalle Anchor Darling valves. There
21 was an issue with valve separation at one of the main steam isolation valves in 2018,
22 and there was an issue associated with the low pressure coolant injection system
23 associated with Browns Ferry.

24 So, we do have some operating history that shows that power-

1 operated valves do have a risk associated with safety systems. In selecting that
2 system, we have consulted with the Division of Reactor Assessment, I mean Risk
3 Assessment, in selecting power-operated valves. So, I believe that we did use risk
4 insights in selecting those valves, and there is a hot operating history associated with
5 that, with the power-operated valves.

6 COMMISSIONER CAPUTO: So, I'm going to draw a parallel here to
7 the EQ inspections. How do you plan to prepare inspectors with regard to licensing
8 basis and the appropriate scope for such deep dives?

9 MR. DICKSON: So, the Inspection Branch in DIRS, since the
10 inception of this inspection procedure, have been gathering lessons learned associated
11 with the inspections. And it was recognized from the beginning with the inspectors,
12 and NRC management and the licensee, that some of the aspects of the design basis
13 assurance inspections associated with EQ programs, some of the inspection
14 requirements lacked connectivity to the regulations. And so, we're making sure that
15 the power-operated valves, the Design Basis Assurance Inspection Program contains
16 those attributes.

17 There's also some direct communications between inspectors and
18 some of our subject matter experts here in the headquarters and in the industry that
19 didn't have good connectivity associated with the inspection activities at multiple plants.
20 So, we're making sure that that's all built into the upcoming power-operated valve deep-
21 dive look.

22 Additionally, we are training inspectors associated with the technical
23 aspects of the power-operated valve, design issues related to the licensing basis. And
24 we're doing tabletops with inspectors, and Regional Inspectors, during this training. So,

1 we've taken a number of lessons learned, incorporated them into our Inspection
2 Program. And in fact, I think today we're having a workshop with the multiple entities
3 and offices and divisions today to gather up all -- to finalize our lessons learned report.
4 And we are going to be issuing a report to the Director of NRR just to summarize the
5 lessons learned from the EQ inspections.

6 COMMISSIONER CAPUTO: Okay.

7 MR. DICKSON: All right.

8 COMMISSIONER CAPUTO: Thank you.

9 Shifting gears to the Vogtle Readiness Group, which Victor
10 discussed on slide 17, personnel stability of the Vogtle Readiness Group remains a
11 concern for me. With retirements, reassignments, rotations, et cetera, I worry that the
12 Vogtle Readiness Group loses experience and knowledge accumulated with a history
13 of the project. No matter how capable a new person may be, they'll be lacking in that
14 history.

15 So, Margie, how do we maintain the continuity and knowledge and
16 experience with the Vogtle Readiness Team, especially as we approach the completion
17 of construction, the 103(g) finding, and start up commencement of operations? And
18 are you able to offer incentives to help with retention to keep the team intact as we're
19 in these crucial final steps?

20 MS. DOANE: Okay. So, you're right that we have had retirements
21 and we have had movement of staff, and we do offer rotations. I'd say that the rotations
22 actually help us be better prepared for the later stages of the project. So, the rotations
23 I put in kind of a different category because we're very careful about the rotations, that
24 we don't have any work that goes undone. They can do the same work and have the

1 same attention to activities here or in the Regions.

2 So, we often exchange staff. Like I know Bill Jones was at a meeting
3 last year, for example, or the last meeting that we had, I think, on Vogtle, because he
4 was in headquarters. And now, he's back down in the Region, for example. So, I would
5 say the rotations actually put us in a better position because it's getting us more
6 experience in getting ready for the later stages. Like, for example, we're going to have
7 a lot of ITAAC before us.

8 With the retirements, the way that we are ensuring that we have a
9 consistent approach is making sure that we have many people who have a
10 longstanding history with the project, remain involved in the project. We also double-
11 encumber to the extent that we can. So that we have someone working with someone
12 else before they leave. Much of the work is committed in writing to make sure that we
13 have a good turnover, even for future projects. So, with all of those measures, I feel
14 that we do have an assurance that we're going to be able to meet the schedule and
15 that we have staff that are adequately trained and skilled.

16 COMMISSIONER CAPUTO: Okay. Thank you.

17 CHAIRMAN SVINICKI: Thank you, Commissioner Caputo.

18 Next, we will hear from Commissioner Wright. Please proceed.

19 COMMISSIONER WRIGHT: Thank you.

20 Good morning. I've enjoyed the conversation and your presentations
21 today.

22 I'm going to follow up real quickly on Commissioner Baran's question
23 a minute ago where he was talking about the number of findings that had dropped like
24 40 percent since 2015. And maybe it was just me hearing something wrong, but it

1 almost sounded like you were a little defensive in why you hadn't figured out why that
2 had happened.

3 Could it be something just as simple as we're going through a period
4 the last three or four years where the licensees are actually doing a really good job of
5 maintaining their plants? And through our inspections, we're validating that? Could be
6 something as simple as that right now?

7 MR. DICKSON: I would say yes.

8 COMMISSIONER WRIGHT: Okay. All right.

9 Because, I mean, you sounded like you were searching for an answer
10 as to why the numbers had dropped. And it seems to be matching up again with
11 what -- you know, when we have our periodics and the people drop by, and drop-bys,
12 it seems to match up with what they're seeing I guess through INPO, or whatever, their
13 things, too. Do you want to elaborate on that at all?

14 MR. MILLER: Yes. I'm going to right a wrong from before and state
15 my name. I'm Chris Miller, for the record.

16 COMMISSIONER WRIGHT: Yes.

17 MR. MILLER: But, anyway, the difficulty is that we don't have hard
18 data that could correlate. We made this change in the ROP, and at that time, after that
19 date, you know, the findings went down or went up. Or a certain point, a procedure
20 changed or some kind of guidance that went out that said you had to handle a finding
21 or something differently. So, there's no hard data.

22 There is a lot of speculation, and I don't think we're trying to feel bad
23 about it or good about it. We were just trying to answer the question straight-up. We
24 don't have anything that would be a direct correlation to why the findings. But it certainly

1 is a potential -- I mean, we've noticed a lot of trends that are favorable over the last 20
2 years, and those trends continue. And one would speculate that, you know, licensees
3 are focusing more in certain areas, certainly on SCRAM reductions, even though the
4 trend over the last year -- and the question was asked, oh, if you look over since 2013,
5 or even go back to 2000, you know, there's certainly a reduction in SCRAMs. There's
6 dose oversight has gone way down. So, there is definite improvements.

7 So, absolutely, it could be. We just didn't want to give you a
8 speculative answer.

9 COMMISSIONER WRIGHT: Okay. Fine. Well, thank you for that.

10 MR. MILLER: Sure.

11 COMMISSIONER WRIGHT: Billy, so last year 99 percent of the
12 inspection findings at power reactors were green. Yet, the findings near the green-
13 white threshold have also received a lot of attention. So, I'm trying to understand if this
14 attention is warranted.

15 I've heard a lot of anecdotes about this, but is there a way to estimate
16 how many findings received a high level of analysis because they were near this
17 threshold. Especially as we, as a Commission, try to or get into considering what to do
18 about the issue, it would help to understand how prevalent it actually is. I mean, are
19 we talking about something that maybe is five times a year or fifty times a year or?

20 MR. DICKSON: And this, again, would be kind of speculative, but I
21 believe it's from five to ten times a year, is the range. If I recall some previous
22 discussions we had as part of the ROP Enhancement Initiative, I think last year about
23 six individual items that actually caused -- they were on that green-white threshold that
24 caused a significant amount of resources for the NRC and the licensee. So, it's around

1 five to six per year.

2 But, again, the issues are important, and there are several aspects
3 of those findings dealing with human reliability analysis. And the span sometimes for
4 some of those issues goes from green finding, based on your inputs, to yellow. So,
5 there is a need to understand the finding and the significance of actions from the
6 licensee. But I would say about five to ten a year.

7 COMMISSIONER WRIGHT: Okay. So, the ROPs evolved over the
8 years and a lot of improvements have been made, and driven by the annual self-
9 assessments. And I understand they add value. I'm interested, however, in
10 understanding how much it costs to perform these assessments. Do you have an
11 estimate on the number of hours that it takes to perform the annual self-assessments,
12 and are we getting the right amount of return on our investment? And I guess one
13 other question while you're thinking: have we considered reallocating some of the
14 hours to other things, like working down the feedback backlog?

15 MR. DICKSON: I would say in our project plans for the holistic review
16 for the Self-Assessment Program, we're looking at all of those aspects.

17 COMMISSIONER WRIGHT: Okay.

18 MR. DICKSON: I did have some recollection of having some
19 conversations about the regional peer review that we've done, and it was close to about
20 500 person-hours for doing that regional review. We do have one full-time, well, one-
21 half an FTE employee dedicated to managing that program. And the specific focused
22 area assessments, they vary between 150 hours to 200 hours. So, that's about the
23 span for each one of those items we do for the inspection, and they have been giving
24 some tangible information to the program office that we've used. And I think it's been

1 beneficial to the program.

2 COMMISSIONER WRIGHT: Okay. Thank you.

3 So, I'm going to stay with you a little bit longer, Billy. I'm trying to get
4 a feel for how significant this red metric is on the ROP feedback forms. Anytime I hear
5 "red," kind of the ears perk up. So, nobody likes a backlog, but have we got our arms
6 around the consequences of the backlog? Have we identified any cases where we
7 would have made a different regulatory decision, had we been faster in implementing
8 a change suggested by the feedback form?

9 MR. DICKSON: So, part of the feedback form process is that there's
10 an initial screening of the feedback form. So, if we identify an issue that is of
11 significance associated with any of our inspection guidance, we will flag that and
12 immediately work on it. So, I do not believe that there have been any negative effects
13 based on the red indications. And again, we're doing this holistic review, the self-
14 assessment process, and feedback form is one of the things that we're continuing to
15 kind of work on.

16 COMMISSIONER WRIGHT: Okay. Thank you.

17 Chris?

18 MR. MILLER: Yes, this is Chris Miller.

19 Yes, Commissioner, you asked a great series of questions, and
20 we've been asking ourselves similar ones since we made the changes to the ROP a
21 couple of years ago. We like to let a little bit of runtime go and see. And we made
22 some significant changes to how we do that assessment. We're putting a lot of hours
23 into things like the regional peer reviews, and we've discussed this with the
24 Commission in past times. And the Commission has actually asked us, hey, is there a

1 way to maybe get more efficient in some of that? Because we are getting, as Billy said,
2 we're getting some good information, but at quite a cost. So, that's what we're really
3 intending to do.

4 And if you look at the backlog, the red metric, to get back to your point
5 on the red metric, it was put in two years ago. We said, hey, we'd better really look
6 more in-depth, for the very reasons you asked, is there anything significant we're
7 missing?

8 Really, what is a feedback form? A feedback form is just another
9 way of changing the ROP. It's somebody making a recommendation that, hey, I think
10 we should change the ROP.

11 COMMISSIONER WRIGHT: Right.

12 MR. MILLER: And we've been doing that quite consistently over the
13 last several years. Certainly with the ROP Enhancement, it's been a whole year or six
14 months of really looking at that in-depth the previous year, looking at the engineering
15 program and how can we change it.

16 So, it's a matter of prioritizing that, and then, prioritizing the inputs as
17 they come in. Which ones do we really think we need to look at? I think that's what
18 our holistic review is going to accomplish when we get done with that. And we hope
19 that the hours will get more in line with what we think the benefit from it is. But it's a
20 good question. Thanks.

21 COMMISSIONER WRIGHT: Thank you. Thank you so much.

22 John, in your presentation you had a slide, slide 6, and you compared
23 the number of events each year from NRC-regulated licensees to the Agreement
24 States. Did you find anything to suggest that the oversight provided by Agreement

1 States is less robust than what we provide?

2 MR. LUBINSKI: No, not at all. If you look at the data, as I said, you
3 can say that we had three new Agreement States come onboard. That may have been
4 a contributor to the total number of NRC events. But, as I said, if you look at the overall
5 number of events, which again the number of Agreement States, 38 Agreement States
6 at this point, so a fair share of the licensees are in Agreement States. Seeing over the
7 last five years that we're still seeing a statistically-significant trend down would tell me
8 that, just based on the numbers, no, you don't see any concerns with oversight or them
9 being any less robust.

10 Also, I think the most important indicator, though, is our IMPEP
11 Program, and when we do our IMPEP reviews, and that is definitely a factor. We don't
12 just look at the number of inspections performed, but the quality of the inspections.

13 COMMISSIONER WRIGHT: Right.

14 MR. LUBINSKI: Another great feature of that is having on the IMPEP
15 team Agreement State members. It's not just the NRC doing the IMPEP reviews.
16 They're on the team. They're on the review boards for the team as well and help with
17 sharing lessons learned and best practices they have.

18 COMMISSIONER WRIGHT: Thank you. Thank you for your
19 answers and thank you for what you do.

20 I yield back.

21 CHAIRMAN SVINICKI: Well, thank you all again for the
22 presentations.

23 Maybe I'll begin by just sharing some thoughts, since a number of
24 colleagues have talked about the decline in the number of findings. And so, it may be

1 that there are a number of contributors. We've talked a lot about licensee changes that
2 could have contributed to that. There could be changes on our side as well.

3 If we were to widen the aperture and pull back to the years when
4 there were a higher number of findings, we could think of a few things. This isn't a
5 systematic analysis and it's not really a conclusion. But, under the prior Executive
6 Director for Operations and the prior General Counsel, there was an initiative on
7 backfitting and on a return to adherence and greater adherence to that. Although that
8 seems a step removed from the day-to-day work of inspectors, it's not really at the end
9 of the day because we have to have some cohesiveness around the notion of what's
10 required, what's in the licensing basis.

11 So, it could have been that, if you start examining the years, if you
12 add to your sample, if it were the years where we had a higher level of findings, you
13 might find -- and I say "you might" -- but you might find that there was kind of a
14 dominance that was occurring of low to exceedingly low safety significance.

15 So, what comes to mind for me is that I think we would acknowledge
16 we have been on a journey of trying to refocus towards the safety and risk-significance
17 of items. So, it could be a contributor as well. If you look only at the declining years,
18 that might be lost, that in the years before that we were making some programmatic-
19 focused changes to make sure that we had a coherency across the four Regions, but
20 also that, of the findings returned, that we were allocating our attention to safety and
21 risk-significant items.

22 So, I would just offer that perspective. I think it would be an
23 interesting set of different people contributing different effects on the number of
24 findings, but it certainly goes beyond just the licensee's actions. So, that could be an

1 element of it.

2 And, Billy, you've really been shouldering the topics here. So, I'm
3 feeling a little bad for you. You're doing, by the way, a great job. Thank you for carrying
4 topics of broad and active interest by the Commission today.

5 I might, actually, wonder if perhaps the folks sitting behind you might
6 be able to take a longer historic view. Listen carefully to this question because, when
7 I reflect on my first AARM meetings here, my early years on the Commission -- it was
8 reported today that there are no deviations from the Action Matrix. That was not true
9 when I started on the Commission. There seemed to be, and I remember it really
10 caught my attention, a not highly irregular invocation of deviating from the Action Matrix.

11 And I wondered -- Billy, I won't put this on you -- but if Dan Dorman
12 or Chris Miller, or someone, had a perspective on, are there elements that you think
13 contribute to the Agency in 2018 not needing to lean into deviations? Have we clarified
14 the system around the process for invoking those deviations? Or is that something
15 we've not really looked at?

16 And, Billy, you're welcome to take a swing at it, but since you are
17 stepping into this capacity today and in an acting capacity -- I guess Mr. Dorman.
18 Thank you.

19 MR. DORMAN: Thank you, Chairman.

20 For the record, Dan Dorman, Deputy EDO for the Reactor Programs.

21 We have had, I think, 23 deviations over the history of the program.
22 And I would put them into two broad categories. The first is some specific issue at a
23 station that's not specifically called out in the ROP for which we issued a deviation to
24 enhance oversight. And I will specifically reference groundwater at various sites and

1 the licensee's response to alkali-silica reaction in the concrete structures at the
2 Seabrook Station, as examples of deviations for specific technical issues.

3 The other gets into where the staff determined, in looking at the
4 unique circumstances at a station, that the Action Matrix was not putting us necessarily
5 in the right place relative to oversight. I think the two most recent examples of those
6 deviations were examples where, for multiple whites, it indicated that a plant should be
7 placed in column 4, but in one case, as I recall it, the Region's determination was that
8 the issues were presenting in a very narrow section of the cornerstones of the ROP,
9 and therefore, it didn't warrant the kind of broad oversight response that a column 4
10 indicated.

11 During 2018, we had none of those unique technical issues and we
12 had none of those type of Action Matrix issues presenting.

13 CHAIRMAN SVINICKI: Well, thank you for that. And I draw from that
14 response that we can't really predict anything about the future. It's not perfecting the
15 ROP that eliminates, or perfecting some of the guidance and structure around the ROP,
16 that yields a result of having no deviations. And don't get me wrong, that I'm of a view
17 that anytime you have a system, you have to have some sort of exemption process for
18 it because life is complicated and facts are going to present, and you can't really ever
19 design a perfect set of metrics and thresholds. So, I wasn't in any way advocating
20 against the use of the deviation, where appropriate.

21 But there was some question. At the time, there seemed to be a bit
22 of a proliferation of the need for deviations. And so, one does want to always feed that
23 back into the system to say, if we systematically need to invoke the exit ramp, you
24 know, or the escape clause, that might mean that somehow something in the system

1 itself needs to be looked at. So, I appreciate that perspective.

2 And I will also acknowledge that groundwater issues were dominant
3 in the deviations around the 2008-2009 timeframe, when I was first on the Commission.

4 The other topic that I wanted to turn to, Vic, was yours. I appreciated
5 in preparing for the meeting that I had a chance to look at the Office Instruction that
6 was issued. I know that you said that it doesn't sound interesting. I got a little geeked
7 up about it myself and was looking at the templates.

8 I actually find it very thoughtful because this gets to another
9 perspective I have, which is that, if the staff is drafting a Safety Evaluation Report or
10 something like that, it's not the work of, you know, it's not literary work. It's the notion
11 of what topics need to be covered, what substance needs to be discussed, and what
12 regulatory conclusions either need to be substantiated or we need to describe that we
13 failed to substantiate.

14 So, this work really can be prepared in advance. I was not aware
15 that these templates were being finalized and published. I was glad to see that they
16 were. I think it is a very important state of readiness.

17 Margie made mention to the surge of work that comes towards the
18 end under the ITAAC process. It's unavoidable. I've been watching this over the time
19 the construction has been going on. I think that every area that we can think of to be
20 ready, every rock we can turn over, it seems pretty thorough. It seems pretty
21 systematic to me, again, to and including saying, well, you know, if there's a request
22 for a hearing, if there's not, you've got templates; you've got text; that, you know, if "A,"
23 this is the text; if "B," that is the text. And also, the explicit references to the fact of the
24 bases of the determinations and where those can be found. You've cross-referenced

1 in the other documents that will have that. So, I think that this will serve us very well.

2 It just gets busy at the end. It's not that different from like home
3 construction or something or a remodeling project where that punch list at the end is
4 really the one, that you just want to be in a state of readiness.

5 And you made another comment that I might ask you to expand on.
6 You said it's kind of not too early to start applying insights from what we've learned with
7 this go-through and things we probably have yet to learn in our oversight of the Vogtle
8 3 and 4 project.

9 I think there's also a knowledge management piece to that. We
10 cannot be sure when the United States might have another nuclear reactor construction
11 project. And as has been talked about by others, continuity of staff knowledge is very,
12 very important here.

13 Is there anything that the team, as busy as they are, is having an
14 opportunity to think about how we document some of our lessons learned and do some
15 knowledge management for those, to whom Vic Hall might hand off the reins as he
16 takes his next assignment?

17 MR. HALL: Well, thank you, Chair, for the question. I was feeling
18 left out. So, I appreciate it.

19 (Laughter.)

20 Well, first, thanks for the compliments on the Office Instruction. It is
21 funny to feel geeked-out about something that is a government office instruction, but it
22 just follows along the line of needing to be prepped and ready to go, having everything
23 ready for that very last step.

24 On lessons learned, I think we're applying them every day. And so,

1 this is not a group that has history. We've never done a Part 52. We had never closed
2 an ITAAC until we first started receiving them recently.

3 So, I think at least the folks that I work with on a daily basis, including
4 Region II's inspectors and the folks up here that work on the ITAAC, are open to doing
5 things differently if we need to. So, we've just built this. And so, it's actually the first
6 time, and learn right away from what we're doing.

7 And we're finding, I think, ways to improve inspection, to take credit
8 for -- I'll give you the example of the test that was done in China. That was a license
9 amendment request, that the licensee had requested that we take a look at the testing
10 that was done in China and having that be applied here. The staff took an open mind
11 to that, I think used, call it transformative thinking in applying that. We sent inspectors
12 to China to follow testing that was done.

13 So, lessons learned is being a lot more done on the fly versus, hey,
14 let's get this project ready for the end where we can write this great, grand report of the
15 lessons learned, which we are going to do as well. But, of course, I think we're much
16 more open to working on the fly, to finding ways we can improve and be as efficient as
17 possible.

18 CHAIRMAN SVINICKI: Well, thank you for that. And as I was
19 listening to you respond, I do have to note myself that you said, we're not closed off,
20 even on the first time through. We're looking at what did we do 18 months ago and can
21 there be an improvement made. I have to acknowledge that, as you said that, I recalled
22 going down to Region II and spending half a day going through the Primavera system
23 and what we call CIPIMS. I've forgotten what that stands for, but it's our inspection and
24 how the two schedules and software systems can marry and hand off to each other.

1 And even since that time, which was a number of years ago, I think
2 we've continued to tweak and improve both the tools that are available to our
3 inspectors, the processes that we're using to track the inspection that has to marry
4 along with the construction progress itself. So, thank you for reminding me of that
5 because there's been change that even I've noted since I first began to inquire about
6 what we're doing there. So, that is very helpful.

7 And I do want to note that not only did we send the inspectors over
8 to China, but the United States NRC has had a multiyear collaborative relationship with
9 China's safety regulator, the National Nuclear Safety Agency or Administration, NNSA,
10 but not the DOE NNSA. And as a result, we were allowed that access, and that was, I
11 think, again, to the staff's credit, that they leaned into that, made use of it, and that we
12 have brought those learnings back home to apply at the time to the two projects, but
13 now one that we have remaining in this country. So, thank you for that work.

14 I hope all of you are getting very well rested, though, because that
15 surge, even with all your preparation, that's coming. So, we will have to rise to the
16 occasion when we get that.

17 And with that, again, I appreciate all of your comments.

18 Do my colleagues have anything further? Commissioner Baran?

19 COMMISSIONER BARAN: Thanks.

20 Well, I appreciate the discussion of the potential causes of the steep
21 42 percent decline in NRC inspection findings for power reactors over the last three
22 years. The staff and the Commission have suggested several possible drivers for this
23 trend. Could it be changes in procedures or guidance? Could it be changes in
24 inspector training? Could it be a reflection of a dramatic improvement in licensee

1 performance? Is it a result of inspectors appropriately filtering out potential findings
2 that really don't meet the standard of a finding? Or is it a result of inspectors being
3 reluctant to make a finding they should be making in the face of licensee opposition?
4 It may be a mix of one or more of these factors.

5 But, with a trend this significant that relates directly to our core
6 inspection function, I think we need to move beyond speculation and conduct a rigorous
7 analysis of this trend. These are NRC's inspection findings. We should be able to
8 figure out what's causing them to decline so markedly in a short period of time.

9 And again, I have no judgment. I make no judgment about whether
10 we're going to find it's a positive thing or a negative thing, or a combination. But we
11 really should understand that. I mean, it's been several years now. It's been a really
12 strong, continuing trend. We analyze the heck out of much smaller trends than this.
13 We really need to understand this, I think.

14 So, thank you.

15 CHAIRMAN SVINICKI: Would the staff like just to respond or tie it
16 back to the assessment you're doing? Anyone?

17 Mr. Miller?

18 MR. MILLER: Yes, thanks, Commissioner.

19 I would agree it is significant. The devil's in the details of how you
20 get into each individual decision made by an inspector, made by the Branch Chief,
21 made by the Division Director who's overseeing those reports.

22 It's difficult to actually come up with a hard-and-fast number of data
23 to pull from that. It's "X" number that are in this category; some are in that. We do
24 know there are some different bins. We have been asking the questions. We've gone

1 out with a survey. I don't think that the survey that we went out with will get to the kind
2 of detail.

3 So, we'll continue to look at it. I think it's important. We feel the same
4 way. It's important. I hope we can come up with more details. And certainly we will
5 monitor it to see which way it's going, so we'll know is it still going down or has it leveled
6 off. Is it going up? I think some of those insights will continue to help us in the future.

7 COMMISSIONER CAPUTO: Don't sit down.

8 (Laughter.)

9 CHAIRMAN SVINICKI: Yes, Commissioner Caputo.

10 COMMISSIONER CAPUTO: One factor that hasn't been mentioned
11 is the fact that over the last six years we've had eight plants cease, eight reactors cease
12 operations. So, there is a sector of the industry that's not being inspected because it's
13 not operational. So, I would expect that a portion of that decrease is due to the fact
14 that we now have fewer plants operating.

15 MR. MILLER: That's a great point. Thank you, Commissioner. We
16 are looking at the data on findings for a plant as well for operating plants. And it's still
17 going down. But that's a good --

18 COMMISSIONER CAPUTO: Well, and it will continue to go down as
19 additional plants --

20 MR. MILLER: Right, right.

21 COMMISSIONER CAPUTO: -- cease operation.

22 MR. MILLER: Right.

23 CHAIRMAN SVINICKI: Thank you.

24 Commissioner Wright?

1 COMMISSIONER WRIGHT: I'm just glad it's going down.

2 (Laughter.)

3 MR. MILLER: Yes.

4 CHAIRMAN SVINICKI: Commissioner Baran?

5 COMMISSIONER BARAN: I'm not sure I'm glad if it's going down.

6 That's what I'd like to figure out.

7 (Laughter.)

8 It could be good. And I take Commissioner Caputo's point that that's
9 another factor that might be in the mix as well. But, of course, the number of units
10 hasn't dropped 42 percent in three years, either. So, something else is going on here,
11 and we've got to figure out what it is.

12 MS. DOANE: Yes. And, Commissioner, I feel like I need to say
13 something here, because I don't want us to think that we're just flailing around and just
14 didn't pay attention to these numbers. We are not. We have seen these numbers
15 decreasing. What you're hearing is we have asked questions why, to make sure that
16 we didn't have any immediate concern that we wanted to remedy. And we have, and
17 it's just sort of this general discussion.

18 We also have other indicators that we can look at to make sure that,
19 where there's not findings, do we see something else going on at the plant, so that you
20 would see some degraded performance that you would be concerned about? So, we
21 have resident inspectors, as you know; the corrective action program. We can look at
22 the equipment.

23 And so, there's been a lot of thought in this. And I just want to make
24 sure that we don't leave the impression that there's an unsafe condition or something

1 like that and our inspectors just aren't finding it. That would not be the case. These
2 inspectors are out there every day.

3 There was a GAO report that also called on us to look at -- you'll
4 remember this; I think we've mentioned this the last time -- that calls on us to look at
5 how we were doing these findings, because there was an inconsistency. And so, after
6 that, it started to decrease, as we took a hard look at how should we be making these
7 findings. And so, that contributed, I think, originally to what had happened.

8 And what you're hearing now is, "But why is the trend continuing?"
9 And so, we're looking at all of the different things about whether it's performance or all
10 the right questions.

11 CHAIRMAN SVINICKI: Dan, did you have anything to add to that?

12 MR. DORMAN: Thank you, Chairman.

13 Just briefly, I agree with Chris on the challenge of defining the
14 negative of why somebody didn't write up an inspection finding. And I think we can
15 explore from the inspector's side what may be impacting this. I think we have multiple
16 dynamics going on here that have been touched on.

17 I would note that, during that period, the greater-than-green findings
18 went from a little over 20 in 2015 to three last year. We have two so far this year.
19 We've talked about we have no plants in column 3 and 4. So, I think there are some
20 data that we can draw on. We can look at LERs. We can look at not just are we
21 crossing green-white thresholds on the PI, but maybe we can dive into some of the PI
22 data and see if there's indicators there that may indicate changes in licensee
23 performance that may be contributing to this as well. So, I think there are a number of
24 things that we could look at to try and put more meat on the bones of why is this

1 happening.

2 CHAIRMAN SVINICKI: Thank you very much.

3 Did anyone have anything else?

4 (No response.)

5 I thought this was a really good discussion.

6 Okay. With that, thank you again, and we are adjourned.

7 (Whereupon, at 11:19 a.m., the meeting was adjourned.)