UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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

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THURSDAY,

JUNE 2, 2016

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ROCKVILLE, MARYLAND

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The Commission met in the Commissioners' Hearing Room at the Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, at 8:58 a.m., Stephen G. Burns, Chairman, presiding.

COMMISSION MEMBERS:

STEPHEN G. BURNS, Chairman

KRISTINE L. SVINICKI, Commissioner

WILLIAM C. OSTENDORFF, Commissioner

JEFF BARAN, Commissioner

ALSO PRESENT:

ANNETTE VIETTI-COOK, Secretary of the Commission

MARGARET DOANE, General Counsel

NRC STAFF:

VICTOR M. MCCREE, Executive Director for Operations

DANIEL COLLINS, Director, Division of Material Safety, State Tribal and Rulemaking Programs, Office of Nuclear Material Safety and Safeguards

MARC DAPAS, Regional Administrator, Region IV

DANIEL H. DORMAN, Regional Administrator, Region I

SCOTT MORRIS, Director, Division of Inspection and Regional Support, Office of Nuclear Reactor Regulation

ENTERGY STAFF:

CHRIS BAKKEN, Executive Vice President/Chief Nuclear Officer

JEREMY BROWNING, Site Vice President-Arkansas Nuclear One

JOHN DENT, Site Vice President-Pilgrim Nuclear Power Station

DONNA JACOBS, Chief Operating Officer

JOHN McCANN, Vice President, Regulatory Assurance

TIM MITCHELL, Senior Vice President

JOHN VENTOSA, Chief Operating Officer

P R O C E E D I N G S

CHAIRMAN BURNS: Thank you. And I will ask the staff to come forward for our main part of today's meeting. We want to welcome the staff, members of the public, other external panelists who appear before us today.

The purpose of today's meeting is for the NRC staff to discuss the results of the Agency Action Review Meeting or AARM and to hear from Entergy Corporation representatives on their action plans for improving performance at the Arkansas Nuclear One and the Pilgrim Nuclear Power plants.

We will begin with presentations from the staff and following the staff panel, we will have a brief break and then we will hear from two panels from Entergy Corporation.

I look forward to the presentations and the ensuing discussion with members of the Commission. Would any of my colleagues like to make any remarks before we begin?

Okay, with that, I will turn it over to the staff to discuss the results. Vic.

MR. MCCREE: Good morning, Mr. Chairman, Commissioners.

Today, we are here to discuss the results of this year's Agency Action Review Meeting that we conducted on April 27th. As you know, the Agency

Action Review Meeting is an opportunity for NRC senior managers to gather and evaluate the processes that we use to ensure the operational safety performance of our licensees. Next slide.

The specific objectives of the Agency Action Review Meeting or AARM are to review the appropriateness of the actions that we have taken for power reactor plants, for power reactor plants under construction and/or nuclear material licensees with significant performance issues; to ensure that coordinated course of action are developed and implemented for our licensees with performance issues; to review the results of our annual assessment on the effectiveness of the reactor oversight process, including a review of all approved deviations from that process and the action matrix specifically; to review the results and assess our effectiveness of the construction reactor oversight process, including all approved deviations from the construction reactor oversight process action matrix and ensure the trends in the industry and in licensee performance are recognized and appropriately addressed. Slide 3, please.

Before I turn it over to the following speakers listed on the agenda, I would like to discuss the results of this year's Agency Action Review

Meeting and I would like to highlight one topic which was discussed at the AARM but is not being presented in detail at this meeting today and that is the results of the annual construction reactor oversight process self-assessment that showed that no facilities met the criteria to be discussed at this AARM Commission meeting.

The process that we implemented followed the principles of good regulation and we also concluded that the staff have been effective in ensuring the new reactor units that are being constructed are being done so in accordance with the approved designs.

We will discuss the construction assessment in more detail during the New Reactors Business Line Commission Meeting, which is planned for later this fall.

Now, I would like to turn it over to our first speaker, Marc Dapas, to discuss the performance at Arkansas Nuclear One. Marc.

MR. DAPAS: Good morning, Mr. Chairman and Commissioners. I appreciate the opportunity to be here today and discuss with you our regulatory oversight activities with respect to Arkansas Nuclear One or ANO.

Regarding my presentation, I will briefly

mention the yellow findings we issued that led to the staff decision to place ANO in column 4 of the reactor oversight process or ROP action matrix. Then, I will focus my remarks in five overarching areas with the first being the principle findings from our recently completed 95003 supplemental inspection. I will then discuss the causes for the significant performance decline at ANO as identified by Entergy and independently verified by the NRC. Following that, I will highlight some notable improvements in licensee performance. Then, I will describe our oversight activities and those going forward.

Finally, I will share some overarching regulatory perspectives, including the basis for our conclusion that ANO continues to operate with adequate safety margin. Next slide, please.

By way of background, on March 31, 2013, while moving the Unit 1 main generator stator out of the turbine building, the temporary lifting assembly failed, causing the stator to fall into the shared train bay between Unit 1 and Unit 2.

Based on the risk significance determination, in June of 2014 we issued a yellow finding for both Unit 1 and Unit 2 in the initiating events cornerstone, which for ROP action matrix purposes, was effective the first quarter of 2014.

As the stator fell, it damaged a fire main. The water from this fire main caused localized flooding with some of it leaking past degraded hatch seals and entering the Unit 1 Auxiliary Building. Given the flooding vulnerabilities revealed by the stator drop event, the licensee began an extent of condition review which eventually led to the identification of over 100 unsealed conduits and degraded seals.

We concluded that the licensee failed to design, construct, and maintain flood barriers for certain structures in a manner that would protect safety-related equipment from flooding.

Given the significance of this failure, we issued a yellow finding for both Unit 1 and Unit 2 in the mitigating systems cornerstone in January of 2015, which was effective the third quarter of 2014.

After NRC engagement via the performance indicator or PI frequently asked question process, the licensee submitted revised PI data in March of 2015, which resulted in the PI for unplanned scrams per 7,000 critical hours with respect to Unit 2 turning white for the second and third quarter of 2014. Next slide, please.

With the completion of the 95003 supplemental inspection, we have conducted a rigorous

independent diagnostic assessment of the performance programs and processes at ANO. The 95003 supplemental inspection, which is the inspection and assessment tool we use for column 4 plants is the most comprehensive inspection activity we conduct in the connection with the ROP and consisted of more than 3,750 direct inspection hours in the case of ANO.

The results of this significant inspection provided us with insights into the breadth and depth of safety, organizational and programmatic issues that contributed to the performance decline at ANO.

The subject inspection included a diagnostic review of programs and processes that are not typically inspected as part of the ROP baseline inspection program. It included an independent assessment of the safety culture at ANO, including the results of Entergy's independent, third-party nuclear safety culture assessment and associated apparent cause evaluation.

The inspection also included an assessment of the completed and planned corrective actions related to the four yellow findings and the white performance indicator using inspection procedures 95002 and 95001, respectively.

With respect to the white performance indicator, the 95003 inspection team concluded that the licensee adequately addressed the causes for the three unplanned scrams involving Unit 2 and as such, this performance indicator will be closed in the 95003 inspection report, which I expect to sign next week.

In addressing the yellow finding for degraded flood protection features, the licensee modified some 300 existing fire seals to also make them flood resistant. However, in doing so, the licensee created a number of untested configurations.

The licensee has contracted to have testing performed to determine whether there are any actual degraded conditions from a fire protection standpoint. While the data is still being reviewed, preliminary results indicate a positive testing outcome.

One of the root causes for the yellow finding associated with the stator drop event was inadequate control of contractors. Since the stator drop event, the licensee has implemented corrective actions to enhance station requirements for oversight of supplemental workers performing contract work activities, such as engineering and technical services.

However, the 95003 inspection team

concluded that corrective actions to address the extent of condition with contractor oversight problems have not been fully effective. Further action is needed because oversight plans for outage workers were inadequate. Qualification requirements for contractors to act as supervisors did not have a consistent standard and designated ANO oversight personnel lacked adequate guidance and training to effectively perform their oversight plan.

The licensee has subsequently revised its comprehensive recovery plan to address these gaps. Next slide.

The team concluded that the licensee did not fully evaluate safety culture weaknesses. The specific action plan focused on improving safety culture was not developed. And as such, corrective actions were not formulated for some safety culture elements that the 2015 independent safety culture assessment indicated were degraded.

The causes and/or extent of problems associated with some safety culture attributes were not evaluated. In response to the team's assessment, the licensee performed appropriate causal evaluations and developed the specific action plan that addresses the full scope and causes for the identified safety culture weaknesses. The licensee did not determine

the causes for the full extent of problems with risk recognition and management. Actions to improve risk management were incomplete and few actions existed to address risk recognition.

The team identified several examples of where procedure guidance was not adequate and/or workers lacked training to be proficient in their respective risk management roles.

The team identified that the licensee's recovery plan did not adequately consider training and benchmarking as key improvement strategies. Benchmarking outside the Entergy fleet and involvement in various industry initiatives has been limited. As Entergy's senior corporate officials have acknowledged in our discussions with them, appropriate industry benchmarking has been a gap across the Entergy fleet. Next slide, please.

Problems with effectively implementing various engineering programs were more extensive than the licensee had originally concluded from its self-assessments.

While some licensee evaluations indicated performance was acceptable, the inspection team determined that the problems were more significant than the licensee had originally concluded. The team identified instances were ANO did not adequately

evaluate and use internal and industry operating experience to prevent future problems. As a result some technical issues were not resolved, leading to recurrent equipment challenges. Next slide, please.

Entergy identified and the NRC confirmed through the 95003 inspection the following overarching causes for declining performance at ANO. The licensee did not effectively manage the change associated with resource reduction initiatives in 2007 and 2013. For example, the staffing reductions at ANO did not account for the two different unit designs and elimination of various positions resulted in significant increases in work backlogs, as station leaders attempted to prioritize work with existing resources. And starting in 2013, policy changes resulted in an unexpected increase in retirements and the licensee did not adequately manage the loss of experience.

Leadership behaviors were not commensurate with a strong safety culture. Monitoring of licensee performance was ineffective across the organization. For example, station performance indicators focused on completed actions, rather than on whether those actions were effective.

At the corporate level, performance monitoring and safety review committee processes

stopped being intrusive. As I mentioned previously, external benchmarking outside the Entergy fleet was limited. And as such, ANO performance was deemed compared to other sites within the fleet.

Standards declined, which was most evident in failures to follow procedures or stop and correct unclear procedure steps. The licensee became more accepting of degraded equipment performance and reduced margins by using strategies that relied on engineering analyses or proceduralized compensatory measures, rather than fixing degraded equipment. The effectiveness of corrective action program gradually declined. For example, degraded equipment was restored without having a complete understanding of the cause for the degradation. Performance assessments were weak or nonexistent and problem trending was ineffective. Causal evaluations did not consider organizational and programmatic challenges. Next slide, please.

Although the licensee is in the early stages of implementing its comprehensive recovery plan, there have been some notable improvements in station performance. Licensee management has been more rigorous and conservative in its decision-making. For example, in response to a leaking component inside the Unit 2 containment, a well-

designed plan was implemented. Unit 2 was shut down before there was any significant operational impact and a permanent repair was made without any evidence of schedule pressure.

Our inspectors also observed a lower threshold for addressing equipment reliability issues during the Unit 2 outage last fall. And the NRC resident inspectors have noted a number of examples that clearly indicate that the operations department is becoming a demanding customer and raising standards across the station. Shift managers have challenged work plans and operability evaluations, insisting on more complete evaluations in documentation and are verifying conditions. Discussions about potential risk are apparent across the station and corrective action program rigor has improved. There is a clear emphasis on having a greater questioning attitude and need to understand problems so that they can be addressed. Next slide.

The licensee submitted its comprehensive recovery plan on the docket on May 17th. We have reviewed the plan and concluded that the constituent corrective actions are appropriate and fully address both licensee and NRC-identified performance gaps. We are developing a confirmatory action letter or CAL that captures the specific actions within the

licensee's recovery plan that are necessary to address the significant performance deficiencies that led to the station being placed in column 4, as well as the key actions needed to ensure sustained improvement in safety performance.

Regarding our inspection process going forward, in addition to the routine resident inspection program, we intend to conduct focused inspections at ANO on roughly a quarterly basis. The specific inspection frequency will be a function of when the licensee has completed its own assessment of corrective action effectiveness with respect to the individual CAL items and informed us that the associated results indicate that items are ready to be inspected.

From our inspection activities, we will independently determine whether the licensee's corrective actions have been effective in achieving performance improvement. The CAL will remain open until we have determined that the licensee has sustained performance improvement through effective implementation of its recovery plan. Next slide.

As I stated earlier, via the 95003 supplemental inspection, we have conducted a rigorous independent diagnostic assessment of the performance programs and processes at ANO. Based on this

assessment, we have concluded that Entergy's discovery effort was reasonably comprehensive, though as I have discussed the 95003 inspection team did identify some gaps. Based on Entergy's collective review of the causes for the performance decline at ANO, the findings from the 2015 independent third-party nuclear safety culture assessment and the results of the NRC's 95003 supplemental inspection, we have determined that Entergy understands the breadth and depth of the performance concerns associated with ANO's performance decline.

In addition, from our review of the licensee's comprehensive recovery plan, we have determined that it does address with specific planned corrective actions the performance gaps or concerns.

Effective implementation of the comprehensive recovery plan supported by the allocation of adequate resources and continued oversight by Entergy leadership should lead to substantial and sustained performance improvement at ANO.

Based on the results of our assessment, we are confident that the current level of regulatory oversight is appropriate and no action in addition to those prescribed in the ROP action matrix are necessary.

We have also independently confirmed through our inspection and assessment processes that ANO continues to operate with adequate safety margin. While the causes for decline in performance that are described earlier do indicate that over time there had been a reduction in safety margins in terms of how effectively programs and processes were being implemented and how personnel behaved at the station, those margin reductions have not reached an unacceptable level. The robust plant design has not been compromised and there have not been any significant operational events or risk significant findings since the plant was placed in column 4.

As I described earlier, a number of improvements have been noted at ANO. Two of the more significant area of improvement are operational focus and equipment reliability. Operator fundamentals have been strengthened and decision-making has been more conservative.

You may recall that at last year's commission meeting I commented the NRC has been driving licensee performance. And that going forward, the thoroughness of the licensees' self-assessment and discovery effort would be an indicator of whether that situation had changed. I suggested at that time that if our 95003 inspection team

identified extensive and significant gaps in the results of the licensee's discovery effort, that would be an indicator that the NRC versus the licensee was continuing to drive things.

I'm glad to see that is not what occurred. And as I said previously, we will continue to monitor and independently assess the effectiveness of Entergy's corrective actions during our continuing inspection activities.

This concludes my remarks with respect to ANO and I will now turn it over to Dan Dorman. Thank you.

MR. DORMAN: Thank you, Marc. Good morning, Chairman Burns, Commissioners. This morning I plan to provide you a brief overview of the gradual performance decline at Pilgrim Nuclear Power Station which resulted in the plant being placed in column 4 of the NRC action matrix. I will also discuss the enhanced oversight activities undertaken by the staff as a result and outline near-term activities. Before I get into that, I would like to acknowledge two members of our team leading the oversight of Pilgrim who are behind me to your left. Mrs. Erin Carfang is the senior resident inspector at Pilgrim Station and to her left Mr. Art Burritt is the Branch Chief in the Division of Reactor Projects who is

coordinating and organizing the oversight of Pilgrim during this time. Next slide, please.

Pilgrim entered column 3 or the degraded cornerstone column of the NRC action matrix in the fourth quarter of 2013, when the performance indicators for unplanned scrams and unplanned scrams with complications were both white. This resulted from four unplanned scrams in 2013, three of which involved complications. Next slide, please.

In December 2014, the region performed an inspection under Procedure 95002 to review the company's corrective actions to address the issues that contributed to the multiple unplanned shutdowns. This inspection determined that Pilgrim's actions to date were not adequate to address the root and contributing causes of unplanned shutdowns. As a result, the staff opened two parallel white findings in accordance with the inspection manual and, in consequence of that, Pilgrim remained in the degraded cornerstone column for greater than five quarters. Next slide, please.

On January 27, 2015, during Winter Storm Juno, Pilgrim experienced a loss of offsite power resulting in an automatic shutdown of the reactor. During the ensuing cooldown, one of the plant's four safety relief valves failed to open on demand three

times. I would note that the plant was safely cooled down and depressurized using two of the remaining safety relief valves.

A special inspection team from Region I discovered that a similar failure had occurred during Winter Storm Nemo two years earlier and that the company had failed to understand and correct the root cause of that failure and to take actions to prevent recurrence. This performance deficiency was determined to be of low to moderate safety significance. The resultant white finding in combination with the greater than five quarters in the degraded cornerstone led to Pilgrim being placed into column 4 of the action matrix for a repetitive degraded cornerstone on September 1, 2015.

The assessment letter to Entergy identified that the focus of our enhanced oversight will be on longstanding weaknesses in the company's programs for identifying and resolving problems at the site, as well as an assessment of the safety culture that has allowed these weaknesses to persist. Consistent with the nature of the complications associated with the unplanned shutdowns in 2013 and 2015, the inspection will also examine the key reactor safety attributes of equipment performance, human performance, and procedure quality. Next slide,

please.

As a result of the movement to column 4, Entergy has undertaken a broad scope evaluation of the site's safety culture and corrective action programs, among other things. Pursuant to Inspection Manual Chapter 305, Region I will lead diagnostic evaluation of the licensee's programs and improvement plans when the licensee has indicated readiness to receive such an inspection. At this time, we understand the licensee expects to indicate their readiness within the next couple of months.

In the meantime, Region I has undertaken several targeted inspections within the baseline inspection program and also under Inspection Procedure 95003 to ensure that adequate safety margins are maintained. We have exercised flexibilities in the implementation of 95003 to move up some of the samples under the corrective action portion of the inspection to address the procedure's objectives related to the acceptability of continued operations while the company conducts its reviews and develops its recovery plan.

The Phase A and B inspections were conducted to determine whether significant issues were being adequately addressed and whether additional regulatory actions were necessary to

arrest decline plant performance. They serve as partial completion of this portion of the procedure.

Phase A was conducted in January of 2016 and reviewed open risk-significant issues and other aspects of the corrective action program. No significant issues were identified as a result of this inspection.

Phase B was completed in early April and looked at overall corrective action program performance since the last biennial problem identification resolution inspection, which was completed last August. This inspection focused on progress in improving the plant's performance in the area of corrective actions. Overall, the team determined that Entergy was taking appropriate actions to address identified weaknesses in the corrective action program. The team concluded that progress has been made over the last several months, due to management's commitment to improvement. However, continued management attention is warranted to ensure sustained improvement, as the items identified in the report indicated that weaknesses in the program continued to exist.

The final phase of the 95003 inspection will be scheduled for completion once Entergy indicates that it is ready. Next slide, please.

We have also targeted problem identification and resolution samples within the baseline inspection program in the areas of previous performance issues. In particular, during the fourth quarter of last year, we targeted several inspection samples in the area of operator performance and procedure quality. While these inspections confirm weaknesses in the corrective program implementation, they have not revealed any additional significant performance deficiencies. To support these inspection activities, Region I has augmented our resident inspector team at the station pending the results of the 95003 inspection. We are conducting senior management quarterly performance assessments and reviews of our oversight strategy. The results of these assessments and the inspections to date will guide the planning of the final phase of the inspection 95003.

Currently, the results of these activities indicate that additional regulatory actions beyond those prescribed for plants in column 4 are not required. There have been no risk-significant events, equipment failures, or inspection findings since Pilgrim's entry into column 4. Next slide, please.

Successful completion of the final phase

of the 95003 will ensure that Entergy understands the causes of the significant performance issues and has developed plans which are reasonably expected to result in sustained improvement in station performance. The completion of the 95003 will support the development of a confirmatory action letter and the assessment of the need for additional regulatory action. The content of the confirmatory action letter will identify the most significant elements of the licensee's recovery plan, as determined by the inspection and confirm as licensee commitments. To ensure adequate implementation of the most significant corrective action items, CAL follow-up inspections will be conducted as Entergy makes progress on its improvement plan. Exit from column 4 will occur when sustained performance is demonstrated by the inspection closeout of the elements of the CAL. Next slide, please.

Notwithstanding the decline in performance at Pilgrim -- yes, next slide, please. Thank you. Notwithstanding the decline in performance at Pilgrim, the staff concludes, based on the results of our augmented oversight activities, that there remains adequate safety margin in the design and operation of the plant to support continued operation. Since placing the plant in column 4, we

have undertaken specific additional inspection activities. These inspections have been aimed at determining whether the performance decline at Pilgrim indicates the existence of other significant performance deficiencies. To date, we have found none.

In the meantime, the licensee has embarked on a substantial effort to evaluate their programs and processes, to identify root and contributing causes of the decline and to establish a plan to accomplish sustained performance improvement.

This concludes my remarks. I look forward to your questions. And I will now turn the presentation over to Dan Collins.

MR. COLLINS: Thank you, Dan. Good morning, Mr. Chairman, Commissioners. This morning I will be discussing the nuclear materials and waste program performance.

The materials program includes approximately 21,000 NRC and Agreement State licensees that perform a wide variety of activities in areas such as industrial, academic, medical, and fuel cycle facilities. It is important to note that some activities involve intentional exposure of humans to radiation, particularly in diagnostic and

therapeutic medical uses.

The NRC 2015 Performance and Accountability Report estimated that 112 million nuclear medicine or radiation therapy procedures are performed annually, with the vast majority used in diagnostic procedures.

When discussing trending, the number of reported events is small in proportion to the total number of activities carried out. That being said, the staff monitors the data and continues to look for issues or events that warrant additional NRC response, communication, or program improvements in support of the materials program. I plan to highlight some of the issues we addressed this year as part of the National Materials Program Review. Next slide, please.

We collect, monitor, and evaluate industry operational data on an ongoing basis as part of our event reporting function. This information is provided in an annual assessment report to the Commission. Our performance evaluation process includes the review of operational performance trends, significant licensee performance issues, and identification of issues and gaps in the NRC program that warrant high-level management awareness at the agency action review meeting.

Operational performance trends refers to what is examined in the nuclear materials event database annual report and is part of our ongoing review of events. Licensee performance issues refers to the specific criteria for identifying nuclear material licensees for discussion at the agency action review meeting. The key aspects of the criteria include licensees with events resulting in failures to meet NRC strategic goals, significant issues or events that result in escalated enforcement and where there are aspects that warrant additional oversight, repetitive significant program issues or multiple inspections also involving escalated enforcement, and licensees discussed at previous Agency Action Review Meetings, where the licensee corrective actions did not address or were ineffective in correcting the underlying issues identified.

And finally, NRC program issues and gaps refers to any programmatic issued identified by our self-assessments, annual event review, and trending report, special studies, and enforcement action review. Next slide, please.

The staff uses the criteria and information sources listed on this slide to assess and measure our performance, including a graded

approach from high level, high consequence events to lower level precursor monitoring. This event review is conducted through our use of our nuclear materials event database, which is also referred to as NMED. We examine event information and trends for overall number of events, as well as in more narrow categories to identify any trends which may indicate programmatic changes or weaknesses.

The NMED review also leads us to focusing on specific targeted segments of our program. These special studies are conducted to more closely examine the causes and potential correlation of events in generic or programmatic weaknesses.

We also use the abnormal occurrences process, including the abnormal occurrence annual report, as well as a review of significant enforcement actions to identify events of high significance and identify any potential licensees with significant performance problems.

Strategic performance measures, including the Agency's safety and security goals are monitored by the Materials Program Office and were addressed in the fiscal year 2015 performance and accountability report and were fully discussed as part of the Agency Action Review Meeting. Next slide, please.

All safety and security goals and performance measures were met in fiscal year 2015. There were no fuel cycle facilities or materials licensees that met the AARM discussion criteria. The nuclear materials program met all strategic and performance safety and security metrics. No significant trending or programmatic issues were identified in our review of operational performance trends, licensee performance issues, or other assessments of the materials program.

In the next two slides, I will discuss the results of the staff's NMED training review -- trending review, rather and a special study of lost, abandoned, and stolen source events involving category 1 and 2 sources that occurred in the last ten years. Next slide, please.

During the fiscal year 2015 reporting period, there were 489 NRC and Agreement State licensee events reported NMED. To account for random fluctuations in event data from year to year the annual report reviews data for the last ten years, as depicted on this graph.

For fiscal year 2015, there was no statistically significant trends in the overall data. There were, however, a few statistically significant trends identified for narrow portions of the data.

These trends in the narrow data sets include a decrease in the overall number of NRC events, a decrease in NRC equipment events, and an increase in Agreement State and medical events. Contributing factors to these trends were the transfers of licensees from NRC to Agreement State jurisdiction during the ten-year time period, increased awareness of events and reporting requirements, as well as the introduction or prevalence of new medical device procedures.

Regarding the number of equipment events, the NRC issued an information notice related to damage to industrial radiographic equipment due to falling equipment and improper mounting in April of 2014 in order to address a previously identified trend in radiography. We continue to assess this performance.

With respect to the trend in Agreement State medical events, a large number of these were issues associated with yttrium-90 treatments for liver disease. NRC staff issued new guidance in February of 2016 that in part clarifies what constitutes a reportable event for these types of treatments.

Despite the trends within the narrow portions of data, the total of events per year has been relatively stable and very small in comparison

with the large number of radioactive materials uses each year.

The peak in this graph from 2008 and 2009 represents events from Walmart's one-time inventory of their tritium exit signs. Walmart identified a large number of lost signs. There 272 events reported in 2008 and 65 in 2009.

Within the NMED events, some met the abnormal occurrence thresholds and are reported to Congress each year in NUREG-0090. There were 17 abnormal occurrences identified for fiscal year 2015, 15 of those were in Agreement State jurisdiction and two were NRC. All involved medical procedures, one of which was a radiation exposure to the embryo or fetus of a woman who was undergoing a treatment where the pregnancy test performed just prior to the treatment returned a false negative.

The 17 abnormal occurrences for fiscal year 2015 is a number that is within the statistical variation of previous year's average of 14 since FY2006. The number of identified medical AOs is approximately 3/10,000th of a percent of the number of medical procedures performed annually.

We do not believe there are presently any trends or significant safety concerns among medical licensees. We continue to monitor licensees'

performance and provide prompt follow-up response when warranted. Next slide.

For fiscal year 2015, the staff conducted a special study of lost, abandoned, and stolen materials events that occurred in the last ten years and found that there is not a statistically significant trend for category 1 and 2, lost, abandoned, or stolen source events over the ten-year period. The data shows a fairly steady average of three to four of these events per year.

The graph on this slide displays category 1 and 2 events. With regard to the category 1 events, there were two that occurred that involved the loss and recovery of a category 1 iradium-192 sources during shipment by common carrier. Not including irretrievable well logging sources, there were 32 events that involved category 2 sealed sources. These included 11 events that resulted from shipping errors, where the sources or devices were temporarily lost in the common carrier system but were not actually -- never left the possession of the carriers. All of those sources were recovered.

There were six events that involved the theft of a radiography device and the majority of those were either thefts of a device from a truck or theft of the truck itself. All but one of those

devices were recovered. The only device that was not recovered was stolen in July of 2011 from the darkroom of a truck that was parked at a hotel. An extensive search was performed, which included a flyover survey by the Department of Energy but the device was not located. Due to the 73.8-day half-life of that radionuclide, that source would no longer be of high radiological significance.

There were 12 events that resulted from errors made by radiography crews, where the device fell from a vehicle that was in transit because it was not properly secured or where the device was left at a jobsite or in one case at an airport. All of those devices were recovered, however, eight of those events occurred in the last two fiscal years, which indicates that the lessons learned process that was undertaken by the radiography industry and by regulators has not been completely effective. We are planning to perform additional outreach to radiography licensees to heighten their awareness of these issues.

And then finally, there were three other events that occurred where weather contributed to the loss of the radiography device or, in one instance, where an irradiator was abandoned at a biotechnology facility during an eviction process. All of those

devices were recovered. Next slide.

In summary, all safety and security goals and performance measures were met in 2015. There were no fuel cycle facilities or materials licensees that met the AARM discussion criteria. The Nuclear Materials Program met all strategic and performance safety and security metrics and there were no significant trending or programmatic issues identified in our review of operational performance trends, licensee performance issues, or other assessments of the materials program.

That concludes my remarks and I will now turn the presentation over to Scott Morris.

MR. MORRIS: Thanks, Dan.

Good morning, Mr. Chairman, Commissioners. Today I am pleased to have the opportunity to provide you with a high level overview of the status of the NRC's power reactor oversight process. Next slide, please.

Specific topics I will discuss during today's briefing include the Industry Trends Program results for 2015 and our plans to sunset this program in 2016; the ROP Self-Assessment Program revisions made to improve its effectiveness; the self-assessment results for 2015 and our future activities; and finally, recently completed ROP

enhancements, as well as planned enhancement activities scheduled for completion in 2016. Next slide, please.

The Industry Trends Program has been the element of the ROP designed to monitor industry-wide performance, instead of plant-specific performance. The goal of the program is to identify significant trends in the nuclear industry's overall safety performance using industry level indicators.

The Industry Trends Program is comprised of several short- and long-term indicators, as well as the baseline risk index for initiating events metrics.

For 2015, none of the short-term indicators exceeded their established thresholds. Similarly, none of the thresholds associated with the Baseline Risk Index for Initiating Events were exceeded.

Lastly, there were no statistically significant long-term trends identified that would require generic agency action. The safety system failure indicator did yield a statistically significant adverse trend in 2015 but this outcome was the result of outliers in the data set and the staff determined that no follow-up actions were warranted. Next slide, please.

As part of the agency's Project Aim re-baselining initiative, the staff proposed to eliminate the Industry Trends Program. In making this recommendation to the Commission, the staff noted while this program, which has been in place in its current form since 2001 has helped to validate broad industry performance trends. No regulatory actions have directly resulted from Industry Trends Program insights.

Simply put, the value derived from the program relative to its operational cost does not support its continued implementation. The staff believes that any adverse trends in industry-wide performance that would otherwise be detected by the Industry Trends Program would very likely be identified through other agency processes. Examples of other process include ongoing licensee performance assessment activities, ongoing ROP self-assessment, annual End of Cycle Assessment Meetings, the Agency Action Review Meeting and the Robust Operating Experience Program.

As you know, the Commission approved the staff's proposal to eliminate the Industry Trends Program and the program is currently in the process of being abolished. Next slide, please.

I would like to now turn to ROP self-

assessment related activities. With the Commission's approval, the staff did not perform an ROP self-assessment for 2014 and, instead, focused its resources on addressing the numerous ROP improvement recommendations received from multiple independent sources in 2013 and 2014 and, as part of that, developing a more efficient and effective ROP self-assessment process.

Last fall, the staff finalized the pertinent Self-assessment Program governance documents to implement the new process and an information paper was provided to the Commission in December 2015 describing the revised approach and the staff's implementation plans for 2016 and beyond.

The revised approach now consists of three elements. Element 1: Assessing staff adherence using, for example, objective performance metrics to measure the effectiveness of and staff adherence to the ROP. Element 2 assesses recent ROP changes to validate that these changes achieved their desired outcomes. And Element 3 involves performing a focused in-depth evaluations of specific ROP aspects and conducting Regional Office peer reviews.

Some of the key benefits of the new self-assessment process are that it adds accountability to increase assurance that the ROP is being reliably and

predictably implemented across the entire power reactor fleet. It is also a continuous year-round activity versus a once per year focused effort. And finally, it enables more in-depth evaluations of key program aspects and involves a broader engagement of internal stakeholders. Next slide, please.

Because 2015 was a transition year for the new ROP Self-Assessment Program, implementation was limited to Element 1 and portions of Element 2 of the new process. Specifically, the staff completed an analysis of performance metric data, evaluations of certain ROP processes, and reviews of recently completed ROP enhancements in related ongoing activities. The more detailed aspects of both Elements 2 and 3 required more time to be effectively implemented than was possible before the new self-assessment process was finalized.

For 2016 and beyond, the staff will complete all three elements of the revised program. So, specifically under Element 2 in 2016, we will conduct comprehensive evaluations of recent changes to the security baseline inspection procedures and modifications to the ROP that address lessons learned from the staff's implementation of Inspection Manual Chapter 0350 oversight at the Fort Calhoun Station and 95003 inspection at Brown's Ferry.

Under Element 3, we will perform a comprehensive review of the agency's inspector training and qualifications program, as well as an ROP implementation peer evaluation of Region II.

In summary, the 2016 ROP self-assessment will include all aspects of the revised Self-Assessment Program and will be documented in our annual SECY paper in early 2017. Assessment results will be discussed with senior NRC management at the 2017 Agency Action Review Meeting and with the Commission at next year's briefing. Next slide, please.

The results of the 2015 limited ROP self-assessment were documented and provided to the Commission in an April 2016 SECY paper. Three of the 26 total Self-Assessment Program metrics were deemed to be not applicable for 2015 because their supporting data was not readily available. Of the 23 remaining metrics, 22 were evaluated as green, indicating that they had met their specific criteria or specified criteria, that is that they represented expected program performance and, therefore, did not warrant further staff evaluation. No metrics were evaluated as yellow, which would demonstrate a downward performance trend that warrants further evaluation and potential staff action to reverse the trend.

Only the timeliness metric associated with implementing the significance determination process was assessed as red.

In 2015, 88 percent of the opportunities to implement the SDP for greater than green inspection findings were completed within 90 days versus the acceptance criterion of 90 percent. As you know, the staff is currently engaged in a comprehensive SDP streamlining effort to improve SDP timeliness, while maintaining its effectiveness.

In 2015, the staff also evaluated the effectiveness of each of the four major program areas of the ROP consistent with the revised self-assessment process. These evaluations were included in the ROP self-assessment SECY paper and encompassed the performance indicator program, the inspection program, the SDP, and the assessment program. Specifically, the staff noted that the performance indicator program continued to offer insights into plant safety and security performance. NRC inspectors independently verified that licensees operated the plant safely and securely. The SDP continued to be a generally effective tool for determining the safety and security significance of inspection findings. And the assessment program continued to ensure that the NRC took appropriate and

predictable actions to address licensee performance issues commensurate with their safety significance.

Lastly, with respect to the 2015 self-assessment, the staff documented numerous but less obvious improvements to the ROP governance documents and noted substantial progress addressing the various program improvement recommendations. Again, further details are provided in the enclosures to the ROP Self-Assessment SECY paper. Next slide, please.

As part of the Agency Action Review Meeting, at which the ROP Self-Assessment is discussed, the staff briefs senior NRC management on any action matrix deviations approved during the previous year, along with a description of the changes needed or made to the ROP to address any resultant lessons learned from the need to pursue the deviation.

Executive Director for Operations approved one new action matrix deviation in 2015, which was associated with oversight of the Monticello Nuclear Generating Plant in Region III. Specifically, Region III management requested that Monticello be placed in the regulatory response column of the action matrix that is column 2, rather than the multiple/repetitive degraded cornerstone column, that is column 4, which would have been prescribed by the ROP assessment program. After

careful consideration, the EDO approved the deviation because of the successful completion of both the 95002 supplemental inspection and a biannual problem identification resolution inspection at the site, as well as a lack of evidence of any broad or systemic performance issues across plant organizational areas.

In sum, the staff concluded that placement of Monticello in column 4 of the action matrix and the regulatory actions associated with column 4 were not warranted.

The Monticello deviation remains open, pending the NRC staff's review of the license's safety culture assessment, which is currently scheduled for next month.

Consistent with the ROP Self-Assessment process, the staff also evaluated the circumstances leading to the deviation and determined that no programmatic changes to the ROP were needed. It is worth noting that since the inception of the ROP in 2000, there have only been 23 approved action matrix deviations. I would also like to point out that these deviations from the action matrix had resulted in both increases and decreases in NRC oversight relative to what would have otherwise been prescribed. In fact, only six of the 23 deviations were granted to decrease regulatory oversight

relative to what the ROP would have dictated. Next slide, please.

So to summarize, the staff self-assessment results to date continue to indicate that the ROP provides effective regulatory oversight of the nation's operating power reactors by meeting established program goals and achieving its intended program outcomes. Specifically, the ROP ensured openness and effectiveness in supporting the agency's mission and its strategic goals of safety and security and it was successful in being objective, risk-informed, understandable and predictable. The limited 2015 self-assessment using the new process confirmed that the staff had implemented the ROP predictably and reliably during 2015. Future self-assessment activities will include all of the aspects of the revised self-assessment process including a focus on the efficacy of recent changes to the program, performing in-depth reviews of specific areas of interest and continuing to ensure staff adherence to program governance. Next slide, please.

I will now provide a brief update on the numerous ROP activities in which the staff has been engaged over the past year. As a reminder, most of these activities were spawned by evaluations and/or recommendations derived from a variety of sources,

including but certainly not limited to the Commission-directed independent assessment, the staff's own significance determination process Business Process Improvement Initiative, lessons learned from the Fort Calhoun 0350 oversight, and the Brown's Ferry 95003 supplemental inspection, and the San Onofre Steam Generator tube degradation event.

Recommendations and feedback were also addressed based on real-time continuous feedback that we received from inspectors in the field throughout the year.

Some of the more significant ROP enhancements that we completed in 2015 include revising and improving numerous baseline inspection procedures across all of the cornerstones, modifying the cross-cutting issue process, changing the ROP action matrix criteria for what performance assessments inputs constituted degraded cornerstone, and multiple repetitive degraded cornerstone, also improved several internal and external ROP-related communication tools, and redesigned the ROP self-assessment processes I have just described. Next slide, please.

The staff continues its work on several other key program enhancements, many of which are scheduled to be completed in 2016. These include

revising the triennial Component Design Bases Inspection to make it less resource intensive, while maintaining its effectiveness.

After several public meetings with industry, the staff began conducting pilot CDBIs at eight operating reactors sites. The pilot inspections will be completed by next month. The staff has scheduled another meeting with industry representatives in July at which the lessons learned from the pilot inspections will be discussed and soon after incorporated as appropriate into revisions of the CDBI procedures. Another enhancement to be completed this year involves clarifying the inspection findings screening process and the associated program governance documents to improve agency-wide consistency in the characterization of inspection findings. We are also piloting various SDP streamlining project proposals in an effort to improve the timeliness and predictability of SDP outcomes. The staff has solicited input from industry representatives at several public meetings and even conducted a dedicated session at the March 2016 regulatory information conference on this project.

We are clarifying ROP and enforcement program expectations relative to when and how to

process licensee performance and/or compliance issues in the ROP, in traditional enforcement, or both. We are streamlining the inspection report development process, as well as the inspection report content to better serve internal and external stakeholders while maximizing regulatory clarity, openness, and efficiency. And finally, we are continuing to develop the ROP to incorporate new reactor technologies. Given current construction schedules, new performance indicators in a modified baseline inspection program will need to be in place in the next two years to ensure a smooth transition from construction to operation for the AP1000 reactors at Summer and Vogtle.

That concludes my remarks and I look forward to your questions. I will now turn the presentation over to Victor McCree for closing remarks. Thank you.

MR. MCCREE: Thanks, Scott.

Chairman, Commissioners, I recognize we have covered a lot of ground in the last 54 minutes. So, I appreciate your attention.

In summary, we have met the objectives of the Agency Action Review Meeting process and our discussions confirm that the actions that we have taken and the actions that we are currently

implementing are appropriate and consistent with our oversight processes.

Before taking your questions, I would be remiss in not recognizing that this is Commissioner Ostendorff's last Agency Action Review Meeting as a commissioner. We appreciate your insightful constructive and challenging support of our efforts to ensure that our oversight processes and the decisions that we make to implement those processes are appropriate and implemented in a manner that is consistent with our principles of good regulation.

And with that, we are ready for your questions.

CHAIRMAN BURNS: Thank you and thanks for the presentations. As you said we have covered a lot of ground here, both in terms on the overall program as well as the two plants that deserve particular attention.

This morning we will start questioning with Commissioner Baran.

COMMISSIONER BARAN: Thanks, Mr. Chairman. Thank you all for your presentations and all of your work.

Dan, I want to jump right in with some questions on Pilgrim's performance. The background materials for the 2015 annual assessment letter

indicated that progress at Pilgrim was very slow at that time. Inspectors weren't seeing operations management embracing the need for change and they seemed more focused on regulatory categorization than on addressing actual deficiencies. Is this still the case today or is the NRC staff seeing significant improvement at the site?

MR. DORMAN: We are seeing improvement. I think from the time that we issued the assessment letter in September of 2015, you will recall that during the fall Entergy was doing their own due diligence on the future of the facility and decided later in the fall that they would close the facility in 2019 but that first they expect to recover the plant to expected levels of performance.

Since that time late last year they started bringing in outside resources. They have established mentors for processes and programs within the site. Initially, we saw significant gaps between the expectations being communicated by the mentors and the level of performance from the staff and we are starting to see those gaps closing.

So, I think significant leadership engagement and external resources are helping to start seeing change at the site. What we will be looking for in the 95003 later this year, hopefully,

is that that is becoming engrained in the culture of the organization and becoming a sustained turnaround.

COMMISSIONER BARAN: What do you see as Pilgrim's key challenges with respect to its corrective action program?

MR. DORMAN: With respect to the corrective action program during the most recent assessment letter, we identified a cross-cutting theme in the area of problem identification and resolution. And you may recall in our process, that means that we had at least a dozen findings during the assessment period, which indicated weaknesses in some aspect of that program and they touch on all aspects of the program, recognizing that they have an issue and getting it into the program, doing an adequate evaluation of the causes and then such that you can develop and implement effective corrective actions so that the issues that arose during the assessment period really touch in all three areas of the program. And I think, broadly, it is a question of standards and a questioning attitude throughout the organization. And I think that is where, in particular with respect to the corrective action program, where we are seeing some impact from the CAP mentor to help the staff start realizing that there is a higher expectation than the level that they have

been providing.

COMMISSIONER BARAN: So, it sounds like you are seeing some progress, some change, but there is work to do. There is a ways to go still.

MR. DORMAN: Yes.

COMMISSIONER BARAN: Okay. Marc, for ANO, you walked through some of the key performance issues and causes in areas where you have seen improvements. As you sit here today, what are your biggest outstanding concerns for the units at ANO?

MR. DAPAS: Well, I think the most important thing for the licensee to focus on is effective implementation of their comprehensive recovery plan and they need to ensure that the appropriate resources are allocated for effective implementation.

The licensee has done an organizational capacity study. They understand where the gaps are to principally operations, maintenance, and engineering. I think the key is ensuring that they have staff sufficient to address those gaps.

When you look at what were the causes for some of the performance declines you had staff that prioritized various actions because they did not have the staff necessary to prevent increases in work backlogs, in corrective action backlogs.

I also think that there needs to be a focus on culture. I think at ANO specifically, there was in the past a bias to mitigate vulnerabilities, rather than eliminate. The staff would lock into what appeared to be the best mitigative strategies versus focusing on addressing equipment issues. And that translates to equipment reliability challenges, which then subsequently can challenge the operators when the equipment is not available. In response to any plant upset condition, you want that equipment to be reliable. So, you want to ensure there aren't latent conditions there. And that bias toward mitigative rather than eliminating the problem I think is something that Entergy understands and is addressing.

So, those are some of the challenges that I see going forward with respect to Entergy.

And then I guess the last thing I will mention is ensuring that they have adequate procedures, programs, processes in place and expectations that are clear regarding oversight for supplemental workforce, particularly during outages.

COMMISSIONER BARAN: Okay, thank you. You both noted in your presentations that both sites had issues with their corrective actions programs. Are there other problem areas that you are seeing

common to both of these sites? Are there issues that you consider to be fleet-wide for Entergy?

MR. DAPAS: I will offer a perspective there. As I mentioned in my remarks, I think benchmarking has historically been limited at the Entergy sites. And Entergy needs to look at through benchmarking or they are providing what I would call the right frame of reference regarding what good looks like. And I think you achieve that, in part, through benchmarking and that also impacts the discretionary effort that you see from the workforce.

And it is important that there is a clear understanding in the role of what they call the corporate functional area managers that are providing corporate oversights and that transcends across all the Entergy sites because they use those CFAMs to communicate expectations and engage management at the site. And it is part of their assessment process to look at how the various sites are performing.

And the other thing I would just offer I think it is important that there is a consistent set of performance indicators across the Entergy fleet. I think there were challenges at ANO with the performance indicators not providing the information that the licensee needed to understand whether there were issues or trends at ANO and I think that

potentially exists with the other sites as well.

MR. DORMAN: Yes, I would just add to that I think in discussing fleet-wide issues what I see as the challenge is it is not that they have fleet-wide standards and processes that are weak, it is that they have vulnerabilities at their stations because they don't have a consistent fleet-wide standard.

MR. DAPAS: I would add one additional thing. The corporate procedures provide for flexibilities. My understanding is it came as a bit of a surprise when Entergy really looked at it. The degree to which those flexibilities were being exercised so that you actually had significant differences in how elements of the various programs and processes were being implemented at the respective sites.

And I can speak just for the Entergy South sites, is where we saw that. When you look at River Bend versus ANO, et cetera.

COMMISSIONER BARAN: Thank you.

Scott, I want to ask a couple of brief questions about the significance determination process. In 2015, as you mentioned, the staff narrowly missed the timeliness metric. Two of the 17 total determinations exceed the 90-day goal. One

of those is off by a matter of days, as I understand it.

I am open to exploring ways to streamline the significance determination process if it makes sense but I want to make sure we are not overreacting. Can you talk a little bit about what do we see, what does the staff see as the problem we are trying to solve with these efforts? Is the staff's view that the significance determination process is generally too slow? Is the concern that there are the occasional outliers that are taking too long? What degree of consensus is there among the staff about the problem we are trying to solve?

We have got a minute or two to talk about that.

MR. MORRIS: Sure thing. Thanks for the question. So, there is a lot to that question. I will try to keep it brief.

First and foremost, the SDP streamlining is kind of a misnomer because it is really the beginning and end of the entire issue screening process to identifying whether or not there is in fact a performance deficiency to the point where we document something in an inspection report with our preliminary assessment, followed by the more formal and rigorous application of the significance

determination process, potentially a regulatory conference, and then a final issuance.

So, really when we are -- the team that we have assembled looking at this is kind of looking at the entire process, not just the formal SDP piece of it, which is kind of at the back end.

Given that, what is the problem we are trying to solve? We believe, based on -- and there has been, as you know, a fairly robust internal discussion about where the real challenges are and where is the low-hanging fruit -- we believe a lot of the low-hanging fruit is really on the front end, really associated with managing the issue once identified at a particular site actively and effectively in the organization at the branch chief, even the division level, to ensure that appropriate resources are being applied to the issue; that effective communications are occurring within the NRC staff, as well as with the licensee, to ensure that there is a clear understanding of what the proximate cause is; whether or not there, in fact, is a performance deficiency up to and including an understanding of how well, if it happens to be one of the SDP that is quantitative in nature using a probabilistic risk assessment tool, how well that particular tool fits that particular situation; what

uncertainties do we have to address.

Basically, to understand how viable is our tool early. And if there are going to be challenges recognizing that early so that we can apply the appropriate amount of NRC staff resource to go after to come to a resolution at issue in a more timely and effective manner. Those are really where we are focusing our efforts right now. There are a lot of other aspects but due to a lack of time, I won't go into all of them. Perhaps another Commissioner will have a question about it.

COMMISSIONER BARAN: Okay, thanks, I appreciate that succinct response there and I am looking forward to seeing what the staff comes up with. Thank you.

CHAIRMAN BURNS: Thanks. And again, thanks for the presentations. I am going to try to touch on a number of areas here, both in terms of our generic programs but also performance of the two plants that are before us today.

I guess this is probably a question for both Marc and Dan but you touch on and I think in answer to Commissioner Baran's question and as well as in your presentations. Some of the issues in terms of what we look at in particular plant performance but the concern, stepping back, sort of

fleet performance and I know a number of the administrators and I think Director of NRR met with the Entergy executives. What is a message or what did you see or gain from that discussion in terms of recognition of potential issues that they need to address in the fleet or where you see areas of focus that Entergy really needs to be on, given that yes, we have particular plant performance issues but we are hearing some of the same things in terms of these two plants, particularly?

MR. DAPAS: From my perspective, I think one of the things that we heard at that status of the fleet meeting was the recognition by Entergy that they are an outlier in terms of performance relative to the industry. I think the performance indicators they had been using in the self-assessments that would look at one station and how they implement programs and processes relative to another station didn't provide for that assessment relative to industry performance. And that relates to the benchmarking that I mentioned. I also think there have been challenges with corrective action program implementation and that was an area of discussion or a topic of discussion. And one of the things we talked about was when you do causal assessments, are you looking at the organizational and programmatic

issues that contribute to a particular issue or concern and not just focusing on the technical issue. So, I think that is an area that Entergy recognizes they need to address across the fleet.

And then I think most importantly is equipment reliability challenges. And there as a discussion we had about the increased number of scrams at the various Entergy sites or trips relative to industry performance. And Entergy, as I understand it has embarked on an aggressive effort to understand where they have single point vulnerabilities and address those but equipment reliability is something that I think Entergy needs to look at very hard as a fleet.

CHAIRMAN BURNS: Okay. Dan?

MR. DORMAN: I agree with everything Marc said and particularly I think it was clear in that meeting that the senior leadership of Entergy has bought into that it is not just Pilgrim and ANO. They have fleet issues that they need to address.

And I think equipment reliability is an issue. I spoke to Commissioner Baran's comment about the lack of a consistently applied standard, a fleet expectation. And I think one of the things that we have seen at Pilgrim I think is an issue that we were talking about 20 years ago and they didn't move past

it was a reliance on skill of the craft versus a rigor of procedures. And so in the scram in January of 2015, they experienced a loss of instrument air as a result of the failure to start of a diesel driven compressor. And there were challenges for the operators in that the instrument air -- the loss of instrument air procedure was not complete in addressing what functions they would lose and there was a reliance there on the skill of the craft that was not up to where it needed to be with that respect to that particular issue.

So, one of our follow-up actions in our problem identification samples back in the fall was getting our operator license examiners in the simulator with their shift and observing their response to similar conditions.

So, I think there is a rigor in their processes that because of a lack of benchmarking I think they have not kept up with industry standards that have changed on them.

MR. DAPAS: One last thing I will add we did have some discussion regarding the degree of engineering rigor that is applied within the engineering organizations when you are looking at 50.59 evaluations operability determinations. And I think there are opportunities to increase the

organizational capacity in terms of the quality and capabilities of the engineering function.

CHAIRMAN BURNS: Okay and one of the things I know you and I were at ANO I guess in April together and had an opportunity to visit the site.

One of the points of discussion at ANO and I think you touched on it as well, Marc, is this. A relationship in terms of the safety culture at the site related in part to staffing considerations. And in fact I will use the term, these are my words, in fact starving the staffing over a period of time so that it almost seemed like I said, sort of a loss of experienced folks, greater reliance on contractors resulted in a certain culture, if you will, at the site.

Can you maybe fill in the gap and sort of talk about that a little bit and how we saw that manifested and where you think they are going with that? Because it is not just a matter of going out and picking up experienced staff on the street, you know, development. That is a challenge in this industry. It is a challenge for us, as an Agency.

So, if you would talk to that.

MR. DAPAS: Thanks. I think one of the challenges is, as I discussed, was the various resource reduction initiatives 2007, 2013. And my

understanding is that at least at ANO, and you can certainly engage them specifically when you talk to Entergy management is the view at the site was you are expected to make do with what is provided. Don't challenge whether there are inadequate resources. These are initiatives that are being implemented across the fleet and so leadership is expected to determine how to get the work done with the resources that are provided.

And as I understand it, corporate would have provided additional resources but ANO didn't raise the flag say there are more folks that we need to implement the programs and processes in a comprehensive manner. And so there were decisions that were being made at lower levels of the organization regarding prioritization of work that management was not aware. They thought things were getting done like apparent cause evaluations et cetera in a quality manner and they weren't because lower levels of the organization had to make resource prioritization decisions. So, I think that was a particular challenge.

And then when it comes to contractor oversight, I really just think that Entergy needs to look at the infrastructure they have in place. For example other licensees do this -- they have

contractors provide supervisory oversight of other contractors. And you can do that as long as you have a procedure and have a consistent set of standards there and there is a qualification process that you go through and implementing that in a rigorous manner will provide for that effective oversight, if you are going to rely on contractor supervisor oversight versus individual licensee employees. Both will work. It is all a matter of how you implement those two different approaches.

CHAIRMAN BURNS: Okay, thanks.

And Dan, I want to go specifically on Pilgrim. One of the questions we sometimes get with respect to Pilgrim, given the fact that is announced that it will be shutting down in 2019, is what's the real commitment here. What is the real commitment to address these issues? How is it NRC, in terms of your oversight program, you are really focused on the right things in ensuring that the licensee implements a safe operation, a safe program?

How would you respond to that in terms of what you see in terms of our inspection program addressing monitoring this issue regarding -- in effect, what are the incentives to core improvement here, given this is a plant that is going to shut down in three years?

MR. DORMAN: I think first is the investment that we see on the ground. The licensee has brought in substantial external resources. I mentioned the mentors that they have put in place to drive process improvement at the site. So, they clearly are at the leadership level bought into it.

The fact that we are seeing some movement on the staff performance toward the mentor standards, I think is an indication that the staff is buying into it to a degree.

I think they received a number of staff from Vermont Yankee when that station closed at the end of 2014. I think a number of those people have brought a mentality of finish strong that are a seed corn, if you will, in the culture at Pilgrim Station.

So, I think there are certainly indications that leadership wants to bring it to a better place and that that buy-in is taking some hold in the staff.

I think from an oversight perspective, we have the experience with Vermont Yankee of about a year and a half of operation with an announced closure to adjust our oversight to focus on ensuring that operations and maintenance focus remained on the appropriate priorities. And they did finish strong at Vermont Yankee, addressing a number of issues

during that last year and a half of operation. We have -- implemented a similar oversight process for FitzPatrick and Oyster Creek, which also have announced closures.

With Pilgrim, we are more focused on the column 4 response and so we have not gotten into a pre-closure oversight activities but the column 4 response will address those human performance issues, those safety culture issues, the equipment reliability issues that we would focus on as they approach the announced closure.

CHAIRMAN BURNS: Okay, thanks very much.

Commissioner Svinicki.

COMMISSIONER SVINICKI: Good morning and thank you all for your presentations.

To Mr. Dapas and Mr. Dorman, I want to thank you for your presentations which were thorough and clear. So, the good news is, I probably won't have a lot of questions for you. My colleagues have asked a number of questions.

You're both very capable and that's one of the reasons that your presentations were well done. But, it's also an outgrowth of the teams you lead of very capable individuals.

And, I think it also has its origins in the fact that the reactor oversight process is

systematic, disciplined, understood and it allows you to discuss outcomes today that have a certain level of transparency that maybe previous reactor oversight processes did not have.

And, that's really one of the strengths of the ROP. I tend to make this observation at the briefing on the AARM results that the system we have now, which we look at consistently, as we heard presentations on business improvement initiatives and other enhancements to the ROP.

Nothing is perfect at its origin, so we continue to look at it and to feed back in our experience with it which I think, as a learning organization, is very appropriate.

But, I think we also need to proceed with some caution and discernment in terms of where the process is strong, we need to be very vigilant and in guarding those strengths of the program.

I will briefly mention, since Mr. Collins has not had any questions, that the -- we also cover the materials side of our program at this meeting. And, the staff reached its conclusion this year that all strategic outcomes, safety performance measures and security and performance measures for fiscal year '15 were met and, therefore, concluded from the assessment of overall performance data. There were

no discernable performance trends or generic concerns.

I think I would offer, therefore, the observation that I encourage the staff in the materials program to remember that result in light of areas of regulatory action we're exploring now in ocular, dermal and other external hazards, again, in the materials area, NRC has generally acknowledged it's very important to have a graded application of things commensurate with the safety hazard and the risk significance.

So, we are reporting this year, as a result of the Agency's review, that we didn't have any discernable trends or generic concerns and so we need to always be feeding that result into our consideration of new regulatory issues.

Construction oversight is one of the companion papers that comes along with the package of materials for this Agency Action Review Meeting. It received a glancing blow here today, but there is, of course, the companion paper which discusses the staff's assessment in greater detail.

I'd like to share an observation and encouragement on the CROP, as we call it, construction reactor oversight process.

Interesting history there is that the

program in the form it exists today had its origins back in a NUREG in 1996.

If you look at that document of the development of what is now our construction reactor oversight process, at that time, there was a very detailed job task analysis.

There were a number of mechanical structures for the program that were considered. Not all of those were adopted.

But, interesting and of note to me, is that, at the time it was assessed that the entire inspection program under what became the CROP per site would be approximately 17,000 hours of construction inspection oversight.

For Vogtle and Summer by the time the licenses were issued, that had risen to about 33,000. And, with our experience at the two sites to date, it's projected to be about 35,000 of construction inspection hours.

So, interestingly, in 1996, to carry out the inspection program of 17,000 hours we assessed that we needed 6 to 12 resident construction inspectors at the sites.

Right now, our assessment is that we need five. And, with the surged capacity out of the construction inspection program in Atlanta in our

Region II office, that we will take care of this.

Interesting to note, I visit the sites fairly routinely and the statistic was pointed out to me that, with six years of on-site presence, I'll use Vogtle as the example, though I think Summer is about the same, six years that the CROP has been present on the sites and in action, we're about 20 percent complete on that 35,000 hour inspection program.

In approximately the next two years, we will have to complete 80 percent of the program with five people.

So, what I'm seeking from the NRC leadership that I've met with on this topic is simply a commitment that we will have a very consistent attention on the needed inspection resources at Vogtle and Summer.

And, I'm acquainted with the history and it made a lot of sense to me, that when I arrived and we had 28 COL applications and we thought we might have 8 to 10 construction sites in the southeast United States at any given time, the notion that you would deploy out of Atlanta, I think was very sound.

We have two sites, though, and they're very close together. So, I'm simply seeking from the NRC managers a very consistent attention on this over the next 12 to 24 months.

The deployment from Atlanta, I am told, becomes logistically complex because it is construction and you have a schedule, but it's more likely than not that things will not occur as at the time frame where they are listed on the schedule.

So, we're looking for flights into Augusta. We're looking at shifting hotel rooms.

As a practical matter, the inspectors tell me, it's a little more complicated than we thought.

So, I think we need to manage that, both sites have also added a back shift which means that I've got, you know, five people, maybe not all of them are fully qualified inspectors that are trying to cover multiple shifts including the back shift.

These are our boots on the ground. We call them that all the time. So, I think that I'm asking for special attention to meeting their needs and not over stressing them.

In the next two years, they might also want to take an occasional family vacation or do something like that. And, I think we don't want to burn people out.

So, we didn't talk much about CROP, but I think, as I've indicated to you today, it's much on my mind. And, again, I'm just asking, as I'm

confident we will, to have a lot of care and attention to that.

I'll close by wishing Mr. Morris well wishes. He will soon be taking on a new responsibility that the Agency has asked him to do.

And so, this may be the end of our dialogue about changes to the significance determination process. You have not been able to convince me, not that you haven't given it a spirited try.

I attended the RIC session that you made reference to in your presentation. And, although Mr. Lochbaum likely part company respectfully on a number of topics, I found his presentation very compelling.

He looked at the timeliness statistics in a hard data driven kind of look.

And, I wasn't surprised to read the staff's assessment that we were only, by a couple of determinations, made us miss the metric. One was by a few days as Commissioner Baran noted.

And, it is my view that for processes of this complexity, it is not reasonable to think you're not going to have one or two particularly complex circumstances in a given year.

I liked Commissioner Baran's term about, you know, we have to look at this, but we shouldn't

over react. I know NRC hates missing metrics because we're regulators and so we are hard judges on ourselves. But, I think we're always going to have some outliers.

Those are outliers for a reason. They pose some kind of complexity and I think short cycling the process is where we will disappoint ourselves.

The other thing I'm monitoring closely is Appendix M, or as we like to call it, Appendix Mike, here.

It is, for those not acquainted, I want to get the title exactly right. We've recently issued an update recently in the last couple of years to the Technical Basis for Inspection Manual Chapter 0609, Appendix M, entitled Technical Basis for the Significance Determination Process Using Qualitative Criteria.

Now, this is a dialogue that's been going on for a while, quantitative versus qualitative. And, although I acknowledge that there's maybe been a little bit of hyperventilating, we're always going to have a mix of both quantitative and qualitative factors.

I will be suggesting and encouraging the staff to be looking at the invocation or use of Appendix M. Have we been looking at trends there?

Are we becoming more comfortable in short cycling the hard work of quantitative, which I think that Dan and Mark would agree that one of the things that gives the ROP all its rigor is the fact that it has a lot of analysis and, therefore, that's a lot of hard work for us.

I think it can be attractive over time to say, well, I kind of know where the outcome should be and if I could just kind of short circuit it with qualitative aspects, I might be able to get where I need to go.

So, again, I can't direct, but I would encourage the staff to -- I think it may be getting to be the appropriate time to look at Appendix Mike utilization and whether or not that's having an enhancing or detrimental effect to the overall rigor and discipline of the ROP.

I will just tell you, which Mr. Morris knows, but I will make clear, that as long as I am privileged to serve on this Commission, I will be very possessive and do not miscalculate the Commission's level of ownership over the ROP. We're very, very invested in this process.

I will oppose anything that I assess to be making the ROP more like the systematic assessment of licensee performance which, if you don't know,

preceded it, and, despite it's name, was, in my view, not terribly systematic and not, at the end of the day, a very accurate assessment of performance of licensees.

So, I stand in clear opposition to moving in that direction and I've run over, so sorry if anyone wanted -- Victor, you can pull rank here and give some reaction. Just saying that all sounds good to me is fine.

MR. MCCREE: You covered a lot. It all sounds good to me, Commissioner.

And, some of us -- many of us at the table actually implemented the systematic assessment of licensee performance and celebrated its demise -- sun setting.

Appendix M is certainly not intended to short circuit the Commission's policy on risk informing our oversight processes. In fact, we put it in place to assist in achieving that end to fill gaps, if you would, when quantitative assessments alone, although the Commission's direction has never been to conduct a risk-based oversight process.

Risk informed, again, which inherently involves use of deterministic information and we look forward to further engagement on Appendix M as we've strived over the years to improve its efficacy. But,

it is a good approach and we are not using it in a manner to circumvent a quantitative process.

I appreciate your encouragement on the construction reactor oversight process. We look forward to a more fulsome conversation during the construction program review later this year.

I'm confident that Kathy and Laura will make sure that we resource both Vogtle and Summer in a way that supports implementation and processing including forwarding -- advancing the assignment of residents at the site as the pace of construction escalates at both sites.

COMMISSIONER SVINICKI: Thank you for that.

Thank you, Mr. Chairman.

CHAIRMAN BURNS: All right, thanks.

I'm not going to defend -- so much defend SALP, although I think the important thing is, as you had indicated, ROP is sort of built on SALP, what preceded SALP was far more -- far worse which was basically five individual fiefdoms in individual regions.

So, we learn by experience, that's one of the good things I think this Agency does. But, certainly, with the ROP, I would agree that we've made strides.

Commissioner Ostendorff?

COMMISSIONER OSTENDORFF: Thank you, Chairman and thank you all for your presentations.

I want to add my comments to Commissioner Svinicki's on the ROP process. She said a lot that I agree with entirely.

I just would comment that I see the evolution over the number of years, as the Chairman and Commissioner Svinicki have referred to as a positive, very positive step. I think it's a real strength to the Agency.

When I looked at how the Department of Defense, where I spent 26 years and looked at unit performance, whether it be in the operation reactor safeguards examination, tactical readiness evaluations, nuclear technical proficiency inspections, across the board for the submarine force.

And, I looked at how the Department of Energy, when I was an official there, we looked at the site performance in the weapons complex.

I think we have a far more disciplined, mature process that serves the nation very well.

And so, I think the fact that there might some inertia for further change, it's a good thing and that there needs to be a strong justification to

change things.

I think that the predictability and stability are real positive attributes and consistent with our principles of good regulation.

And, the fact that you take ongoing looks and suggest changes where appropriate, that's a real strength, too.

I want to add my thanks to Scott, to Commissioner Svinicki and Scott, to going down to Region IV.

I want to acknowledge that this is, I think, Marc's last appearance before the Commission as Region IV Administrator. I want to thank Marc for his dedicated leadership of the Region IV team during your time down there.

I want to thank both Marc and Dan Dorman for your ongoing communications with the Commission on Arkansas Nuclear I and Pilgram. I've visited both sites with you all last year. I think the communications you've had with the Commission on your teams' assessment of the licensee performance and your very thoughtful and careful perspectives on the significance of various findings.

What was appropriate from a regulatory standpoint, I think it's been a real positive experience for me as a Commissioner to watch you all

go through that and I applaud you and I know the teams, whether it be the resident inspectors on site, the regional team members and the branches, et cetera.

I think it's -- I don't really have any questions on performance because I think you did such a good job on communicating with the Commission.

I do have one comment the Chairman raised and I appreciated him raising this comment about the fleet meeting you had down, I think, in Jackson, Mississippi here recently. And, I believe that Cindy Peterson attended that.

And, I just wanted to comment from my experience elsewhere primarily, but also here at NRC, I think Marc, your comment on, I don't recall the exact words you used, but, you know, in an environment where people were making do with what they were given, with the resources on site, that really registered with me.

And, I assume you discussed that in your fleet meeting?

MR. DAPAS: Yes.

COMMISSIONER OSTENDORFF: I'd appreciate any other, you know, how you saw Entergy's reaction to that discussion on this particular aspects.

I think the resource piece is really an important part here.

MR. DAPAS: I've had some discussion with the various levels of Entergy management on that particular aspect as it applied to ANO. And, more difficult to speak, or I'm not in a position to speak to what degree is at the view associated with the other sites.

But, with respect to ANO, it certainly was part of the culture there about making do with what has been provided. And, Entergy management was receptive to that.

And I think, you know, INPO conducts various evaluations. They've done corporate assessments and my understanding is that that's consistent with one of the items that was identified via that corporate assessment that INPO conducted.

You know, we look at that to determine whether there are any safety issues, but we did have the opportunity to review that assessment and that is something that was consistent with what INPO had identified and Entergy management has acknowledged that.

The discussion at the status of the fleet meeting was more along the lines of leadership behaviors and reinforcing standards at the first level supervisor and ensuring that individuals understand what are the expectations and reinforcing

those. So, that was the context to the status of the fleet discussion.

COMMISSIONER OSTENDORFF: I have to tell a very quick sea story. So, I go back when I was the commander of the USS Norfolk during a time period in 1995 when Department of Defense budget was -- there was some difficulty there.

And, I can remember very clearly at that time, there were perhaps 16 to -- probably 18 attack submarines based out of Norfolk, Virginia. Most of them were 688s, some of them were 637 Class.

But, as a routine practice, because of the shortage of money for spare parts, that every time a ship got underway that had a BQQ5-D sonar system, that we would transfer or be the recipient of spare power supplies that were about $10,000.00 a pop for the sonar system because of the shortage of money to buy spare parts.

And, there's lots of discussion, and this was 21 years ago, lots of discussion about it but it just did not pass the common sense test.

And, if you're going to operate anything, I'm using this very broadly, in this case, submarines, you need to provide the resources to properly do it.

It was -- it set, I can tell you, it set a very poor tone for this third-class Sonarman who

was maybe 21 years old saying that, well, this, you know, our work maybe is not important enough to invest in the proper power supplies to run your system at sea, you know, and we were having the cannibalization process and material transfers going on.

So, it's not just the functionality of the system affected by the lack of spare parts, but also the culture, the environment, the atmosphere that it became very evident that it lowered everybody's standards and it was not helpful.

So, I use that Navy example I think is what really caused me to want to comment on it.

MR. DAPAS: Yes, thanks, Commissioner.

I would just put my comments in full context here. My understanding of one of the real ah-ha moments for Entergy was the 2015 third-party nuclear safety culture assessment where there was -- and I had the opportunity to talk with Jeremy Browning, the site VP about the observation by that team that individuals were making decisions at lower levels in the organization regarding prioritization because they weren't sufficiently resource loaded for the activity.

The more senior management did not have an awareness that those decisions were being made. So, they thought root cause evaluations, apparent

cause evaluations were being conducted adequately and comprehensively when, in fact, they weren't.

And so, not having that awareness so that you could engage, and that's a number of things that contribute to that, but that was the context in terms of the culture of making do with what you have and making prioritization decisions at lower levels where more senior management not being aware could not then engage to address that.

And, the discussions that I've had with more senior Entergy management, you can certainly engage them. They've clearly indicated that resources will be provided at the appropriate level to recover the plant.

COMMISSIONER OSTENDORFF: Thank you.

Two brief comments and then I'll close.

Dan Collins, thank you for your presentation. I appreciated your putting in perspective the number of events in the numerator compared to the denominator of millions.

And, I think those perspectives are so important for us as a regulator to communicate externally.

We had this number of issues out of this number of overall activities. And, I think that perspective is really important. So, thank you for

highlighting that in your presentation.

And, Scott, I'll just comment that you made a brief reference to the component design basis inspection pilot. I think that's a really important part of our oversight inspection activities.

I agree with efforts to try to reduce the burden on licensees while maintaining the spirit and the intent of the intent of the inspection. So, I look forward to seeing what the Agency's results are from those pilots.

Thank you all for your presentations.

Thank you, Chairman.

CHAIRMAN BURNS: Thank you.

Anything else?

Well, again, thanks to the staff for the presentations and perspectives on the overall programs as well as the two plants, Pilgrim and ANO.

We'll take now a brief break, about five minutes or so and then we'll resume with the second half of the meeting.

Thanks.

(Whereupon, the above-entitled matter went off the record at 10:41 a.m. and resumed at 10:52 a.m.)

CHAIRMAN BURNS: Well, we'll come back to order and we'll begin the presentations from the

first of the two Entergy panels and first discuss the action plan for Arkansas Nuclear One.

And, on this panel, we have Chris Bakken, Executive Vice President and Chief Nuclear Officer for Entergy, Tim Mitchell, Senior Vice President, Donna Jacobs, Chief Operating Officer, Jeremy Browning, Site Vice President for Arkansas Nuclear One and John McCann, Vice President for Regulatory Assurance.

And, Mr. Bakken, I'll turn it over to you to begin the presentation.

Thanks.

MR. BAKKEN: Thank you, Mr. Chairman.

Good morning. My name is Chris Bakken and I'm the Chief Nuclear Officer for Entergy Nuclear.

As you may know, I'm new so, as I approach the end of my second month at Entergy, I wanted you to know on behalf of the company and myself how much we respect the NRC, it's technical expertise and the perspectives and insights that you provide as we work to improve our fleet's performance.

Specifically, this morning I'd also like to acknowledge and accept the feedback that was provided by Mr. Dapas and Mr. Dorman in the earlier portion of this meeting. And we share and agree with their perspectives.

We are committed to full regulatory compliance at all our facilities as our minimum standard.

Our top priority is to operate or facility safely, securely, and reliability and we will not waiver from that commitment.

We are well aware that our nuclear fleet performance has not met expectations and is not operating at the levels of excellence that it should.

We're disappointed, frankly, to be here today and to be the only fleet in the United States to have three units at two sites in column 4.

And, we're absolutely determined to improve our performance.

Specifically, as I said, we're committed to improving our plant's performance. We're committed to operating our plants safely and reliably and in full compliance with NRC rules and regulations.

We're committed to operate as one fleet, consistent with all regulatory requirements and industry best practice so that we quickly share our learnings across our fleet and don't learn our lessons and our shortcomings one site at a time.

And, finally, we're committed to being professional with all internal and external stakeholders and not being defensive nor insular.

Our nuclear assets remain an important part of Entergy's utility growth strategy. I have a leadership team here at the table that is focused on improvement and we have the full support of our Chairman, Leo Denault, the Entergy senior executive leadership team, and our Board of Directors.

Our goal is not just to exit column 4 at Pilgrim and Arkansas Nuclear One. It is to return our plants to sustained excellent performance and to be considered again as one of the best nuclear operators in the world.

From feedback provided by the NRC, our employees and other key stakeholders, there are a number of common causes that we have determined, after careful consideration, self-reflection, and analysis over the past months.

As examples, in our past, we have assumed that we knew all the answers when we were challenged. And, we've learned that we did not. We need to be more humble.

As a result, we've also learned that we have not listened well and have been defensive when we've been challenged.

We now have insights though have consistently set and adhered to our own high standards and, instead, were relying on others to identify our

problems.

We were not sufficiently self-aware of our performance shortfalls.

We also now realize that we've not always been clear in roles and responsibilities, such as the role of the fleet organization, and in the prioritization of our work.

We are committed to owning and fixing these issues. Today's discussion is specific to two of our sites. Rest assured that we are taking in the learnings pointed out by the NRC, the industry, our own root cause analyses, our organizational capacity study, and other stakeholders to improve our entire fleet's performance.

For Pilgrim specifically, we are committed to safely operate the unit until June of 2019 and then through to a successful decommissioning.

The site has the full support of my leadership team, the company and its Board of Directors to achieve this objective.

We will provide the necessary resources so that we can finish the station's operating life in a position of strength or finish strong as we refer to it with our employees.

It's also important for you to understand

that Arkansas Nuclear One is a critical long-term asset for Entergy, our fleet, and the State of Arkansas.

The facility plays a key role in delivering electricity to customers across the state. It is a major employer and it's helping that local community to continue to become a better place to live, work, and raise families.

We are committed to returning Arkansas Nuclear One to one of the industry's strongest performers and the flagship of our fleet.

I will now turn the discussion over to Arkansas Nuclear One Site Vice President, Jeremy Browning, who will be followed in due course by Pilgrim Site Vice President, John Dent.

So, Jeremy?

MR. BROWNING: Thanks Chris.

Good morning. I'm Jeremy Browning, Site Vice President, Arkansas Nuclear One. I appreciate the opportunity, Mr. Chairman, Commissioners, to share Arkansas's current performance and the basis of the comprehensive recovery plan and our actions moving forward.

Starting with the development of the comprehensive recovery plan, when we first entered into this, we sought benchmark data for other stations

that had undergone similar, got the learnings from that.

We also recognize that we needed to have a dedicated team of not only Entergy personnel, but industry folks that had participated in similar efforts. So, we wanted to leverage that.

The ANO assessments were comprehensive and very broad. The causal analysis that we performed were rigorous and developed corrective actions or produced corrective actions that, not only address the contributors that led to the findings that Mr. Dapas spoke to, but also our institutionalizing learnings that will sustain our performance and drive us to excellence.

During the implementation or development of the comprehensive recovery plan, we demonstrated bias for action. We were taking interim actions to try to improve performance. And, as Marc stated in a couple of areas, those interim actions did not hit the mark completely, primarily in the areas of the safety culture and the area of vendor oversight as it's been presented.

When we looked at that and tried to learn from that and as we incorporated that into the comprehensive recovery plan, one of the areas that we felt like we had not done an adequate job was the

full engagement of the workforce.

We had an intentional bias towards trying to make sure that the station stayed focused on the operation of the facility. Other utilities that have entered into these kind of endeavors have been distracted in the operation of the plant, so we tried to insulate a little bit and make sure that the station stayed focused and we probably went too far in that effort and didn't engage.

We did have some employment engagement -- employee engagement. However, I think we didn't have sufficient.

Some of the insights that were provided to us by the 95003 inspection did point out that the causal analysis that we did in the area of safety culture didn't hit the mark.

We thought that we could address that though kind of some corrective actions that were scattered throughout the plant and not make that a central point of the corrective action plan.

So, we restructured the plan and, after going through that evolution, I recognized that that needed to be at the forefront of the plan to paint the picture that the culture changes at ANO were going to be the driving force for the plants. So, that became the catalyst for us and I do appreciate that.

The causal analysis, what it did for me and what it did for the senior leadership team is it really made us focus a little deeper on the values that we have at ANO.

The behaviors that you heard in here about folks maybe letting resource limitations not intentionally, but unintentionally, maybe bound the extent of cause or condition. They were allowing that limitation to maybe cloud what our core values are, and that would be nuclear safety as our top priority.

So, when you go to the value system and that is defining how we behave, that is how we're intending our supervisors to coach.

The effectiveness measures that were put into the comprehensive recovery plan were based on benchmark data of excellence. The effectiveness measures that we have in place and the oversight structure that we have put in place, not just -- aren't just limited to ANO.

There's an oversight review board for ANO that consists of both Entergy executives and industry executives so that we have a balanced approach to making sure that we're getting the right level of challenge.

The process is twofold. It measures

timeliness and the rigor in which those actions are being implemented but just the measure of activity isn't good enough. We have to see objective evidence that performance is improving.

Other stations, as we have benchmarked, have put too much emphasis on just measuring levels of activity and feeling good about themselves because they're getting things done with rigor and quality. However, they're not getting the intended outcome of performance improvement.

So, our process is twofold. We want the rigor, we want the timeliness. But, if those actions aren't giving us the performance improvement, we need to make those course adjustments.

Approximately 80 percent of our comprehensive recovery plans will be -- actions will be completed this year with the balance to be completed in the following years.

As I stated, workforce engagement and a focus of our core values is at the heart of the comprehensive recovery plan.

Next slide, please, if I could?

The commitment that we are making is to the safe and reliable -- continued safe and reliable operation of ANO and the rigorous implementation of the comprehensive recovery plan.

And, in order to do that, we recognize that we need to ensure that our leaders recognize risk and mitigate that risk appropriately with a bias for action to eliminate as opposed to mitigate.

Validation of organizational capacity really has four scope elements and there is a process that's in place to validate that. It's called a People Health Committee modeled very similar after the Equipment Health Committee that we have at the station and have had for a while.

It doesn't just look at an individual component deficiency like the -- if it's a vulnerability that you see in a department, what is the vulnerability of that human resource's impact on the overall system? And then, what's that system's overall impact on the site?

So, it takes a more holistic look at the station.

It also looks at the, as we've discussed, some our problems, whereas, a senior workforce left and newer employees and one for one ratio doesn't occur from a knowledge transfer standpoint.

So, it's a more forward looking, making sure that, as attrition if forecasted, that that knowledge transfer is conducted in a timely manner.

It also has a forward look at things that

might be on our horizon. When we did our recovery plan development, we recognized that certain initiatives came to Arkansas like the NFP-805 initiative in the Fukushima initiative.

So, you're seeing a changing of a workforce on the horizon, some increased volume of work. The new process would identify new volume of work is on the horizon and what is your workforce's ability to actually implement that and do the two match?

So, you can be making those proactive adjustments to your resources. So, it's not just about the volume of the resources, it's about the knowledge, skill and proficiency of those resources and then what are those resources actually working on today? And, what are those resources going to need to focus on tomorrow and in the years to come to make sure that we are prepared to deal with ongoing challenges.

And, that concludes my comments.

CHAIRMAN BURNS: Okay. All right, thanks.

We'll start again with a question from Commissioner Baran.

COMMISSIONER BARAN: Thanks, Mr. Chairman.

Thank you all for being here.

I think this is really one of the most important Commission meetings we have each year.

Chris, I very much appreciated your comments and your frank acknowledgment of the problems at ANO and in other parts of the Entergy fleet.

Marc Dapas detailed his assessment of the situation at ANO and you indicated that you were in agreement with his comments.

Is there anything from his presentation you disagreed with or you thought was unfair?

MR. BAKKEN: No, I think Marc gave a very accurate analysis of the situation. I'd also acknowledge, Commissioner, as you said, that the problem that we have at ANO, we have elements of it across the fleet and we need to work very hard to take our lessons that we've learned there an ensure that we apply them across the fleet and we're doing a good bit of work on that through the balance of the year to strengthen our ability to do that.

COMMISSIONER BARAN: Marc highlighted the decisions about resources were one of the root causes for ANO's performance decline and this manifested itself in different ways, staffing levels that were lower than what they needed to be, what was

needed.

Contractor oversight wasn't adequate. Equipment maintenance and repairs weren't as prompt or thorough as they should have been.

What has Entergy done and what are you doing to address these resource issues at ANO?

MR. BAKKEN: Well, from an ANO standpoint, I guess I'd like to talk about some of my lessons from an ANO standpoint and then I'll let Jeremy amplify it.

But, he talked about the Plant Health Committee, but, to me, organizational capacity is a good way of framing up the discussion. And, it's got to be a forward looking organizational capacity assessment. And, that's what I believe the Plant Health Committee does.

But, what I'm talking about is it includes staffing. Do we have the right staffing in order to perform the workload that is in front of the organization?

So, depending on variabilities in that workload, staffing and organizational capacity have to be adjusted accordingly.

In addition, though, it's experience. It's proficiency, it's leadership. It's prioritization to make sure that the work is done

with the highest quality. So, it is a much bigger element.

So, we're doing organizational capacity studies across the entire fleet including the fleet resources. I think Marc or Dan one brought up some of the CFAMs. I think Mr. Dapas actually brought up the corporate foundational area managers.

Well, they're part of the ongoing organizational capacity study that's going on right now. So, we're looking at it not just at ANO, even though ANO got started first, or they did start first, but we're expanding that across the entire fleet.

MR. BROWNING: So, specifically, what was done at ANO is the capacity study was done in the third quarter of last year. Capacity study says, based on benchmark data and some of things that Mr. Dapas spoke to which is we're dual unit 18-month cycle dissimilar plant. What does that need to look like if you're not in a column 4 condition?

So, that base load, what does that need to look like? The results of that came to us in the first quarter of this year and, through the corporation, we actually raised the base load target size of ANO to meet that capacity study results. So, we now know what we need to look like.

In addition to that, we did what we call

deep dives into the department. What do you need today based on today's demands. And, that study has just recently been completed and we're comparing the comprehensive recovery plan resource requirements to the current stations resources.

And, that's not just volume, it's the skills, the knowledge, the proficiency of that resource and making sure that those two match.

We do have a couple of challenges, as Marc spoke to, in the engineering area and maintenance. Although the maintenance area and the engineering area gaps have been closing and we're close to having that finalized.

But, those were our two most challenged areas based on the first quarter results.

COMMISSIONER BARAN: As you're evaluating the rest of the fleet and looking at potential issues including resource questions, what are you finding? Is this a resource problem occurring at other plants in the Entergy fleet?

MR. BAKKEN: We've launched a very comprehensive organizational capacity review using a known industry consultant that has a considerable amount of benchmarking data.

That study will conclude in the next several weeks. But, sitting here today, I have a

broad view of the outcome of that study.

Mr. Dapas comments are directly on. So, we are below industry benchmarks in terms of operational staff, maintenance staff, and engineering staff.

I think one of the things, you know, Tim's mentioning in terms of the corporate functionality managers, we need to look quite hard at the capability and competence of the fleet support organization. Our numbers and our strength in that area is less than some of the other fleet operators in the country and we believe that's one of the things that we need to correct to continue to have sustained excellence in performance in the long-term.

So, we'd be looking to increase our technical capability, our design conscious, our licensing basis understanding, design basis understanding and look to bring more of that work in house and do less of it externally through contracting.

COMMISSIONER BARAN: Okay, thank you.

MR. BAKKEN: So, that's what we've found and those are our intentions.

COMMISSIONER BARAN: Thank you, Mr. Chairman.

CHAIRMAN BURNS: Thank you,

Commissioner.

Again, I appreciate the presentations and, in fact, the journey that you're on in terms of addressing some of the issues that have been raised both at ANO and we'll talk in a few minutes at Pilgrim and the perspective from what does that mean in terms of overall fleet performance.

One of the things and one question I had and one thing I think I heard during my visit a couple months ago was that, frankly, the operating staff was one of the strengths in the organization. And, what -- and really, a real asset to the plant.

And, I think what I heard, too, is there's, in terms of taking some attempt to sort of leverage that both experience and quality in terms of the improvement initiatives.

And, maybe you could talk a bit about, anybody, talk a bit about that and how you see building upon that? Because I think, looking for places where there are pockets of good performance or excellence to try to drive other areas. So, I'd be interested in hearing how you're trying to do that.

MR. BROWNING: Yes, there's a couple of examples that I could provide to you as we have taken some of our senior leadership, the pipeline of operators that ANO has been fairly healthy, so we are

able to bring some leadership out of that department.

And, one of the areas that we were struggling was the corrective action program. So, we took a senior shift manager and he is now the department manager of that group.

We went through a change management process so we've got a very operationally focused corrective action program manager who's now the conscious of our corrective action program.

And then, as far as the fleet's concerned, the Ops Manager that had been in place for a couple of years is now the engineering director at the Grand Gulf facility. So, I think there is a lot of opportunities for the learnings that he had at ANO and the journey that led to where we were and the foundation that was built in ops and to take that to another station and to implant that.

So, it's through this People Health Committee where the succession planning and the knowledge transfer of where our vulnerabilities are and where our strengths are and how do we develop the people today for that person that's going to leave or that area and start working that.

We do have a succession planning process, but it's more about the implementation of that process that we're focused on.

MR. MITCHELL: And, I think more fundamentally even, you have to back up to the do we have the right on shift, and I believe we do. And, they've got to be setting the standards for the entire organization because they are there 24/7 and they've got to set those standards so not just --

I agree with Jeremy and that is an important aspect of being able to get that experience out within the rest of the organization. But, Jeremy's also, and so is the plant manager at Arkansas Nuclear One, been very focused on making sure that the shift manager and the control room supervisors, the reactor operators are all operating at the highest standards of performance.

But then, also, providing that influence upon to the rest -- on to the rest of the organization.

MR. BAKKEN: I'd just add, Mr. Chairman, I think behind your comment is something I believe quite strongly which is that for a plant to be successful, the operations department and the operations team have got to be the leaders on the site.

You know, they're the people that we license. They have the best understanding of the site, the best capability to make risk judgments,

safety judgments, et cetera.

So, I think one of the things that you did sense and was discussed in your visit is that the facility at Arkansas Nuclear One, that is occurring.

We have other facilities where it's not to the level of strength that it needs to be. So, when we look at the organizational capacity and our workforce planning, we'll be looking to reinforce those departments in the rest of our fleet so that we can be in operations to that organization at the sites and use that team to preserve the safety and the reliability margins of the plant.

CHAIRMAN BURNS: Okay, thanks.

And, I want to -- last question I'll ask and you talked and addressed, you know, developing organizational capacity, evaluating resources, you know, the organizational effectiveness, how things are carried out.

And, you also talked about safety culture which is one of those things that's more ephemeral. It's, you know, you can't say my wife has a story or father used to say, you know, going to some family event, you will attend and you will enjoy.

And, that doesn't quite work that way in terms of safety culture. But, tell me a little bit more about the initiatives you're undertaking, just

to foster that?

Because I realize that's not just assessing, you know, do I have the right number of staff? Do I have, you know, the right contractor balance and all. It's a more difficult thing to address. So, I'd appreciate hearing about that, a little more detail on what you're trying to do in that area.

MR. BROWNING: So, one the -- I know it's -- it looks simple, but this book right here is called the ANO Standards and Expectations book and on this page is, at the top of it, it defines our core values.

And, the very first value is, we always keep nuclear safety first. And so, what we do is how do we translate that into a tangible example?

If, for example, we see someone that's not necessarily adhering to a procedure the way they should be, start with what is our standard when it comes to procedure, use and adherence.

And, you know, the standard would be clear and then we would talk to, do we believe that procedures lead to consistent outcome and results and that's why they're in place? And, the answer to that would be yes.

Then, we'd say, do we really value

nuclear safety because those deviations, although minor, can lead to nuclear safety problems. So, really talk to these.

And, the other core values are we fix and maintain our plant. We operate as a team. We continuously learn and seek to improve from people that are doing it better.

So, those are some of the things -- and, every time we see a deviation from behavior, we go back to these values and say, we can't behave this way if we say we value these things. And we have those very candid discussions with our staff.

MS. JACOBS: I think maybe I can broaden that back, too, Chairman. If we look at the entire fleet, so part of our root cause analysis was to take a look at nuclear safety culture and do a nuclear safety culture review for the fleet itself.

And so, supplementing our team with some very experienced industry executives coming in and looking at what we're doing, putting it in terms of the NUREG-2165, the common culture traits that we have.

And really stepping back and acknowledging that, across the fleet, we need to have a stronger focus on nuclear safety.

And so, it really starts with the leaders

of what is most important for us and how we pull that out of the organization.

We heard an example about when we needed to take the unit down at ANO and we did that and that was probably different focus than what we would have done before.

We're seeing the same types of examples at our other sites where, if we've got an equipment issue, we're going after the equipment issue. If we need to bring the unit down, we're also asking ourselves, what other work is the right work to do?

Mr. Dapas talked about a recognition of our single point vulnerabilities and we've had a tendency to always want to mitigate instead of go eliminate. And, that's been a real focus for us. If we need to bring a unit down, we'll go through the complete list of a single point vulnerabilities and what can we go fix at this opportunity?

And, I think that's a lot different from the past where we might have been more focused on bringing the unit back up immediately instead of saying, we have an opportunity to make some corrections in our facilities.

So, while we've done that nuclear safety culture review, we're putting in more formalized corrective actions. I think the first step you have

to see is how we internalize it as leaders and we carry that across our fleet.

CHAIRMAN BURNS: Okay, thanks very much.

Commissioner Svinicki?

COMMISSIONER SVINICKI: Well, thank you for your presentations.

When I visited ANO, one of the things that struck me that I took away from there was a strong sense of almost family between the women and men who work at the station and there was a real community spirit, but that carried over into the plant itself.

And, while employees looking out for each other is a very positive attribute, a site vice president, maybe I'll direct this to you, Mr. Browning, how do you assure yourself that employees are willing to challenge each other as will be necessary in order to have success on the recovery plan? Challenge each other's actions and to really move forward on the changes that are necessary?

MR. BROWNING: That wasn an absolute. One of the five key insights that came out of our nuclear safety culture highlighted the fact that we're very close. We're a very tight team and almost family.

But then, the safety culture survey went

on to -- or assessment went on to say, and as a result, you tend to not want to intrusively challenge each other or you trust without verification.

So, we have to institutionalize some forcing functions to force ourselves to do this.

So, in some of our key meetings, we have brought in external people from ANO. This would be like in our Plant Health Committees, our people health committees, the challenge meetings that we do before we conduct maintenance called a critical evolution meeting.

And, these people from an external point of view are using the attributes of leadership and watching the managers. And, when they don't see those examples where we've challenged sufficiently, they will either interject during the meeting or provide a critique.

All that information is also rolled up into a product that we review on a frequency to see, are we seeing improvement in those behaviors over time? And we have been and these have been in place for, in some cases, a year.

COMMISSIONER SVINICKI: Yes, I think one other thing that goes along with that is when we look at closing out actions, how do we really challenge them to make sure we've been effective and the

implementation of the action closure review board, which is a team that that is their sole purpose is to go in and challenge that.

We're actually using that at other sites as well, not just at ANO. But, it's a very good opportunity for us to go through and make sure that the actions we're putting place are effective so that we can continue to move our improvement performance.

MR. MITCHELL: There's also a corporate role in addressing your question and that corporate role includes a corporate function of area managers but others. So the improvements that we're making from a fleet recovery standpoint are very focused on making sure that we have the right view of are those corrections, are those behaviors, are those improvement opportunities being recognized and acted upon?

MR. BROWNING: And so, a recent learning from a Waterford Station in the way they implement a management review meeting is, it had in the past been more of a fleet challenge of our performance, but we're changing that format to where it's more of a departmental challenge of each other’s performance with the fleet's role to make sure that challenge is adequate.

So, it's a little bit of a change in the

mind set. The material's the same, but it's shown to be real effective at Waterford, so that's just another tool that we're using to make sure that the corporation has the ability to see us do that external to ANO.

COMMISSIONER SVINICKI: Another observation over the course of time in looking at U.S. industry performance is that, certain fleets or particular sights have cycles of performance over the decades.

Do you feel that you, as you developed your recovery process, have designed in long-term sustainment of the measures and different changes that you're making? Has that been something that was designed in up front?

MR. MITCHELL: That would -- absolutely our intent to make sure that that was our focus, not just a -- and that kind of leads back to Mr. Bakken's initial comments.

Our objective and our focus is not to exit column 4. Our objective is to restore performance at a level of excellence that ensures the sustainability that you're talking about.

But -- and that applies to Arkansas Nuclear One as well as the fleet. So, our everyday motto or mantra is to go focus them on, what do we

need to go do, not for today, but what do we need to do for the long-term health of the organization?

MR. BROWNING: And, technically, at ANO, what that looks like is before any one of the focus areas gets closed out, it's about the execution, quality execution. Did you see the performance improvement that you expected and then what are the sustainability tools?

So, those three scope elements have to be satisfied before any one of our focus areas will get closed. And, it's not just ANO says that, it's ANO says that and then is challenged by not only fleet but also industry folks to say we believe that you've met the mark.

MR. BAKKEN: Just a follow on from Jeremy's last thought and an answer to your question, I think we have a piece of work to do in terms of strengthening the capability of the fleet governance organization, the team that work in echelon to make sure that we have a proper vision of industry excellence, that we have sufficient benchmarking from our peers in the industry and that we keep that fresh.

One of the things we discussed in the meeting we had at the end of March was our ability as an organization to recognize excellence today.

We have bene insular, I mentioned in my

opening remarks. We tended to benchmark within our fleet and we've missed some of the improvements that others have made in the industry. So, when we look forward, I think part of the sustainability is to keep that alive, keep that benchmarking going.

One of the things I've been very pleased to find in taking this responsibility is the response from my peers in the industry who are very willing to try to help us and to allow us those opportunities to benchmark and to learn from them and their successes in doing things similar to what we're trying to achieve.

So, I think that part is really instrumental to us continuing to improve and then sustaining that over time is to keep that very fresh and current.

COMMISSIONER SVINICKI: Thank you.

Thank you, Mr. Chairman.

CHAIRMAN BURNS: Thank you.

Commissioner Ostendorff?

COMMISSIONER OSTENDORFF: Thank you all for your presentations.

I'm going to maybe pick up where you were leaving off, Commissioner Svinicki. I appreciate your candor as the Chief Nuclear Officer. I know you've been then a short time. Thanks for coming by

to see the Commission here earlier a few weeks ago.

You know, you've got a strong background in the nuclear industry in the United States and overseas. What was the biggest surprise you had coming into Entergy? And, my question's not about ANO but just about the overall fleet? Because I think the fleet issue is one that certainly has the Commission's attention here.

MR. BAKKEN: I don't know if I'd frame as a surprise but I think the one thing where we have the largest opportunity for improvement is to strengthen how we operate as a fleet.

Because, my vision of Entergy was a decade old and I had a very different perspective. When we were in England, it was actually Entergy people that were there helping us turn the fleet's performance around.

So, the clear roles and responsibilities and mission statement of the fleet organization is the area where I think we have a very large opportunity to improve and then consequentially improve our whole fleet's performance.

So, that would be my answer to the question.

COMMISSIONER OSTENDORFF: Okay. I'll ask this question and I'll let you decide who wants

to answer.

The question is, how do you assess morale at ANO? You can figure out who you want to have answer that question, it could be multiple people.

MR. BROWNING: Well, there's a couple of different ways we're doing that at ANO.

One is, we're doing pulse surveys every quarter targeting specific things. So, we're getting direct feedback from the employees.

We just finished a major survey where we had about 80 percent of the site participate in that. So, we get those learnings.

The other way is by being with your people in different settings. I call them 2C's meetings. People meet with me, they meet with the plant manager, a broad spectrum of the site.

They meet, I guess you could say, independently with some facilitators and then I would enter the room and then we discuss their comments and their feedback and then we address those.

So, those are some of the ways, but it's the best way that I know is to be with your people where they're doing their work and have meaningful interactions with them while they're doing it.

And then, you also can measure the results of that by the discretionary effort that you

see in the results that you see from your performance improving. That's the only way that I know.

MR. MITCHELL: I think there's another element to the morale at Arkansas Nuclear One. I think they are encouraged by the actions that are being taken, but there's still a question on their part of, are we committed to the long-term sustainability of those actions or is this just a short-term?

And, we have to demonstrate to them that it is a long-term commitment that we are after.

COMMISSIONER OSTENDORFF: Okay. Thank you all.

Thank you, Mr. Chairman.

CHAIRMAN BURNS: Thank you.

And, I guess what we'll do now is switch out to have the folks who addrss Pilgrim come forward. And, again, thanks.

Well, welcome. And, again, we'll proceed with the presentation from Entergy with respect to Pilgrim.

MR. BAKKEN: I did not intend to repeat my opening remarks. I'm sure you're happy to hear that.

CHAIRMAN BURNS: Thank you.

MR. BAKKEN: So, I'll let -- we've been

joined by John Ventosa who's the Chief Operating Officer for the northern portion of our fleet and John Dent, the Site Vice President. So, I'll hand over to John.

MR. DENT: Thank you.

Good morning. My name's John Dent, again, I'm the Site Vice President at Pilgrim. I very much do appreciate the opportunity to be here to talk with you this morning.

Before I jump into the presentation, I first of all wanted to say that, on behalf of Pilgrim, on behalf of myself, completely align with Mr. Dorman's comments, the NRC's perspective of our performance.

We agree that we're safe to operate. We do recognize, however, that we have work to do, a lot of work to do to continue to improve our margins to safety and we are 100 percent committed in doing so.

So, with that said, what I intended to cover this morning is some questions that I thought may be of most interest.

So, first of all, what I'd like to talk about is why Pilgrim's in column 4. And, I know Mr. Dorman talked about the ROP perspective of why we're in column 4, I wanted to take it just a little bit further.

Additionally, I wanted to talk about how we're addressing our performance problems, what our fundamental problems are and what a fundamental problem is, kind of a definition of what a fundamental problem is, and then, finally, how we're driving our recovery.

And then, when I'm finished I'd be more than happy to try to answer any questions that you might have. Okay?

First of all, why we're in column 4, as Mr. Dorman talked about, 2013 we had a combination of unplanned SCRAMS and SCRAMS with complications that resulted in our entering the column 3.

The latter part of 2014, we were unsuccessful with our 95002 inspection. Subsequent to that, we identify an issue with a safety relief valve that we misdiagnosed in 2013 which, obviously, resulted in a white finding, the third white finding and our entry into column 4.

So, I would characterize that as the direct cause or the nuts and bolts from the ROP mechanics of why we're in column 4.

But, the real reason, the underlying reason that we're in column 4 is because of us. It's because of our culture. And, at the heart of our cultural issues, I would tell you, is our

implementation of the corrective action program.

We've lacked the reverence, that deep appreciation for finding and fixing our problems. Now, I'm not here to tell you that's our only problem, but I would argue that, had we been implementing the corrective action program to the spirit by which it's intended, there's a pretty good possibility I wouldn't be sitting here talking to you today about why we're in column 4.

So, we're doing a lot of work in that area. We, as we talked about earlier, we think we're making progress. We recognize we have a long way to go and a lot of work to do to really instill the cultural changes that we need to instill to be where we need to be which is aligned with industry excellence.

So, that's the why we're in column 4.

How we're addressing our performance problems? There is a very systematic and comprehensive process that's been very successful in the industry. We've taken the opportunity to benchmark plants such as Fort Calhoun, Brown's Ferry, Palo Verde and, obviously, ANO. ANO's kind of an ongoing benchmark for us.

They are, obviously, further along in their efforts. We've taken the opportunity to

leverage the pluses and deltas and will continue to do so through our efforts.

I did want to touch on from a very high level how we're going about this. There's three -- kind of three parallel activities, if you will, going on right now.

There's a team of industry experts, a company that does this for a living and is being very successful. We've hired that company. So, this team of nuclear professionals working with the Pilgrim team in concert.

Essentially, what they do from time zero, which was the latter part of 2015 to the beginning of 2016, they take a look at our performance. Basically, turn over every rock going back in time to a point in time when performance at the station was considered to be healthy or strong.

So, all that data is pulled together and then, in parallel with that, there's a separate part of the team that's doing observations in the field, whether it be in the plant, the control room, meeting settings, training settings or whatnot.

And, they're gathering information so you have a combination of a historical perspective for our performance, coupled with a contemporary or current perspective of our performance.

All that information comes together, it goes through a very rigorous structured process and what comes out of that process is what's termed, one of the key outputs is our fundamental problems.

And, a fundamental problem is, by definition, it is your cultural problems, it is your systemic organizational issues. And, it's typically that the fundamental problems are the drivers for your other problems. And, I'm going to talk about those in just a minute.

So, in parallel with that, we have five issues of concern or five focus areas, very -- we're very clear on what those focus areas are.

So, from the onset, what we've done is we've implemented interim actions and the intent of the interim actions that address those five areas is to ensure we're managing risk throughout the process.

So, we understand what our fundamental problems are, our organizational drivers. We understand what the causes are. We understand what the corrective actions are to fix the problems.

We implement the corrective actions and then we assure ourselves that the corrective actions have effectively fixed our problems. Then and only then will be back off of the interim actions. So, that's the second piece.

The third piece is augmented staff. We've talked a lot about staffing and organizational capacity. But, what we've learned from benchmarking, what we've learned from our own experience and going through the 95002 inspection was that, to safely operate the plant is it takes a lot of effort. It takes a lot of attention from the site, from the leadership team, from the workforce to safely operate the plant.

That's the price of admission. We have got to operate the plant safely 24 hours a day, seven days a week. That's a foregone conclusion.

Equally as important, we have to recover. We have to understand what our fundamental problems are and we have to implement a recovery plan to improve performance.

So, to do that, we know that we've needed to augment the staff. So, key leadership positions, we've created shadow or assistant level full-time positions. And, in certain departments within the organization, we've augmented the staff as well.

And, to be clear, this augmented staff isn't just here from now until we get through recovery and when we return to column 1, this augmented staff are completely funded and resourced all the way to the end of plant life. So that's the third piece.

So, it's big picture, analytical approach to understanding our problems. We've got interim actions in place to manage the risk until we solve those problems.

And, from an organizational capacity standpoint, we have the staffing necessary to support safely operating the plant and recovery.

Okay? So, that's how we're addressing our problems at a very high level.

Our fundamental problems, just as analysis or analytical approach I talked about is referred to as the collective evaluation process.

And, for us, at Pilgrim, the collective evaluation process has determined that we had three fundamental problems.

Not surprising is CAP, corrective action program. In fact, we didn't wait for the collective evaluation process to complete. Very early on in the process, we made the decision that we have a fundamental problem in the implementation of the corrective action program.

So, we went right into the root cause evaluation. We've been in the process of implementing those corrective actions and we are seeing improvement in our efforts.

Again, a long way to go, but we are seeing

improvements in that area.

The next two fundamental problems, risk recognition and decision making is a fundamental problem for us.

And then, finally, in the area of safety culture, a specific focus in three areas, leadership, resources or organizational capacity and then, finally, oversight.

So, they are our three fundamental problems.

It is noteworthy, I just want to make a point here, since 2013, we've been working hard to improve our performance. We implemented a comprehensive improvement plan in 2013.

Objectively, subjectively, we've been seeing performance improve. Again, we've got a long way to go and we've got plenty of work to do in front of us. We're not where we need to be, I just want to be clear about that.

But, the reason I bring it up, this is really important in our process. As we go through the analytical portion and the causal analysis, it's very important to us that, for example, if we identify six drivers to a problem in say, CAP, if three of the drivers had been adequately addressed from the beginning of the assessment or the beginning of the

improvement efforts, we need to be clear that these drivers have been addressed.

And, the reason I tell you that, it's really important to us from a focus standpoint of the organization that we're not putting corrective actions in place and diverting the organization's attention to fixing things that don't need to be fixed, we need to be fixing the drivers that will improve our margins to safety. So, that's the reason I tell you that and that's a focus for us.

It sounds simple, it sounds basic, but it's a bit more complicated than it may sound.

So, that's the fundamental problems for us and then, finally, how we're driving our performance recovery efforts.

The root cause is the apparent cause. Of all that causal analysis work will come together in corrective action plans.

We have interim correction actions in place. We have an improvement plan that's in place. So, all that comes together and that'll be combined into what we talk about as the comprehensive recovery plan.

And, I'll tell you, that's the mechanics of how that comes together. But, the magic for us here, since 2013, we've been working very, very hard

to build the trust and transparency and openness and engagement of the entire workforce.

A key element of that in 2013 was the engagement of the workforce and helping us build the comprehensive improvement plan. Big dividends for us back then.

The ownership, the buy-in, the understanding, the knowledge. The knowledge of my role in a recovery, the knowledge of my role as a worker, what it means to be in column 4, what that means to us in terms of margins and safety and what my role is.

They are the dividends we're looking for. So, we're literally weeks away to implementing that portion of the process.

Again, we've been talking to the workforce a tremendous amount throughout the effort and the workforce knows that we're in the process and will be pulling together.

So, all that said, the way this is going to play out as we move forward here in the coming weeks, when we've got the comprehensive plan in place, when we're confident that our actions are being effective and we're seeing performance move in the right direction, when we're confident that the organization's completely aligned around where we're

going, then and only then will we pick the phone up and let the NRC know that we're ready for the inspection.

So, and, Mr. Mitchell alluded to it here, and I talk incessantly to the workforce about this and I want to be clear today, this 95003 inspection is very, very important to us. There's no doubt about it.

But, this isn't about passing an inspection. That's not what this is about. What this is about is an organization understanding what our fundamental problems are, what those cultural issues are, understanding what behaviors we need to change, not just to improve the margins to safety but to drive us to industry excellence. That's what this is all about for us.

So, that's what we're doing to drive recovery. And then, just very briefly to close things out here, as far as safe and reliable operation, there's a lot I can say in that area.

But, I keep coming back to engagement, continuing to engage and build on what we've accomplished with the workforce at Pilgrim and continue to leverage the workforce.

Our workforce to align top to bottom, horizontally, vertically, that's what's going to

carry the day for us and lead to our success in terms of, like I said, not just improving margins to safety, but driving our site's performance to excellence.

And, the last thing I wanted to just touch on is finishing strong. I have a board in the presentation that talks about finishing strong.

There's an elephant in the room we really haven't talked about a whole lot. We're shutting the plant at the end of May 2019. That's going to happen.

I know these are just words, I like to think our actions and our words mesh up. From our perspective, and when I say we here, when I say we, I mean the site leadership team, I mean the workforce, Entergy Nuclear, Entergy Corporation are 100 percent committed, not just to improve in our margins of safety, but we're a 100 percent committed to driving right through the end of the plant life here.

Somebody sitting in the room right now made a comment to me about a week ago and it really resonated with me. This organizational vision of running through the tape at the finish line, I really like that vision.

We've got the organization aligned around leaving a legacy of excellence. We've got a proud New England workforce and I think this workforce is completely aligned around finishing strong at the end

here.

So, I said a lot. I said a lot fast. I'd be more than happy to answer any questions that you may have.

Thank you.

CHAIRMAN BURNS: Okay, thanks. Is that it?

Okay, thanks very much. Again, we'll start with Commissioner Baran.

COMMISSIONER BARAN: Thanks.

Mr. Dent, I appreciate your acknowledgment that Dan Dorman's assessment of the issues at Pilgrim is fair. I think that's really helpful to have kind of a common understanding of the problems to address there.

I asked Dan about the Region's observation at the end of 2015, that’s a few months ago now and that operations management wasn't embracing the need for change. It was more focused on regulatory characterization than on addressing and fixing problems.

I'm interested in your thoughts on -- he also mentioned that he's seen improvement, but there's a way to go. So, I'm interested in your thoughts on that and I'm interested in Chris's thoughts on that coming on those issues coming in and

new to the fleet.

MR. DENT: Yes, I think, first of all, we've made some organizational changes in ops, promotional across the board. But, nonetheless, we've some changes and I think the, at least I'll give my perspective, I won't speak on behalf of our residents or Mr. Dorman.

But, I think the lines of communications have opened considerably. I think the focus on, for example, shift managers driving performance at the station is a focus for us.

We're not an industry leader as far as shift managers driving performance and that's something that the operations leadership team as well as the senior leadership team are focusing on. And, I think we're seeing improvement within that area.

So, that is very much a focus for us and it is important to us.

MR. BAKKEN: And, just to follow on in the point I commented on it a bit earlier, but, you know, in my experience tells me that strong operational leadership leads you to have a successfully and well run site.

I think the other piece that we need to look at, which we really haven't discussed, is succession planning and workforce planning.

Because, the other thing that makes an organization successful is a pipeline through the operations organization. It's then used as a feed stock for the rest of the organization, be it maintenance, engineering, licensing, et cetera.

We have some of our facilities that do that very well and we have others where we need to improve. And, I think that role of the path through the shift manager and then out into the broader management responsibilities and fleet responsibilities is key to our success. So, that'll be a focus area for us in the coming years.

COMMISSIONER BARAN: Mr. Dent, you mentioned that one of the steps you're taking at Pilgrim is to augment the staffing and that that's something you intend to maintain over the next few years in a run up to shutting down in 2019.

How are you going to make sure that any necessary capital improvements are made to the plant even though it's only going to be operating for a few more years?

And, I guess this is a question also for the senior leadership of the fleet. How is the fleet going to make sure, fleet management going to make sure that, if there are investments that need to be made at a plant that's going to be shutting down in

three years, those investments are made?

MR. DENT: Yes, the timing, if you heard the safety culture comment I made around risk recognition and decision making, that decision making aspect, there are things we've done in terms of structure processes to make sure decisions that we're making are rigorously vetted out and challenged.

So, timing wise, we have one outage left, one refuel outage. We just finished scoping that outage. And, that is -- you have two years left to operate and from a making the decision what scope goes into the outage or not, what we did is we expanded it beyond the site.

We took our shot at scoping the outage and we thought were absolutely positively necessary for the efficient operation of the plant through plant life.

And, what we did is, we've had independent challenges at a fleet level to make sure that there wasn't anything we were missing or we weren't getting blind to it in terms of being too close to it.

So, we're including third-party or kind of independent help in that area to make sure we're not missing anything.

COMMISSIONER BARAN: Okay.

MR. VENTOSA: The only thing to add to that, I mean there's a significant kind of fleet corporate piece of that from an oversight piece, John.

And, I think we looked at it a little bit differently in the past. Not the probability of the piece of equipment failing because you could rationalize then two years, you know, probability time, but what's the consequence?

And, let's focus on consequence when we're making scoping decisions. And, we are committed, from a resource standpoint, and when you look at the outage scope coming up in this next outage, it's commensurate with consequence, not necessarily probability.

There's a little nuance there, but that's kind of how we've focused, I think, the organization that it was important for us.

COMMISSIONER BARAN: Thank you very much.

CHAIRMAN BURNS: Thank you, Commissioner.

One of the things, Mr. Dent, you touched on it and I think in the presentations, but perhaps you can elaborate some.

You have, I think, what you have going is you, in effect, have two things in one. You have the notion of finishing strong apart from whether you're

being, you know, or Pilgrim was in column 4, it would have that challenge in terms of communication, in terms of the workforce, you know, the workforce commitment, enthusiasm, whatever in terms of getting across, as you say, getting across the finish line in May 2019.

The same token now we have in terms of the improvement processes, improvement initiatives that need to -- that focus on the column 4 status.

Can you tell me, how is that sort of integrated or how is that finish strong sort of influencing, in effect, the corrective actions taken with respect to the column 4?

Can you give me some sort of picture of how one influences the other or sort of absorbed or put together?

MR. DENT: If I could just step back for a minute to answer --

CHAIRMAN BURNS: Sure.

MR. DENT: -- that question in terms of speaking on behalf of the workforce.

Prior to March of this year, there was anxiety within the workforce.

CHAIRMAN BURNS: Yes.

MR. DENT: Frankly, because we hadn't made the decision whether we were shutting down in

'17 or '19 and the other variable out there was the workforce didn't understand what their retention was going to be.

So, what does this mean to me and family and my life? So, that was a distraction to the workforce. We're past all that now.

So, there's an interesting, I don't know that I can completely explain it, but the workforce, maybe it's the demographic. I think 2019 fits into a large portion or a large demographic of the workforce life's plans, if you will.

So, there's this sense of positive -- a positive energy within the workforce that is really heartening. It's really, I hate to say surprising, but given the circumstances, it's surprising. But, it's very, very encouraging.

So, you couple that with running -- we're running multiple initial classes right now, three initial maintenance classes, initial license class, initial non-license class. We're bringing in folks from Fitzpatrick.

We're actually able to attract people from within the industry that are at a different part in their career, at the end of their career because of the retention. So, we're able to draw that experience in.

So, you couple all that and there is an organizational momentum right now and this, like I said, this New England, there's a sense of this New England pride and this leaving a legacy of excellence resonates.

I forgot who it was mentioned the folks from Vermont Yankee coming in with the spirit of finishing strong. Fitzpatrick has the same kind of a presence about them as an organization. And, that's kind of the groundswell that's coming up through the organization.

So, we're, as far as the column 4 recovery is concerned, we're recovering. We've had independent, outside of Entergy, multiple organizations and individuals come in and say, you'd never know this plant's shutting down. You wouldn't be able to tell by the behaviors of the workforce. You just, in casual conversation, the organization we used Marathon to help us with recovery efforts, they were astonished by how positive and how engaged -- how the leadership team and workforce is interested in fostering more of that spirit of continuous learning.

So, I know I said a lot, I'm not sure if I answered your question.

CHAIRMAN BURNS: No, no, I think that's helpful. That's helpful, it does help elaborate.

One of the other things you talked about in terms of both in the initiative on finishing strong in terms of transparency, communication with the workforce, Pilgrim is, quite honestly, one of those plants that gets a lot of attention from the local community.

How are you communicating what you're doing in the local community in Massachusetts?

MR. DENT: Yes, we worked fairly extensively with the Selectmen in the township. We work a lot. Our recovery director, a guy by the name of Dave Noyes, is very engaged. Chip Perkins sitting behind me.

So, we have a lot of engagement with the Selectmen.

We're working on setting up an advisory committee that's more tailored towards going into the phase of decommissioning. So, there's a lot of work that goes on at that level and I think it's fairly effective.

We've brought in just recently, it was just announced within the last day or two, another individual that had been at Pilgrim before that's responsible for that public relations kind of approach with the various stakeholders.

So, we've got a few different prongs that

we're working through in terms of the outreach and engagement. So EWC, Entergy Wholesale Commodities, has a whole division that's basically dedicated to exactly that, not just with us, but with Fitzpatrick and Vermont Yankee and Indian Point as well.

CHAIRMAN BURNS: Okay. Thanks very much.

Commissioner Svinicki?

COMMISSIONER SVINICKI: Well, thank you for your presentation and for your responses to my colleagues' questions.

We have covered quite a bit. I will ask one question, maybe I should have asked this also of the ANO, you've made very clear that your recovery plan does not begin and end at passing an inspection or exiting column 4.

But, if I were to narrow my question and say, in terms of approaching significant inspection milestones or other regulatory milestones, is it clear to you what you need to do and what the expectations are?

I guess I'm asking for some feedback in terms of our communications on regulatory expectations and the scope and intent of how we're going to assess various things as those milestones approach.

MR. DENT: Absolutely. So, I'll talk about something internally we're doing and my accountability to the guy sitting to my right.

But, in terms of the, you know, all the way up to Mr. Dorman, and I hadn't gotten into this when I said I was aligned with his comments, the relationship that we have with the regulatory is very transparent and open and clear in terms of our communications.

There wasn't one comment that Mr. Dorman made that surprised me or because we have that dialogue. We have that open communication channels at all levels, from the resident's office all the way up to Mr. Dorman.

So, as far as the inspections coming down, we've had a lot of them, as we talked about, not just the phase alpha and bravo, but a lot of supplemental inspections.

Not one of them have we not been crystal clear on what's expected and I don't expect that to change going forward.

MR. VENTOSA: Just to add a little bit, I mean, because the Pilgrim experience was somewhat unique in that it was limited attributes.

COMMISSIONER SVINICKI: That's true.

MR. VENTOSA: So, the dialogue, from my

perspective, and the open communication is really critical from the very beginning and I have no negative feedback. It's been open both at a regional Branch Chief when they have a concern, they bring it up. And, we made sure that that dialogue is open from the beginning because there isn't a lot of precedent in that particular piece of column 4 for Pilgrim.

So, feedback is, I believe, it's working well.

COMMISSIONER SVINICKI: Okay.

Thank you, Mr. Chairman.

CHAIRMAN BURNS: Okay, thank you.

Commissioner Ostendorff?

COMMISSIONER OSTENDORFF: Thank you for your candid presentations. I was listening intently with respect to the morale, the shutdown in 2019 and it's good to hear that you're encouraged.

But, my human nature experience indicates that that road will get tougher in the coming months, not easier.

And so, I'm not saying I'm a skeptic, I believe what you're telling me, but I've seen a lot of organizations approaching end of life or outside the nuclear industry and I just would encourage constant vigilance in that area. I know it's going

to get -- I think it's going to get more difficult for you than -- as the 2019 approaches.

That's all I have, thank you very much.

CHAIRMAN BURNS: Okay.

Well, thank you. Again, thanks for the -- thank you for the presentations. This has, as some of my colleagues have noted, this is one of the most important meetings we hold during the year to go over the assessment of performance within the industry, both.

And we've spent a lot of time on in the reactor fleet, but also for the materials -- licensees that we have a responsibility for, both directly as NRC but also in cooperation with our colleagues in the Agreement States.

I'm also pleased we've had this opportunity to hear from Entergy to address the plans for seeking improvement at both ANO and at Pilgrim. And, we're pleased to hear about the plans for improvement at those sites.

Thank you all again and, with that, we are adjourned.

(Whereupon, the above-entitled matter went off the record at 11:56 a.m.)