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U.S. NUCLEAR REGULATORY COMMISSION

BRIEFING ON RESULTS OF THE AGENCY ACTION REVIEW MEETING

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TRANSCRIPT OF PROCEEDINGS

Public Meeting

Before the U.S. Nuclear Regulatory Commission:

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Kristine L. Svinicki, Commissioner

George Apostolakis, Commissioner

William D. Magwood, IV, Commissioner

William C. Ostendorff, Commissioner

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P R O C E E D I N G S

CHAIRMAN JACZKO: Good morning, everyone. We are here today to discuss the results of the Agency Action Review Meeting. I think this is one of the most important meetings the Commission holds each year. It provides us an opportunity to publicly review licensee safety performance over the previous year, and to focus on the most significant safety challenges they face. It also gives us an opportunity to look at trends for both materials and reactor licensees.

We'll also have an opportunity today to discuss the performance of Fort Calhoun Station, which is currently under the Manual Chapter 0350 process, as well as performance of the Browns Ferry Station, where Unit 1 is in Column 4 of the action matrix.

We'll also have an opportunity then to hear from senior managers at the TVA on their Integrated Improvement Plan to enhance performance at Browns Ferry. So, I think this will be a very interesting meeting. It's also a great opportunity for us to hear how the ROP is working and see where we can make improvements, or modifications if necessary. So with that, anybody have any comments? Okay, Bill.

BILL BORCHARDT: Good morning. The next slide, slide two, please. There's four major objectives to the Agency Action Review Meeting. The first is to allow senior NRC managers to review the appropriateness of agency actions that have been taken for those reactor plants, nuclear materials licensees, including fuel cycle facilities, that have significant performance problems, and to identify additional actions that the NRC needs to take as appropriate.

Second, it's to ensure that a coordinated course of action has been developed and is being implemented, third, to review the results of the staff's assessment of the Reactor Oversight Program effectiveness, including a review of approved deviations from the action matrix, and fourth, to ensure that the trends in industry and licensee performance are recognized, and appropriately addressed through our regulatory programs.

I'd also like to note that this year we've reviewed and had a discussion of the construction Reactor Oversight Program, and for our future meetings, we will have discussions of the performance of construction facilities. Next slide.

During the Agency Action Review Meeting, we concluded that there were no significant adverse trends for materials licensees, and no gaps or failures for the materials and waste programs. Similarly, that there were no long-term significant adverse trends for reactor licensees, no program adjustments for the Reactor Oversight Program, and that the Reactor Oversight Program met the program goals, and achieved its intended outcomes, and third, that the agency actions taken for licensees that warranted the discussion at the Agency Action Review Meeting were appropriate, and the current regulatory tools are sufficient to address the ongoing issues.

There were two reactor licensees that warranted discussion at the meeting for 2011. Fort Calhoun was discussed because it has been under Manual Chapter 0350 oversight, since December of 2011, due to significant performance concerns. The AARM participants did not recommend inviting the licensee today, because of the recent meeting that the Commission held with the licensee in February of this year. The licensee is still in the discovery stage of its

evaluation, and its Integrated Improvement Plan, and appears to include important elements needed for performance improvement. The staff is evaluating the effectiveness of the licensee's plan and developing an appropriate inspection plan.

Browns Ferry was discussed because of its multiple repetitive degraded cornerstone column of the Reactor Oversight Program action matrix, due to a Red finding in the fourth quarter of 2010. Inspections have identified three adverse behaviors related to aspects of the site's safety culture in the areas of procedure, use, and adherence, use of corrective action program, and standards and expectations.

I'd also like to note that for the first time in several years, Nuclear Fuel Services was not discussed at the Agency Action Review Meeting, due to extensive licensee corrective actions over the last several years. Next slide.

This slide shows the agenda for today's meeting, and I'll turn the presentation over to Mark Satorius.

MARK SATORIUS: Thank you, Bill, and good morning, Chairman, Commissioners. I'm here to discuss today the materials and waste performance trends. If I could have slide six, please.

The performance evaluation program is a systematic review to identify significant operational performance trends, licensee performance issues, and NRC program issues or gaps. Industry data is collected, and monitored, and evaluated on an ongoing and periodic basis. The process is intended to identify significant licensee performance issues, or NRC program issues or gaps warranting management attention and awareness at the AARM.

The AARM review is part of a broader oversight process, including

licensing, inspection, and license performance reviews, and routine enforcement, dealing with a very large number of licensees, nearly 22,000 nationwide, and divided with about 2,900 for the NRC, and about 19,000 for the Agreement States as of the end of last calendar year. More importantly, dealing with a wide variety of applications and activities that include industrial, medical, academic, and fuel cycle applications, the defined process and criteria are used to identify those issues and licensees that rise to the level of needing discussion at the AARM. These criteria target the most critical issues involving very serious events, those triggering strategic level measurements, significant licensee performance, or program issues, or NRC gaps or failures that are identified. Next slide, please.

The performance criteria consists of strategic outcomes and performance measures that are gathered, reviewed in the 2011 Performance and Accountability Report, a review of abnormal occurrences, significant enforcement actions, and trending review of event data captured in the nuclear materials event database. These are the goals and the criteria that we monitor against. They emphasize a graded approach from higher level, higher consequence, including strategic outcomes, performance measures, and abnormal occurrences that are reported to Congress, to lower level precursor monitoring reported only within the NRC. This graded approach provides us the ability to focus management attention on the higher level items, and providing an early indication of any programmatic issues, and allowing for early action on our part with the lower level items. Next slide, please.

For fiscal year 2011, all strategic outcomes related to nuclear materials and waste programs were realized. For the safety and security

performance measures, the safety performance measures were met. The security performance measures for unrecovered losses or thefts of risk significant radioactive sources, which is zero occurrences, was exceeded by one occurrence. The one occurrence involved a stolen radiography camera, which is IAEA Category 2 level material in an Agreement State, which was Texas, and the source has not been recovered, and the slide contains a picture of the camera that was stolen.

It should be noted that the source is decayed to below IAEA Category 2 levels in about 60 days after the theft, which took place last July. We determined that actions taken for this security event were appropriate and no additional actions were required, after evaluation of our regulatory programs. Also, no programmatic changes are warranted based on this event. Next slide, please.

There were 23 abnormal occurrence events that had been reported to Congress for fiscal year 2011, and I'll not that that report to Congress was just made yesterday, and it's not public yet. It should be noted that nine of the 23 abnormal occurrence events occurred in previous fiscal years, and of those 23, 19 were medical events, two of the AOs included dosed to an embryo or fetus, and one was involved in an exposure to the extremities of a radiographer, and one involved the stolen radiography camera that I just mentioned.

It's important to note that the number of AOs is small compared to the number of uses of radioactive materials in medial radiography research and fuel cycles, which those activities number in the hundreds of thousands that take place every year.

It should be noted that the staff has also identified 11 additional

events that took place in fiscal year 2007 to 2011, that are potential AOs for which additional information is required. Generally, this additional information has not been provided previously due to ongoing pre-decisional enforcement actions or have not been resolved, and are due to additional time needed for follow up of certain events. No significant performance trends were identified when analyzing this data. Next slide, please, slide 10.

In last year's annual report to the Commission on license performance in materials and waste programs, the data indicated that there was a statistically significant increase in the number of NRC only AOs. Due to the increasing trend we performed an analysis to determine the cause for this trend, and for the study we took 10 years of AO data from 2001 to 2011, or 2010, which totaled 105 AOs. When looking at the data based on the dates the events were reported to be an AO, and that's the manner that they are reported to Congress. You get a statistically significant increasing trend with the number of NRC AOs.

However, when you look at the data based on when they actually occurred, not when they reported there is not a statistically significant trend. We found that due to the lengthy amount of time it takes to identify, investigate, and classify an event as an AO is due to the latter reporting or discovery of AOs, and some of the AOs, reported for a given fiscal year, actually took place in the previous fiscal years. So, after reviewing the data, we determined there were no generic concerns. Next slide, please.

In conclusion, after review and analysis of the program, we did not identify any significant trending issues, or program gaps, or failures within the materials and waste programs. I will now turn the discussion over to John, who will discuss reactor industry trends and ROP self assessment.

JOHN LUBINSKI: Thanks, Mark. Good morning. This morning I will discuss the industry trends program, the ITP, the Reactor Oversight Process, (ROP) self assessment, and the Agency Action Review Meeting with respect to reactors.

The Industry Trends Program assesses safety performance across all operating reactors and provides for assessment with predetermined thresholds or limits. If a threshold or limit is crossed, the staff assesses the effectiveness of the ROP, and the need for additional agency action. This morning I will discuss the staff's assessment of performance regarding three predetermined limits in the Industry Trends Program.

The Baseline Risk Index for Initiating Events introduces a risk informed view of industry performance. BRIIE tracks different types of initiating events that could potentially challenge a plant's safety systems. This graph shows the loss of offsite power category, which exceeded its annual prediction limit with seven events in 2011. These seven events were all due to three natural phenomena events, two tornadoes and an earthquake effecting three multiunit sites. Therefore, the staff believes exceeding this prediction limit is not indicative of a declining trend in industry performance.

The next graph shows the industry indicator for significant events on an annual basis. A significant event is defined as a Red or Yellow ROP finding or PI, a conditional core damage probability or a change in core damage probability of 1E-5, or greater, an abnormal occurrence or an event on the international nuclear event scale of two or higher.

The light blue bar graph indicates six significant events occurred in 2011. The dotted red line indicates that the final number of significant events for

2011 may reach 13. These additional seven events are the loss of offsite power events that I discussed on the previous slide. These seven events are currently being analyzed in terms of conditional core damage probability, to determine if they meet the definition of a significant event. An addendum to the industry trend SECY paper will be issued, if the short term annual prediction limit is crossed after the staff completes its analysis and assessment of these seven additional events.

There were no significant adverse trends in 2011. This graph shows the 10-year trend model for significant events. The solid line represents the trend for finalized events for 2011, and the dotted line represents a trend line model for the worst case for 2011, if all seven of the loss of offsite power events still being analyzed are classified as significant events. Even if a total of 13 events in 2011 were to -- to end up having 13 events in 2011, the 10 year trend is still not considered a statistically significant trend.

The only prediction limit exceeding in 2011 was for the loss of offsite power events. As mentioned earlier, the seven losses of offsite power events were at three specific sites, and were driven by external initiators which were beyond the licensee's control, and therefore the staff has viewed it as -- these are not viewed as an indicator of declining trend in industry performance with regard to offsite power prediction limit. The staff did share this information with the NRR staff, which is working on Near Term Task Force Recommendation 4.1, to revise 10 CFR 50.63, the station blackout rule, and this has -- mitigation strategies for these types of events have been captured in orders that were issued to the industry.

Aside from the events and indicators which were discussed earlier,

none of the other industry trend indicators are notable. Currently, no significant accident sequence precursors were identified in 2011. The Office of Research staff is still evaluating several events to determine if they are significant precursors. The staff does not recommend any program changes at this time. The staff will continue to monitor the issues identified for future program adjustments, and will amend the ITP SECY paper if the significant event short term prediction limit is exceeded.

In addition to using the ITP data, the staff also performs an annual ROP self assessment. The self-assessment results for 2011indicate that the ROP met program goals and achieved its intended outcomes. The ROP was successful in achieving objective, risk informed, understandable, and predictable. The staff did not identify any specific commitments in the 2011 self assessment, but it will continue to evaluate, and make program improvements based on routine feedback, and any lessons learned gained during the year.

In 2011, the staff issued two SECY papers based on the 2010 ROP self assessment, one on security reintegration and one on the public radiation cornerstone enhancement. With regard to reintegration, the staff will reintegrate security into the ROP assessment program on July 1st of this year. Staff has communicated this plan with stakeholders by issuing a Regulatory Issue Summary, accompanied by a press release, and an NRC blog entry, holding a discussion section in the 2012 Regulatory Information Conference, and updating the status of security reintegration during routine ROP public meetings.

Consistent with the Commission's direction in SRM to SECY-11-0076, the staff has begun to engage stakeholders regarding potential improvements to the public radiation safety cornerstone, particularly in the area

of ground water protection. The public radiation safety cornerstone was one of the topics discussed during the ROP session at the 2012 Regulatory Information Conference. Two external stakeholders provided formal presentations as part of that session. A public meeting to kick off the effort was just held this past Wednesday. The objective of this initial meeting was to initiate dialogue on the challenges conveyed in the SECY paper, and solicit perspectives on those challenges from internal and external stakeholders. Further discussions are planned and any recommended improvements to the ROP will be provided to the Commission in a notation vote paper.

The staff has also been working with the industry to develop common language for safety culture for power reactors. The staff held two public workshops, one in December of 2011 and one in April, 2012. Staff and the industry developed and aligned on 10 proposed safety culture traits and subcategories of attributes. The staff's next step to finalize the common language is to create examples for each of the attributes.

In addition to the industry trends program and the ROP self assessment, senior management discussed other topics during the Agency Action Review Meeting. A specific goal of the AARM is to ensure that action matrix deviations are discussed and evaluated. Staff closed one remaining open deviation related to ground water issues at Vermont Yankee, and did not open any new deviations in 2011.

Another goal of the AARM is to discuss licensees with significant performance issues, to ensure agency actions taken were appropriate. As Bill mentioned earlier, Fort Calhoun Station and Browns Ferry were discussed during the AARM, and Browns Ferry was invited here today, to present its plans for

achieving and sustaining improved performance.

During this year's AARM, staff also discussed two additional topics. The first topic was the annual ROP assessment public meetings. As a result of the discussion, the staff will reevaluate the purpose and format of these assessment meetings to determine if any actions are needed to improve their effectiveness and efficiency.

The second topic on the AARM was the AARM's discussion itself. The result is that the staff will continue to explore opportunities to improve the effectiveness of these discussions, and the efficiency of the AARM meetings. This concludes my presentation. I will now turn to Elmo, who will discuss Fort Calhoun Station.

ELMO COLLINS: Mr. Chairman, Commissioners, good morning. Thank you for the opportunity to comment. Just to give a quick status update on some of the key activities occurring at Fort Calhoun Station. As we've already mentioned, we did discuss them at the Agency Action Review Meeting. We did that because they were in Manual Chapter 0350 oversight, and before that, they had been in Column 4 of the action matrix.

Just a quick refresh on the history in September 2011, we placed Fort Calhoun in Column 4 of the action matrix because of a repetitive degrading cornerstone, with an additional input greater than Green. Concurrent with the timing with that placement, we were also reviewing an event that had occurred in June of 2011, a fire, and we were conducting a special inspection, and as we've developed more information and proceeded to understand the significance of that event, we -- as part of the continuing assessment process of the Reactor Oversight Process, we asked ourselves a question. Did we need to take

additional action with respect to Fort Calhoun, since they had just entered Column 4 of the action matrix? And so we entertained the criteria into Manual, Chapter 0350, and they did meet the entry conditions, Column 4 shut down with a significant operational event, and we made that decision. We communicated that in December of 2011.

Fort Calhoun and NRC did present to you in February, and since then, we did finalize the significance of the fire in June, 2011, and concluded it was of high safety significance, a Red, and that has been communicated to licensee. Since we had placed them in 0350 oversight, that did not change our oversight posture as an agency. The provisions of 0350 are such that the panel considers all performance inputs and adjusts our inspection plans our oversight, and the licensee's corrective action, and a special tailored program for that licensee.

Since February, just a couple of things from the licensee's perspective, not to speak for them, but they have completed an independent safety culture assessment, that was done earlier this month, and they are using the output of that, to inform their integrated performance improvement program, and a plan which is nearing completion, but not yet finalized. It appears to have the right element. It is resource loaded and so that will form the basis for the licensee's performance improvements.

From NRC's perspective, we're going to issue a new Confirmatory Action Letter, formally documenting the key licensee commitments, attached to that will be the restart check list. That contains the subject align items of the things that the NRC views as necessary to be addressed, prior to plant restart. It's a fairly lengthy checklist. I believe it's comprehensive. It touches on a

number of different topics with respect to the station performance. That will then form the basis and the content of our inspection plan moving forward, which is still under development.

I think the advantage in why we applied Manual Chapter 0350 oversight here was the flexibility to adjust the program, and our response on a timely basis. The licensee is still in discovery, so we can expect at least a potential, that there could be new items and new elements discovered and needed to be added to their performance improvement plan, and also would need to be added to our inspection plan before plant restart.

I'll just restate that at the Agency Action Review Meeting, we discussed this in depth, and concluded that we had correct agency actions applied for Fort Calhoun Station, and that concludes my presentation.

VICTOR MCCREE: Good morning, Mr. Chairman, Commissioners. Slide 26, please. I'd like to briefly discuss the background and why we're here today to discuss Browns Ferry, provide an overview of the licensee's performance since we were here last October to brief on Browns Ferry, provide the staff's current assessment of the licensee's performance, and give an overview of our plans going forward. Slide 27, please.

Browns Ferry entered Column 4 of the multiple repetitive degraded cornerstone column of the action matrix in the fourth quarter of 2010, due to the high safety significance determination, the Red safety significance determination associated with the failure of residual heat removal flow control valve on Unit 1. This Red finding is associated with Unit 1 at Browns Ferry.

Since the Commission was last briefed in October, Units 2 and 3 continued in the licensee response column, Column 1 of the action matrix, and

Unit 1 remained in Column 4. As a result, as Bill indicated, Browns Ferry met the criteria for discussion at the Agency Action Review Meeting. Slide 28, please.

Direct oversight process requires that a plant that enters Column 4 of the action matrix receive a 95003 supplemental inspection. As we've done for other Column 4 plants Region II opted to conduct this inspection in three parts, and we've completed the first two. The first part was completed in September, and that focused on component testing programs such as the in-service testing and motor operated valve testing programs at Browns Ferry. Part two was completed in December, and that focused on the maintenance programs.

The overall objectives of parts one and two were to identify any immediate safety issues, evaluate continued operations, and identify issues that contributed to the poor equipment reliability that we had observed at Browns Ferry. Based on these two inspections, we did not identify any immediate safety issues that caused us to question the acceptability of continued operation of the units at Browns Ferry. However, the inspection findings and observations did indicate inadequate implementation of maintenance and surveillance program requirements and procedures, and poor adherence to site standards, deficiencies and problem recognition, and effective corrective action, and lack of follow through and rigor, as well as instances of tolerance and acceptance of less than high standards of performance. The observations and findings also show the strong correlation between effective implementation of maintenance and surveillance programs, and the poor equipment reliability at Browns Ferry.

Although not identified on this slide, we completed a problem identification and resolution inspection at Browns Ferry in March. This inspection focused, in part, on the corrective actions from a Yellow and White fire protection

finding that we issued in 2010. In general, problems were properly identified, evaluated, and resolved, but there were examples where the adequacy and depth of the evaluations were not consistent with the procedures and expectations, and one of the findings associated with the adequacy of implementation of procedures in training for safe shutdown instructions has the potential to be greater than Green, and this would affect all three units.

As required for a plant in Column 4, TVA has completed an independent third party safety culture assessment for Browns Ferry. The vendor, Synergy, conducted a safety culture assessment survey in related interviews, during the fall of last year. The report was finalized and obtained by TVA, and actually forwarded to us in the latter part of April. We've conducted a preliminary review of the safety culture assessment report, and I'll provide a few additional insights in a moment.

TVA also requested and recently received NRC approval for an extension to submit an application to voluntarily adopt NFPA-805. This decision was based in part on TVA's acceptable compensatory measures supplementation of the fire risk reduction modifications and progress in developing their license amendment request. The confirmatory order approving the extension provides enforcement digression for any fire protection non-conformances related to NFPA-805 transition activities at Browns Ferry. It also requires TVA to submit the license amendment request by March 29th of 2013, or be in full compliance with the current licensing basis. Next slide, please. Slide 29.

As evidence of initial progress in efforts to improve the reliability of the plant equipment, we have seen examples of TVA's implementation of several

initiatives, which TVA will likely discuss in detail during its presentation. One of the initiatives includes a safety system recovery project, which focuses on completing a number of work orders associated with the health of safety systems at Browns Ferry.

TVA is also developing its Integrated Improvement Plan, similar to Fort Calhoun. It's in the last -- latter stages of that. We understand the purpose and the structure of the plan, and the five major areas that it's intended to focus on. We will review the plan in detail once it's been completed, as part of preparations for part three of the 95003. One of the features of the plan that we'll take a close look at is the performance measures and matrix that TVA intends to include to determine the status of performance improvements, and engage its readiness for the part 3, 95003 inspection.

In the area of safety culture, the vendor, Synergy, found that the station rated in approximately the same position compared to the industry. Since 2009, Synergy has conducted -- this would be the third survey it's conducted, 2006, 2009, and of course last year. The overall rating was areas in need of improvement, which placed it in the fourth quartile in the Synergy industry, commercial nuclear power industry database, if you would.

The assessment identified five areas in need of additional attention for TVA, reinforcement of safety as a top priority, reinforcement of safety conscience work environment, restoration of confidence in the corrective action program, improving job satisfaction and morale, and fifthly, improvement in workload management. NRC inspections have identified three adverse safety culture characteristics associated with the findings and observations at Browns Ferry. They include procedure, use, and adherence, use of the corrective action

program, and standards and expectations, and these areas in my view are in general alignment with what's been reported from Synergy's survey.

I'd also note that the survey participation rate was lower than typical. It was about 60 percent, and over the last three surveys, it's typically around 78 percent, and as a result Synergy conducted additional interviews to confirm that the responses were generally representative, and they did confirm that. Nevertheless, Synergy recommended that TVA treat the rating results as a one quartile lower to account for what it characterizes as positive bias in the results. Based on these results, NRC plans to add additional inspection resources to our part 3 95003 inspection, to ensure a thorough and adequate review of this area, as well as TVA's corrective actions. Next slide, please, slide 30.

Part 3 of the 95003 will be scheduled once TVA informs Region II that it's ready for the inspection. We've had very robust discussions with TVA and several public meetings, and as evidenced by the preliminary dialogue we've had on the content of their Performance Improvement Plan it is apparent to us that TVA understands the issues that need to be addressed before they are ready for the Part 3 diagnostic inspection.

Browns Ferry has already begun to implement modifications as part of its transition to NFPA-805, and I'm sure TVA will mention some of this during their presentation. However, Region II is inspecting the modifications as part of our ongoing inspection program to confirm that they meet requirements.

After completion of the part 3 inspection, one of the regulatory tools at our disposal, in fact Elmo has mentioned this as well, and it's also referenced in Manual Chapter 0305, is to use a Confirmatory Action Letter to identify and

track the closure of improvement initiatives that may not be fully implemented by the time we conduct the 95003 part 3 inspection.

In closing, as I mentioned in October, Region II has established enhanced oversight of Browns Ferry. We've dedicated a branch chief, Gene Guthrie, who's here as well as an executive sponsor, Jimi Yerokun, and other staff who are leading the inspection and oversight of our activities at Browns Ferry. In addition to assessing TVA's interim and long term corrective actions, an important aspect of their focus is to confirm our assessment of the safety, ongoing safety, and continued operations at Browns Ferry. That completes my…

BILL BORCHARDT: Our presentation is complete.

CHAIRMAN JACZKO: Thank you. Start with Commissioner Svinicki.

COMMISSIONER SVINICKI: Gentlemen, good morning. Thank you for your presentations. I also thank, of course, all of your staffs, and Victor, and Elmo, I want to acknowledge something that I think is not as visible at what the Chairman called one of our most important meetings of the year, but it is the really, the devoted work of the staff, of Region IV, Region II, and of course, your counterparts in Region I and III, who did not have licensees, that they're not here today discussing licensees in their Regions, but, you know, after the licensing comes the hard work of oversight and inspection, and so I really want to acknowledge I am certain that many of the staff in the Region are tuning in, and this is one meeting that focuses very exclusively on the hard work of the women and men of our Regional offices, that are being done every day. So, I want to thank you and the presentations today are really the culmination of many tens of thousands of hours of work that they put in. So, thank you, and again, my

acknowledgement to the women and men working in our Regional offices. I just wanted to begin with that.

I do have some specific questions and they are at a pretty high level, because you've done a good job of covering both the assessment work that we do every year, and then the specific licensee trends and issues that we're talking about today.

I think I'll begin with a question for you, John, or anyone who wants to chime in, but you've looked at and done an assessment of reactive inspections, and you've looked at the trends from calendar years 2006 to 2011, and I think there were approximately 21 special inspections in 2011. So, my question is have you looked at and assessed the significance, if any, to the number of special inspections, and how is that comparing with previous years, and arising from your assessment, do you view that this corresponds to any of the other trends in performance that you've discussed today?

JOHN LUBINSKI: Thank you. We have looked, as you said, back in 2006, and the numbers of reactive inspections by year has gone as many as 25 in 2006, and in 2011 we had 22, and we had a low though in 2009, of 13 reactive inspections. So, if you look across the numbers, the first appearance was between 2010 and 2011, where it went from 15 to 22, and people looked at that and said, "Is that a spike?" but when you look back over the six years, it's really not -- it went 25, 17, 18, 13, 15, and then 22. So, we don't see any trends there, and in fact, if you -- it's not statistically significant, but a trend line across such small numbers, but if you were, it still shows the trend line going down since 2006 in the number of reactive inspections.

However, we did think it was important to continue to look at this

information, and we are continuing to do that. Looking at this year, right now, we're through May, and we're probably on track with about the same number of inspections projecting out if we stay at this rate that we had in 2011, somewhere -- I believe the number is going to be -- if you project out, around 19, 20, as a projection number, if you just follow a straight line.

From the standpoint of performance, we look at each of these from a performance of what comes out of the inspection, with respect to the licensees, and some of them were in response -- one last year was with North Anna. So again, that wasn't a performance issue. It was an earthquake that caused that reactive inspection. So, we looked at that as well, and we have not seen any trends in performance, and we don't see any clear lengths between the reactive inspections and reactive inspection numbers, and what we're seeing in the trends programs, but we -- really because of the small numbers and as stated, you couldn't come up with a statistical significance in the numbers, we think it was more important to look at is the program working correctly itself. Are we actually performing inspections in accordance with our management directive for performing inspections, and are they achieving the desired outcomes, and we think they are doing that.

COMMISSIONER SVINICKI: And I think you, as part of your answer stated that you will continue to look at this in the coming years. So, is this an assessment -- the kind of assessment you just described, is that part of your routine annual look at the trends and at the ROP program?

JOHN LUBINSKI: It was not part of our routine. We're not adding it to the industry trends program or to the ROP self assessment at this point, but from the standpoint of our day to day activities, we are going to be doing this, and

when we start to look at our annual assessment meetings, we do talk about plants in addition to the plants that were discussed at the AARM meeting. We talk about all the plants that are looked at, and reactive inspections are something that will be discussed there, and whether or not we're seeing any trends in this type of reactive inspection, during those discussions.

COMMISSIONER SVINICKI: Okay, I imagine if nothing else, as a practical matter, we need to think about it from a budgeting standpoint as well, because we need to staff these inspections. So, thank you, thank you for that answer.

Perhaps on a bit of a related note, you did -- we were talking specifically in your presentation about the prediction limit for loss of offsite power being exceeded, and you said that's still undergoing some further analysis and assessment by the staff, but you did note that this was the result of natural phenomena. I think principally it was a very active tornado season for some of our licensees. Could you talk about looking beyond just the prediction limit and its exceedance? Did the staff -- could you comment on how the effected plants withstood and recovered from the losses of offsite power, and what, if anything that tells us in terms of our regulatory requirements, and margins, and Defense-in-Depth?

JOHN LUBINSKI: Yes, if I could give a little more background on that, before I answer the specific question. We did look back, as we said, in 2011, at the number of events. The six events that were identified as significant events, none of those were related to loss of offsite power events. The additional seven events were all loss of offsite power events. We looked back at the previous years, and we didn't go back and look at all the years, but last year, all

of the events that were listed as significant events weren't related to offsite power. So, when we looked at that spike above that of seven events, and being outside the licensee's control, we didn't see performance issues.

Specific to the performance of the plants, all of the plants that did respond appropriately in response of loss of offsite power, they did have the diesels kick on. They were able to safely shut down or operate, as they continued to go in response to this. I will note there was one finding that came out, that you could say was related to this, is at North Anna. One of the diesels initially did kick on as it was required to do, but they did have a problem with one of the gaskets on the diesel, and that did result in us taking -- putting it through the SDP process, and that resulted in a White finding that was just issued to the licensee this month. May 11th, we issued the final White finding on that issue, and that would not be categorized as a significant event. So, what was more important to us, is how did the plants respond when they had the loss of offsite power events. Even though it was outside of their control, they did respond appropriately and safely.

COMMISSIONER SVINICKI: Okay, thank you very much. Just a final point I noted in this year's presentation, there was a slide on deviations from the ROP, and the final open one was closed in 2011, and no new deviations have been opened or initiated. Does the staff have any view of -- does that indicate anything, and if so, what, in terms of analyzing the ROP?

JOHN LUBINSKI: With one of the purposes in discussing deviations at the AARM meeting, and as well in our self assessment, is to determine whether or not the ROP, itself, should be modified to provide some flexibility, or changes, or assessment, based on the fact that we were issuing

deviations. So at this point, you could take that as an indicator to say the ROP is appropriately predictable, as well as flexible for us to handle our mission, and to do our analysis of events, or findings that we have at the plant. So, that would be one, if you were to say an indicator that could be the ROP is sufficiently flexible to handle that.

BILL BORCHARDT: I'd just like to make it clear that there's nothing in the ROP that prevents us from doing the right thing. All right. I have no hesitancy to approve a deviation if it's warranted. So, and what I use as -- so, the Regional Administrators are not impeded in any way of asking for a deviation from the ROP. What we'll use that for is to, as John was saying, to inform how we might want to revise the ROP to recognize the situation were it to happen, or were we to predict it would happen more frequently, and that helps with budgeting for future years, and that kind of thing, but we don't use it as a metric of something we're trying to avoid.

COMMISSIONER SVINICKI: Okay, and so I take from your answer that also though, if you had a large number of deviations that were all similar, it might indicate to you something about some modification needed to the ROP?

BILL BORCHARDT: Exactly.

COMMISSIONER SVINICKI: Okay. All right, thank you very much. Thank you, Mr. Chairman.

CHAIRMAN JACZKO: Commissioner Apostolakis.

COMMISSIONER APOSTOLAKIS: Thank you, Mr. Chairman. I would go back to figures on slides 14, 15, 16, John, and I must say when I first looked at them, I was a little puzzled by the straight lines, which are horizontal, and these are labeled, there's 95 percent radiation limit, and so on. If I look at

the figure 16, for example, or 15, and not know anything about statistics, I would say that there is a period of up to 2005, where I had a fairly larger number of events. Then, from six to nine, the rate decreased, and then in increased again. So, there are three distinct periods, more or less. So, I have difficulty agreeing with the bullet, no long term significant adverse trends. I would say, yeah, the last couple of years, maybe I should look more carefully, and there has been some increase. Now, the straight line is an input to the code. We decide to use a straight line and we decide to use 10 years. So, I wonder whether 10 years is the right number. I wonder whether forcing a straight line gives us insights, especially when I look at a figure like that and I'm saying, "Well, gee, you know, how do they conclude that there is no long term significant adverse effect?" I'm not saying that there are long term significant adverse trends, but I can't agree that there are none.

JOHN LUBINSKI: And I think, as you said in your first statement, this, from a statistical standpoint, is not statistically significant, and the reason is because, as you said, if you go across the 10 years and you look at the randomness of the data, and the numbers, that tells us whether or not there would be any significance. What's important though is this is information that causes us to look at the data, and that's what we did, and we looked, again, the discussion last year was on 2010 events. We focused our discussion this year really on the 2011 events, and we did see that. If you look from the standpoint of number one, we just had the six events this year. It was a decrease from 2010 data. Even if we would add the 13 in, we did our analysis and said, "What is really this telling us? Is it telling us that there is an industry performance issue here, or is it -- what is it telling us," and --

COMMISSIONER APOSTOLAKIS: I guess my point, John --

JOHN LUBINSKI: Sure.

COMMISSIONER APOSTOLAKIS: -- is that I don't need the straight lines to ask these questions.

JOHN LUBINSKI: I would agree with you, and when --

COMMISSIONER APOSTOLAKIS: And to have conclusions like no long term significant adverse trends, I don't think is justified, because there are two significant inputs to this analysis, the 10 year periods, we decide that, and we look at the straight line. I don't know what you would find if you postulate a hyperbole, for example. It will go like this, I don't know. So I fully agree with you that I look at this and I want to investigate and understand why I have this trend, but that's what I'm saying. The other stuff, really, I don't know that it's needed.

JOHN LUBINSKI: From the standpoint of --

COMMISSIONER Apostolakis: Yeah.

JOHN LUBINSKI: Thank you.

COMMISSIONER APOSTOLAKIS: Mark, slide 8, the security performance measure was exceeded by one occurrence. That's the radiography camera.

MARK SATORIUS: Yes.

COMMISSIONER APOSTOLAKIS: And then you said there was no need for additional actions. How could that be? Did people investigate or understand what went wrong, and the camera was stolen, and then as a result of that, really they decided that there was no need for additional actions? I find that a little bit --

MARK SATORIUS: What we mean -- what we intended to mean by that statement is that the Agreement State, in this case Texas, as well as the NRC, primarily in Region IV, we reviewed the actions that the state took as a result of the stolen camera. The camera was stolen around July the 20th of last summer, and the state took some very strong actions, immediately. For example, the State of Texas and the licensee, on the very same day that it was reported stolen, was out with a number of vehicles, traversing streets with detectors, attempting to see if they could find the camera. They continued that for several weeks. They informed local law enforcement as well as the FBI of the theft. They issued a press release.

So, I think what I'm saying is that the action that the regulator, the state regulator took, we thought was as thorough as could be accomplished. Now, that now withstanding, they continued to search, and a week after using some DOE resources, did several flyovers on various parts of the city, that the city of Austin determined might be a place where this camera, based on previous criminal activity, could be located. So, they were unsuccessful. They continued to search in this manner for about two months, and it was in September at some point in time where the camera had decayed -- the source had decayed to less than Category 2 material into Category 3 material, that they decided that they would secure from searching for this camera.

One of the other things they did in their interactions with the FBI, the FBI was able to point them to certain criminal cells that were within the Commonwealth of Pennsylvania. So, the state reached out to Region I and the Commonwealth of Pennsylvania, to see if there was any activity that could be associated where this camera -- this was criminal cells where they funnel stolen

material and provide it for other uses in a criminal manner. So, it was our assessment that the state took some fairly significant actions that -- the camera was locked within the trailer that they used for developing films, and it had inadvertently, the alarm system had not been set. So, there was some significant enforcement action that the state licensee took against this state license.

COMMISSIONER APOSTOLAKIS: Okay, so we do understand then why it was -- how it was stolen?

MARK SATORIUS: Yes, yes. The fact of the matter is because they neglected to set the alarm --

COMMISSIONER APOSTOLAKIS: Yeah.

MARK SATORIUS: -- that it's likely that the theft would not have been successful, had they followed their requirements.

COMMISSIONER APOSTOLAKIS: Okay, thank you, Mr. Chairman.

CHAIRMAN JACZKO: Commissioner Magwood.

COMMISSIONER MAGWOOD: Thank you, and good morning to all of you. It's a pleasure to see all of you this morning. It's -- although the subject's not always a pleasure to talk about. One of the things I wanted to echo, Commissioner Svinicki's opening comments about the work of the people in the Regions and I make a point in trying to visit the Regions every year, coming to see Region II soon. I've seen Region IV recently, been to Region III recently. Region I is coming up relatively soon, and I do believe that the people that work in the Regions -- the work they do is so underestimated, because they are the ones that most directly interact with licensees and with the public on a very routine basis, and without those efforts, you know, nothing that we do would work

very well, and so I just wanted to, you know, particularly with the two of you at the table, Elmo and Vic, a great confidence in your staffs and in you, personally, and I think both of you are doing an excellent job. So, don't take what I say the wrong way. When I recently had the opportunity to spend some time with some of the folks from our state partners, and talked a lot about, you know, our programs to assess their activities, the IMPEP program, and I got an interesting comment back from them, which I'm sure you've heard over time, which is, well, yes, you assess us, you assess licensees, you assess everybody, but you don't really assess your own Regions, and they made a strong pitch to me that why doesn't the NRC have some methodology to look at -- they asked these same questions you asked of our programs in the states of your own Regions, and I just wonder -- I'm sure this has come up in the past, and I want to give you a chance, and Bill, please, or any of you at the table that have some thoughts about that, you know, please --

MARK SATORIUS: It looks like it's a race for the button.

[laughter]

CHAIRMAN JACZKO: Mark, you've got multiple hats, Mark, because you're recently coming from Region III.

MARK SATORIUS: That's correct, yes, sir. I'd just say that the answer to that is the characterization is inaccurate. Each Region gets an IMPEP review on the same periodicity as each of the state organizations, and they look at the same, exact same areas, and they're not just paper audits. They're thorough. They borrow down into the issues and there's an MRB that's conducted the same way that there is with the Agreement States. So, it gets a high level of review with public results that are shared. So, I would say that you

didn't get all of the story, sir.

BILL BORCHARDT: And I'd also say it goes across all programs. I would wager that the Regional Administrators wouldn't mind trading places, because they get oversight every day from the Deputy Executive Directors, and from the program offices, and through the annual assessment that we do at the Agency Action Review Meeting. All of those look at not just the effectiveness of the program theoretically, but the implementation of that program, and, you know, through development of the budget, how many inspection hours go to each site, and to a very fine level of detail, implementation of all those programs are reviewed, and that's largely what my colleagues to my left are held accountable to do.

ELMO COLLINS: I would just to what Mark said, and there's a state representative on the IMPEP team that reviews the Region programs, so that's part of the process.

VICTOR MCCREE: As the only Region that doesn't have a materials program. Of course, we have a fuel cycle facility program, and quite frankly, I look forward as we implement the fuel cycle oversight process over the next few years, to engaging in a more ROP-like oversight accountability model, if you would, from a program office to a Region, but certainly in the Reactor Oversight Process there are indicators. There's actual support in oversight from Ho and John's staff, of what we do and how we do it, whether we're meeting the goals that are laid out, that I think answer the question very well.

COMMISSIONER MAGWOOD: I'm glad there was a good answer to that question. Let me ask you a question about, and any of you please respond to this. One of the -- I think -- I appreciate the review that you do of the

ROP program every time we talk about this, in the two years that I've been on the Commission, but one thing I haven't heard, and maybe there's some history on this, and maybe there's not, but have we ever had an independent review of the ROP program, analysis from outside by the agency of a group that would give us more independent assessment?

JOHN LUBINSKI: Since the inception, we have not. When we originally developed the ROP program, we did look outside of the agency for benchmarking and how to do that. So, that was something that we didn't just, you know, do this on our own in isolation. Since then, we have not had any independent assessments come in and review the ROP program that I am aware of.

BILL BORCHARDT: Yeah, I would say -- I would put into that category a couple of things, GAO. The IG does not -- I don't believe they have looked at the overall program, but they have looked at portions of the program and how it's implemented, and I would also throw then, also into the answer, the fact that the -- all stakeholders are asked for input on the effectiveness of the program through the annual assessment that we do. So, that includes licensees, the public, and everyone else. So, I think there is many elements of it that, I think, get to the essence of what you're raising.

COMMISSIONER MAGWOOD: When was the GAO assessment done, how far back is that?

BILL BORCHARDT: I'd have to get back to you. I don't remember.

COMMISSIONER MAGWOOD: I'll check with you on that later.

CHAIRMANT JACZKO: The last couple of years

BILL BORCHARDT : Yeah, I just can't give a date.

COMMISSIONER MAGWOOD: Look into that. I'd like to see that myself. A couple of specific questions with the time I have left, John, you mentioned that the -- and we've talked about this in the past too, that we are going to be reintegrating the security area into the ROP, and I wonder if you can just sort of talk a bit more about how that's going to work, and how the security findings will affect the overall findings in the ROP for licensees.

JOHN LUBINSKI: Sure. The purpose of this is to have a more holistic look across all of the cornerstones of the ROP. So, when we looked at that without security, we could end up with findings in different cornerstones which would move people into, you know, Column 2 or Column 3 of the action matrix because they are multiple cornerstones, which then allows us to do a more integrated inspection in 95002, maybe 95003, that we can look at the impact of what the causes are of those findings, to determine whether they're impacting other areas.

The reintegration of security into the action matrix is now going to allow us to consider those inputs as well, to determine whether or not a licensee would switch from Column, you know, to Column 2 or to Column 3, based on those inputs, and then when we do our 95002, 95003 inspection will allow us to look at, again, what the holistic view of the cause is, and whether or not the licensee has taken comprehensive corrective actions that would address not just the cause of whatever the finding was, but holistically across the entire plant.

COMMISSIONER MAGWOOD: I appreciate that. That's very helpful. Vic, a question for you. I appreciate your discussion, Browns Ferry, and we'll hear some more from the licensee in a few minutes, but just a more general question, when you look at -- when we look at the performance of a particular

plant, do we also consider the performance of the fleet operator as a whole, obviously TVA operations more than just Browns Ferry, do you look across their fleet to see, to look for trends and issues?

VICTOR MCCREE: That's an interesting question Commissioner, and it's one that we've actually discussed at the AARM. The short answer is that the program does not require us to do that very assessment but, and I believe you'll hear this from TVA, particularly because of the issues that we've identified there that have programmatic implications and these programs and processes are used across the fleet. We've taken advantage of that knowledge and are actually looking at the evidence of performance issues in those same areas at Sequoyah and Watts Bar. The ROP focuses on unit performance. Of course, when we do the supplemental inspections and the causes, the root causes have a program or process implication, we're doing an inspection at that site, at that facility. But the fleet aspect of it is not a central part of the Reactor Oversight Process.

MARK SATORIUS: I might just add, and I know Vic has looked the same in Region II, when I was in Region III, and Perry was in Column 4 of the action matrix, we asked specifically the question of First Energy, have you got the resources necessary to apply them to Perry when you -- and are you -- is it going to be a blanket too small? Are you going to take resources away from Davis-Besse or Beaver Valley? They may be challenged as a result of your recovery from Perry. Are you spending corporately the right focus with making sure you've got the resources for all the plants?

VICTOR MCCREE: And also just to follow up and I won't steal any of Mr. Swafford's thunder, based on the multiple discussions that we've had and

as well as public meetings, I believe there's a recognition within TVA of the opportunity that this Red finding presents to address the concerns that have a fleet implication and, again, he'll perhaps discuss that in more detail during his presentation.

COMMISSIONER MAGWOOD: I appreciate both those answers. I'll just close in noting that we do have a significant number of fleet operators that, in fact, that's something that seems to be a trend that's been going on for quite some time in the industry and even independent plants are aligning themselves into something that looks a bit like a fleet. So I think these fleet effects ought to be looked at somewhat seriously to see if there are some trends that are taking place across reactors.

ELMO COLLINS: Just to add Commissioner, if I may, while it's not part of the -- the ROP is very site -- very unit specific, we do engage at the fleet level through meetings and public meetings and I'm actually scheduling one right now with the Intergy South that we're going to conduct this summer, and so we'll have a common meeting. We can look at what's going on at each of the sites.

VICTOR MCCREE: In fact, it's, just thanks for that segue, Elmo; and, in fact, as you know there are some fleets that cross our Regional boundaries and one of the things that help, Elmo, that Bill Dean, and Chuck, and I leveraged is meetings to address fleet issues with Florida Power & Light, for example, as well as with Dominion, given the fact that it has sites in Region I. So we do take advantage of that opportunity.

COMMISSIONER MAGWOOD: All right, I look forward to talking with you about that further in the future. Thank you, Chairman.

CHAIRMAN JACZKO: Commissioner Ostendorff

COMMISSIONER OSTENDORFF: Thank you Mr. Chairman. I appreciate you guys being here today. I want to echo comments already made by the Chairman and other Commissioner colleagues. I do agree with the Chairman. This is one of the most important meetings we ever have before the Commission, and I appreciated the Chairman pointing that out and other colleagues pointing out the importance of what the Regions do. I know that Vic and Elmo are here today, and Chuck and Bill in their respective areas. Across the board, I think the work done by the NRC resident inspectors, the Regional inspectors, the -- what you all do truly does constitute our first line of defense as a regulatory agency.

Having been exposed to analogous kind of operations in my time at the Department of Energy and also in uniform at the Department of Defense, I will tell you that with limited comparative experiences, but with some significant experience in those two areas, that I personally am very proud of what you all do in your oversight roles. I think as an independent regulatory agency this is a real success story. Not to rest on laurels, because I know you all continue and I read the minutes of your AARM Meeting, and I know Bill you were leading an effort to, okay, let's not be complacent. Let's look at how we can make this even better and more insightful. So, I applaud that, but I really want to thank the Regional Administrators and your teams because I think you're doing just an outstanding job in this area.

I have a few questions. I want to kind of start out maybe with Bill, kind of segueing from that note about your AARM meeting, and Commissioner Apostolakis has raised questions about a straight line fit on different significant event graphs. Bill, do you see, I mean, obviously statistics can tell us some

things and they're very useful as a tool but they don't necessarily tell the entire story. In your discussions this year did you see any, outside of the area statistics, any other themes emerging of concern, maintenance backlogs, knowledge management training deficiencies, or anything like that that you think is important for the Commission to be aware of?

BILL BORCHARDT: I would say one of the most important things facing the industry and ourselves, and it's not something I can point to a performance indicator or even inspection findings, but there's this generational turnover within the industry. So, it's a knowledge management, knowledge transfer issue that is very important and we see it through a lot of individual instances. You know, the understanding of the design basis at the plant was managed at the site or in the engineering organization by people who probably constructed the site. And, so, they had many, many lessons learned, they had a very personal in-depth understanding of the design basis.

The new engineers coming in are incredibly intelligent, highly motivated, but they don't necessarily have that historical perspective, and we have the analogous situation within our own staff. So, there's no quick fix. I just think it's something you need to be mindful of and stay alert to. A lot of us are very good at operating under normal events, but when you get an upset and you don't have that history, I think that's a vulnerability. So, I would say that's the one crosscutting, big issue.

We seem to draw our attention to things like the natural events, you know, it draws a lot of immediate attention but when we look behind it, I think we generally see the licensee performance and the design is holding up relatively well. So, it hasn't driven us to take any regulatory action or to come up with a

proposal for any kind of new regulatory requirement.

COMMISSIONER OSTENDORFF: Okay, thank you. Mark, I'm going to ask you a question here. The first AARM meeting that I attended as a Commissioner, you were at the table talking about Veterans Administration prostrate brachytherapy, and it was a big learning curve for me personally on the medical event reporting and we've gone through a lot of discussions with our staff and have decision papers before us to review. But I know that in that particular area, unlike the ROP where there's pretty much a, you know, 104 reactors, you know, not a whole lot of variability across them as far as how to assess performance. In your area you do have some unique technology issues, medical issues and so forth. I'm recognizing that, you know, the prostrate brachytherapy area has been pretty thoroughly explored; are there any other technological areas or issues that you see on the horizon that would warrant, you know, future review to ensure that our regulatory approach for materials, et cetera, is appropriate?

MARK SATORIUS: Yeah, there's two areas, Commissioner. Probably on a more global and high level it's -- some of the challenges that we're seeing with our co-regulators as far as resources, that, you know, not only is it impacting them but it's also impacting some of their licensees. So, you know, being able to have the resources to be able to maintain the program and the oversight is something we're concerned or looking at, let me just say that. And, in fact, it's one of the 12 focus areas that has been put together, ours is the 12th, looking to see whether there are and is an issue and we're going through a fairly thorough review this summer to see first, if there's a problem and if there are then, if there is then we would go ahead and have some recommendations on

moving forward. So, that's one area.

Another area that we're seeing and it was mentioned within the reactor program about, well it seems like we're having a lot of special inspections, kind of. And then you take a look at it and maybe we are. You know, it seems like there's been a lot of overexposures recently. We've seen a lot of radiography overexposures of individuals; and so we took a look at that, and if you look over the last six or seven months towards the beginning of the fiscal year, we've had seven overexposures, both the NRC and the Agreement States. Of those seven, six are radiography. The other one is an irradiator in New Jersey when they were doing a source change out. And if you look at those six and you look at the historical, how many overexposures have we gotten in the past; if you look at 2007 to 2011, there's been I think 16. So that's about three a year, with the largest one in, I think it was 2008, where we had five. Well, we're about 60 or 70 percent of the way through this fiscal year and we've got seven; so, it's something that we probably and are going to pull the string on and see if there's anything there. It didn't show up necessarily in this assessment of 2011, but we've seen kind of a spike just in the last six months, so it's not really related to the results of the AARM, but it is an area that we're going to keep an eye on.

COMMISSIONER OSTENDORFF: I appreciate that, thank you. John, I have a question for you. Commissioner Svinicki explored with you the loss of offsite power events and I know that those are still under review. When do you think those reviews will be complete?

JOHN LUBINSKI: From a review standpoint, none of those loss of offsite power events had findings that were issued except for the one I've mentioned for North Anna. I believe you're referring to the accident sequence --

COMMISSIONER OSTENDORFF: Yes.

JOHN LUBINSKI: -- precursors. And we have a gentleman from research who has the lead for that who can give us a status.

CHRIS HUNTER: I'm Chris Hunter, Office of Research. The three analyses essentially covering seven units, they're all in process of various states of completion. The most on the near term horizon, the loss of offsite power due to a tornado at Surry, that should be completed in this next week or so, issued final to the licensee. The North Anna, we're just incorporating the feedback from NRR and the Regional analyst, but the conditional core damage probability is to a level to where it will sent to the licensee for a formal 60 day peer review, that that threshold is at E-4, but it is below the preliminary conditional core -- damage probability is below that of a significant precursor, at this time.

And at Browns Ferry we're hoping to have it completed in the next month. We're just doing some modeling changes. And we expect that to be low, to be below the level of where we would need a licensee review. So, we'd issue that final.

COMMISSIONER OSTENDORFF: Thank you Mike. I appreciate it, thank Chris. My key issue here is, I'm pleased to hear that they're close to being finished, and I think it's important as your staff looks forward to the Near Term Task Force recommendation work on Station Blackout, the AMPR that the loss of loss sight power events be analyzed to inform that rulemaking.

JOHN LUBINSKI: Thank you, yes we are keeping engaged when these issues come up with all the items being worked by the Near Term Task Force.

COMMISSIONER OSTENDORFF: Victor, I've got one comment to

make. I don't have time to ask a question, but I just want to point out one thing that really got my attention that's on your slide 29. I appreciate your comments on the safety culture issues at Browns Ferry and look at procedure adherence enforcement, use of corrective action program, and standards and expectations, those three areas that were of concern to you. And my comment is that two of those areas, corrective action program, and standards and expectations, are kind of management issues that sets the tone. But the one that cuts across the entire vertical organization is procedure adherence, and as a former operator of a propulsion plant, that really got my attention. I just wanted to point that out. I think it's important that the use of procedures be really a very high bar for expectations there, and that if that's not happening across the organization, that'd be a big concern to me.

VICTOR MCCREE: Mr. Commissioner, I recognize that as a comment. I just wanted to say, it has our attention as well, and I believe Mr. Swafford and his staff may speak to that issue and how they're engaging it.

COMMISSIONER OSTENDORFF: Okay. Thank you. Thank you Mr. Chairman.

CHAIRMAN JACZKO: Sure. John, I just wanted to follow up on Commissioner Svinicki's comments about reactive inspections. You said you're not going to add that to the Industry Trends Program. Why not?

JOHN LUBINSKI: It currently is not part of the Industry Trends Program. We've looked at whether or not we should track this, should it part of the program. Our position at this time is it is an important item to look at to determine whether --

CHAIRMAN JACZKO: I'm sorry, it is or --

JOHN LUBINSKI: It is important to look at the reactive inspections to see what the information is telling us. However, we do not believe that the information tells us information necessarily on licensee performance, or that it's trending based on licensee performance. We do special inspections based on events that, you know, loss of off-site power events to where the licensee performed adequately. But we still may do a special inspection, so we don't look at that as being an indication necessarily of licensee performance. And we're looking --

CHAIRMAN JACZKO: Should we have some other metric then that we -- or some other category of things? I mean because, I mean for things to screen out for as some kind of reactive inspection. They have to have some risk significance, or some safety significance. So there's if we -- regardless of whether there's industry performance if, you know, we're getting a lot of things happening that have risk significance, that's probably something we want to keep track of.

JOHN LUBINSKI: That's one of the factors. One of the factors in determining whether to do a special inspection as a risk significance. There are some deterministic backstops as well that we use. So that doesn't really tell you necessarily that the risk significance. And then also based on what's going on at the plant, what we know, a Regional Administrator may decide that they want to perform the special inspection for other issues. So to be able to lump it in a category and try to do any trending across that and tell us what information, it may give a false sense of that it's indicating a performance issue when it's really not.

VICTOR MCCREE: Mr. Chairman, if I could add. There's -- the

reactive inspection process it's a very rigorous process. There are deterministic criteria that the Regions consider, and there are conditional core damage, or conditional large early release --

CHAIRMAN JACZKO: I guess what I'm trying to understand is why we wouldn't track that. I mean, I don't -- whether we track it in the industry, I mean we don't need to track it in the Industry Trends Program, but in some kind ROP assessment because, you know, if we've got this situation and we were spiking to 40 or 50 reactive inspections a year, I think that would be telling us something. Maybe it's not something about industry performance, but it's telling us something about our performance. So, I don't understand why we wouldn't track that as a data point, as a -- and do trending analysis.

JOHN LUBINSKI: And when you say tracking it, we are, as I said, we are continuing -- based on the fact that we had what appeared to be a increase from 2010 to 2011, we've now decided from a program standpoint to continue to track the data, have the data in place, --

CHAIRMAN JACZKO: But we're not trending it anywhere?

JOHN LUBINSKI: But we're not --

CHAIRMAN JACZKO: We don't produce a report every year --

JOHN LUBINSKI: We don't produce a report to trend it because again, as you said it, maybe it's on our performance. What we're looking at from a standpoint of performing reactive inspections, but the ROP and the Industry Trends Program is looking from the standpoint of how are we assessing licensee performance --

CHAIRMAN JACZKO: No, I hear you. I want to get to some other questions, I guess my point, maybe this will be something that we need to take a

look at but, it seems that if there's value -- I hear your point that it may not be valuable as part of the Industry Trends Program because it may not be an indicator of industry poor performance, or performance trends. But it certainly seems to me that it's a valuable indicator to track either in our internal reviews of the ROP or for some other --

JOHN LUBINSKI: I would say it's valuable to track and I wouldn't use the word indicator, but it's valuable information to track so that we can reassess the management directive and whether or not the management directive is achieving the objectives of what we're doing with respect to special inspections. And that's the way we would look to use that information. We have many management directives that we use, and that's the kind of information we would use in evaluations of the management directives when they're updated. And --

CHAIRMAN JACZKO: Okay, well, like I said, we may not agree on this but I want to turn to some other things. Elmo, you're dealing with Fort Calhoun right now. One of the things that I think we've seen is, you know we had a plant that was in Column 4, then some other things happened and we moved into Manual Chapter 0350. Once it goes into Manual Chapter 0350 it's basically taken out of the ROP. I saw the good tools that we have in the ROP and the good communication tools that we have with the ROP kind of fall by the wayside. New -- as I understand it if we, as part of some of the work we're doing now new issues are identified we won't necessarily go through them in a STP process, do inspection findings, give color findings for that.

I guess I'm trying to understand what the -- why we have the 0350 process anyway. I mean, does it serve a purpose, or -- is it really -- should we

really just think about getting rid of it and just do everything through the ROP?

ELMO COLLINS: Well, that's a good question. I, in my judgment, 0350 does serve a purpose. It, hopefully not very frequent but in unusual circumstances rare. ROP is a pre-prescribed program of assessment. It has lots of features, the baseline inspection, the PIs, and, of course, the significance determination process with a view toward the action matrix, to gage our engagement. But when this special circumstances when we enter criteria 0350, you've been down that road, and so, and it's a unique circumstance and relatively significant.

CHAIRMAN JACZKO: So what's--

ELMO COLLINS: So it provides for a tailored oversight process with a view to make sure that the issues are understood, fixed, the licensee has at least a Confirmatory Action Letter on those to make sure that they're engaged to provide for extra communication. A series of public meetings, we've had at least three public meetings so far at Fort Calhoun.

CHAIRMAN JACZKO: But what if -- what -- I mean that, you know, and again I appreciate that but I think the issue that as I look at it is why is it outside of the ROP? Why isn't there some progression or some entry point within the ROP where you get into, you know, maybe it's a new column, maybe it's something like that? Because we cast the ROP aside then, I mean we don't, we don't rely on the tools that we have with the ROP anymore.

ELMO COLLINS: I -- go ahead.

VICTOR MCCREE: I'm sorry. Mr. Chairman, I would argue that it is well within, well prescribed and well laid out within the Reactor Oversight Process and, in fact, it provides an opportunity --

CHAIRMAN JACZKO: Yeah, but findings, findings that we get, that we now, I mean unless, am I not correct in this?

JOHN LUBINSKI: I was going to say, the findings, new findings, all the findings that were identified prior to entering 0350, are dispositioned in the same --

CHAIRMAN JACZKO: Right.

JOHN LUBINSKI: Matter they work for, but findings, new finding.

CHAIRMAN JACZKO: Findings that are identified now are not.

JOHN LUBINSKI: They will still be analyzed and --

CHAIRMAN JACZKO: But, but they won't be recorded in the ROP. I mean you won't get, you know, I mean we got the Red finding on fire, you know. as part of our inspections we identify something else which screens through the SDP as a Yellow, there will be no additional finding in the ROP for that particular issue. There, you know, you go on the website and you click on Fort Calhoun, there's not going to be a Yellow finding for that.

JOHN LUBINSKI: The finding will still be identified and we have a special webpage set up where that finding. If we have a future finding it will be identified.

CHAIRMAN JACZKO: But will it be in the ROP?

JOHN LUBINSKI: It's not going to be in the ROP from the standpoint of being a, then again it's the action. The purpose of the action matrix, and I think that's what you're trying to communicate here, is that when the findings are generated to move them into the column of the action matrix, it says what actions we're taking. In this point, those findings won't be lost under 0350, they will still be identified, they will still be categorized with a color --

[talking simultaneously]

CHAIRMAN JACZKO: They're not communicated to the public in the same way.

JOHN LUBINSKI: They will be communicated to the public as saying that the licensee is in 0350, just as if a licensee was in Column 4 and had additional findings coming up, and it would still identify it as a finding. It would color it as White, Yellow, Red. If it were to come up as a new color, so that you could still see the list of findings and with the criteria --

CHAIRMAN JACZKO: And if you go the, and if you go to Fort Calhoun's ROP page, you'll get that?

JOHN LUBINSKI: You can get that. And then --

CHAIRMAN JACZKO: You can or you do?

JOHN LUBINSKI: You do get that.

CHAIRMAN JACZKO: Okay.

JOHN LUBINSKI: And then when you've -- the criteria is when exiting 0350 --

CHAIRMAN JACZKO: Yeah.

JOHN LUBINSKI: Those findings all need to be dispositioned and corrected so that they can move forward so there's a clear exit criteria out of 0350. So it's not a column in the action matrix but if you were to look at the tools that we're using, the tools are still there similar to what we would use if some was in a column. The inspections themselves, we use the tools there, the 95003 inspection, we use that same procedure in developing our inspection plans. We look at what we're doing under baseline inspections and we're customizing it to those findings that are identified for Fort Calhoun under 0350. So we are using

those tools.

CHAIRMAN JACZKO: Okay, thanks. Mark turning back to you for a little bit. We have number of these AO findings that are not coming in in the years they're supposed to be coming in. I mean, what's that telling you about, what's the problem? Why are they -- are they not being reported? Are they -- why the delays?

MARK SATORIUS: Well, I think I mentioned during my presentation that some of the delays are, they're pre-decisional enforcement activities that take place, some involving individuals that will take an OI investigation, so it becomes a lengthy and analysis really can't be made until we disposition the enforcement actions. So that's a good portion of them right there.

CHAIRMAN JACZKO: So, again, looking from the perspective of, how -- because part of what we're trying to do is track. I mean, okay, we've got reporting for the AO, but we're also trying to use this information to track trends. So if they're not -- if we're not getting them properly binned by the year in which they happen, then that is difficult as you, I mean, showed. In one case we would've found that there was a trend, when we're actually placed in the proper year we find out there isn't a trend. So, are we now, at least internally making sure that we're recording events in the year in which they're happening so that we can track trends properly?

MARK SATORIUS: Yes, yes, and the other part of that Mr. Chairman is just because they haven't been given the pedigree of being an AO, doesn't mean staff and the Regions and inspection folks don't focus on that issue and understand the issue and understand that corrective actions are being taken. So we don't sit and wait until it gets the pedigree of being an AO before we

engage the licensee.

CHAIRMAN JACZKO: Okay, good, thank you. I have one more quick question that I want to do. The, you know, again, this category of things that seem like there's things happening and maybe there isn't when you look at the trends. It seems over the last year, maybe year and a half, we've had instances of challenges with controls of SGI and other information across kind of all licensees. Did you all talk about that at the AARM and see any trends or what did you see?

JOHN LUBINSKI: We didn't have a specific discussion of security issues, SGI, or security findings. For it to be discussed at the AARM there would have been indications that they were at a higher level, if you will, from the findings. During end of cycle meetings and the general end of cycle assessment meetings there were questions about that as well. We are looking at the SDPs with respect to security findings and determining whether or not they're appropriate based on these findings. So we are using that feedback of the number of findings to determine are the, is the significance determination process working appropriately there? Does it need to be changed? But it was not a specific discussion at the AARM this year.

CHAIRMAN JACZKO: Thanks. Anybody else want to add? Okay, good. Well, thank you. Any other, we're running a little bit ahead of time, so if anybody else has other questions? Okay, great, well, thank you. We'll take a quick break.

[break]

CHAIRMAN JACZKO: Well, we'll begin now the presentation from TVA. We'll start with Preston Swafford who's the Chief Nuclear Officer and

Executive Vice President for the Nuclear Power Group at the Tennessee Valley Authority.

PRESTON SWAFFORD: Thank you Mr. Chairman and Commissioners. Good morning and as we begin I want to thank you for the opportunity today to meet and share some of our responses we have going for our Red inspection findings at the Browns Ferry Nuclear Plant and our ongoing performance improvement efforts. It's important to understand that this improvement effort is not just a Browns Ferry effort, but rather it is a TVA fleet wide. So, kind of the comment heard earlier in the morning, we've very much built a central organization in place, if you will. It's a corporate fleet approach. We have multiple players in corporate that are now really reared up and intrusive in terms of how we run our fleet, and all the lessons learned that we learned from the Integrated Improvement Plans from our root causes and causal analyses are all rolling into our corrective action program and they're moving back into Sequoyah and Watts Bar and corporate as well. So it's a fully permeable membrane of activities going both ways as we discover and we expect to improve the entire fleet as we improve Browns Ferry.

Our vision for the nuclear fleet is to lead the industry in safety, people and performance. We're clearly not there yet but we're committed to achieving this vision but we've seen some successes. Our safety program across the fleet, including Browns Ferry, from an industrial safety standpoint has continued to improve year over year. We've spent a great deal of time focusing on that. We've spent a lot of time in the people arena. We've obviously had to rely on external players as we've worked through some of the performance issues we've had at our fleet, but to really sustain strong performance you have

to have a strong succession plan. It's been now at work for a good three years and we're starting to actually promote internal TVA players that exhibit the behaviors and the skill sets that we're looking for. And, finally in the area of performance, we've seen some improvement in our performance but as evidenced and we'll talk briefly later -- in a few minutes, the trips on Unit 3 startup, for example, still are showcasing some weaknesses in our design control, our modification, and modification testing arena.

But in order to succeed in our journey of excellence it's imperative that we do understand and acknowledge all these performance gaps. And so, in large part the work we've done with Tim's team here looking at all the root causes and causal analysis we've come up with several different problem -- fundamental problems. Those have been ID'd, and they're going into what we're now moving into and that's our Integrated Improvement Plan.

So the comprehensive diagnostic effort is almost over and the next step for us is getting the Integrated Improvement Plan in place. Keith's portion of our presentation will describe and, if you will, our view of performance challenges at Browns Ferry, but we'll give you the punch line. Our diagnostic effort determined that our work management, our corrective action program implementation, our operational decision making, and resource management were not strong. Each of these areas are critical elements of a nuclear safety culture and through our diagnostic effort we identified 15 fundamental problems and these problems are very clearly aligned with nearly all the elements of the nuclear safety culture, though they lay on top of each other, so part of what we're talking in terms of as we launch on our Integrated Improvement Plan, our confidence is high that the nuclear safety culture will go along with it because

there are the base issues that have caused the 4th quartile performance in our safety culture assessments. We'll reinforce these assessments and then we're confident that the address -- the actions we take will be sufficient. So page 4.

We're currently finalizing the Browns Ferry Integrated Improvement Plan. Kind of the key attributes of this plan will be to address the Red inspection finding, the performance challenges at the station, and the independent nuclear safety culture assessment results. It's also heavily influencing the reduction of risk associated with our potential fire events, and we have made in parallel substantial improvements with more to do there, and improving the station's equipment reliability. This is an area that clearly years ago, or less, a few years ago, when we had continued trips the ancillary and safety related equipment often times had complications to them. The reliability was weak and so the focus that Mr. McCree had mentioned in terms of the focusing on the safety systems has been key and up front and Keith will speak to that in a few minutes.

But we have, not just been sitting back in our laurels; we've accomplished a fair amount of material condition improvements already. We're actually tabulating for kind of the first time the total running total of all the major pieces of components that have been improved and what we have left to go so we can kind of build the road map to materially what we need to achieve.

In addition what we've also not stagnated on, and that is the foundational parts. When I was here last time I briefly mentioned the central governance model we're putting in place. We've built fleet models and at that time some of it was still wet paint, but I'm going to say that probably 90 percent of the key programs and processes and procedures that we set out to standardize across the whole fleet have been heavily benchmarked from our competitors that

do well at a central governance model and we have them in place. So we're in the point now of executing, but clearly some of the feedback we've already heard in terms of procedure compliance issues and we're seeing that, and in a few minutes we're going to share with you kind of the five focus areas, one of which is accountability. And I just try to accent that because I think that's been an ongoing issue at Browns Ferry, but it's frankly broader than that and unless we get that level of individual accountability as well as I'm going to say team accountability going, it doesn't matter how strong our programs are that we've put in place.

This comprehensive Integrated Improvement Plan is nearly complete. We've implemented several significant actions already improving our corrective action program. The PINR that was mentioned was not an overly strong effort on our part. The results of that had some, some identified issues that were clearly not to our standards, nor the Commission's, but out of that though I think a fairly reactive team came together and put some immediate corrective actions in place, also hitting on accountability, doing what we say we're going to do, quality reviews, utilizing corporate to review, et cetera, et cetera.

So, however, difficulties that we experienced starting up Unit 3 also outlined some of these weaknesses in our, like I mentioned, in the areas of modifications and design, et cetera. But we did do a great deal of work in this outage. This was a complex outage for us. So we replaced three main power transformers, replaced a unit service station transformer, changed out an automatic voltage regulator to a new digital system. So the relaying and all that that's been causing us some issues with it are all part of, frankly, upgrading the

material condition of the plant substantially.

We significantly also improved material condition but also reduced personal exposure. Browns Ferry has been a traditionally hot plant. It's been one of the highest radiologically source term plants in the industry. Unit 1 from startup is the opposite. It's kind of the industry leader in source term, and they put a great deal of engineering and a lot of tools in place before we brought that unit on. But Units 2 and 3 have been the other end of the spectrum, but our last Unit 2 outage was the lowest dose that plant has seen, or that unit has seen in many, many years, and now we just challenged ourselves to even outperform that, and Unit 3 came in with a 35 percent reduction over last year's dose. So we've set a goal of 225 REM, came in at 195, and that typically is somewhere around 300 to 350 REM plant. So those are the types of wins without, I'm going to say, from the last three years of putting in place a lot of tools from changing out low stellite, putting in low stellite blades, changing out some CRBs, doing a lot of system flushes, those sorts of things.

So, the key to this success is really built in our governance model. I think one of the key questions that Victor will need to assure him and his team is, can they sustain? So, we'll have a rigorous program. We'll put together an Integrated Improvement Plan and we'll go execute those activities; but we're laying a great deal of the weight on our GOES model, our Governance Oversight, if you will, Execution and Support model. So the corporation is built to come in and do the assessments, do the drop-ins and make sure we're all aligned, have the common standard programs and processes; and, if we get everybody in the same playbook with all the proper checks and balances from a central hub, making sure that everybody is in compliance of play, I think the probability of any

one of our sites slipping way down like Browns Ferry has, becomes much less remote. So, that's an overriding strategy that shouldn't be lost and all this is the strengthening of our GOES model as we move forward.

Finally, we recognize that the next page of regulatory milestone is the conduct of the 95003 supplemental inspection and it's important that we successfully complete that, and I want to assure you that we will potentially will not ask the team to come in and do that inspection until we're confident that we've put in place the proper corrective actions, and we're seeing the improvements that need to be accompanying before that team comes in.

So, with that, the majority of the slides, I'm going to now kind of hand to Keith. He's our site vice president at Browns Ferry and he really has to show, I'm going to say, the first person ownership for this to be successful locally. So, Keith.

KEITH POLSON: Okay, first of all I'd like to say thanks for the opportunity to present where we're at in the process. I'd like to take this opportunity, I do have four members of my staff that are here, if they could raise their hands. They represent records management, engineering, maintenance, and part of the 95003 response team. So I thank them for making the trip.

So as part of my response overview, I'm going to talk about the Integrated Improvement Plan and its ties to safety culture at Browns Ferry. Also, some of the initial successes that we're seeing, but I want to make sure everybody understands that's just initial, by no means are we there, we've got a long way to go and then, really, our path forward. So on page -- on slide five, this is just a big picture overview of where we've been, what we've completed. The actions that we've completed are in green, and then actions in progress are in

blue, and then the white is what we have left to come.

So, the purpose of this slide is really to show that we are making progress on developing the Integrated Improvement Plan. We're taking actions in parallel, that's why it's called an Integrated Improvement Plan because there were already going before we started into the 95003 process, and the Integrated Improvement Plan is in its final stages, as Preston said. The white box is there, if you look at the last box, it's exit Column 4 but really what we're striving for is sustained excellence. It's not just to exit Column 4. Turn to Page 6.

So what we've done as part of the process is we've come up with five focus areas, and those focus areas are the correction action program, operational decision making, accountability, equipment reliability, and fire risk reduction. And the way we got there, I mean this is a huge effort when you start into the process. We started data gathering, started looking at the 95003 procedure requirements. We actually went back five years with data, and we took that and we got about 4,000 facts. We took those facts, we combined them, refined them, and we actually came up with about 500, over 500 findings, which are really deviations from standards. We took those immediately and we insured that they were either in the corrective action program; and, if they there not in the corrective action program, we put them in the program.

Then we went through a whole series of refinements, and what we boiled this down to is basically 15 fundamental problem areas, and you can see those problem areas are listed under the focus areas. But then as part of communicating this to the site, I felt that trying to go with the 15 would've been overwhelming, so we came up with the five focus areas. But, as you can see, the fundamental problem areas map neatly into the five focus areas. So the

focus areas are just for the purpose of communication to the site. And, also, all of the fundamental problem areas get causal analysis and we're down to the last three causal analyses. They are complete; we just have to get them through our corrective action review board. Turn to Page 7; I'm going to cover Page 7 and 8 at the same time.

Each of the fundamental problem areas that I discussed on the previous page are going to have actions that'll be identified and we're also going to have specific performance criteria so that we can monitor the effectiveness of the actions as we move forward. And if you look at this graphic here, you'll see that we have the five focus areas surrounding safety culture. I feel confident that if we address these five focus areas, because they're based on fundamental problems, that we will achieve the desired change improvement in safety culture at the plant. In fact, Victor talked about the independent nuclear safety culture assessment. If you really look at, really what that -- the findings that came out of that they map right into the fundamental problems that we found. So they marry up almost identical. If you'll skip to Page 9.

So, just talking a little bit more about the Integrated Improvement Plan. We're obviously developing this plan to address the Red findings, the fundamental problem areas, and the independent nuclear safety culture assessment results. So one example here of management and leadership standards, you heard a lot of that talked about. What we're doing is we're taking action. We've hired an independent firm to come in, they're called Accelerated Leadership, they've been proven across the industry. And really what this group is, is they hold us, including myself, accountable to our plans and they insure that we have alignment, both vertical and horizontal, because what happens

sometimes at a three unit site, you have good plans moving forward and then you have a unit trip or something happens and you get deviated from those plans. This is not an overnight thing, or not even a week or a month. They're signed up for -- I have them signed up for about a year and half or two year process to ensure that we're holding ourselves accountable.

We're also -- the plans developed to reduce risk, improve equipment reliability, and then the big one at the bottom it's to ensure sustained improved performance. And, really, this ties back to safety culture. We want to develop a culture so that no matter what the leadership team that comes in, the culture is so strong and it -- that makes everything sustainable. And then, as Preston talked, the governance and oversight from the corporate office. So really what we want to do is eliminate the cyclical performance. Moving on to Page 10.

I really want to emphasize, again, that while the Integrated Improvement Plan is not yet finalized, we're very close. But there are numerous actions that were already in progress. The corrective action program improvements, one of the things we've done is, we've hired mentors to help improve the quality; risk reduction through NFPA-805 transition; we've installed numerous plant modifications. Most recently in the outage we've put a control switch up in the control room so that we can de-energize an electrical bus, so we can eliminate operator manual actions out in the field. Our safety system recovery project, during the last outage replaced multiple hand switches and relays. Safety culture assessment actions, I'm personally meeting with small groups of 20 to 25 employees and I'm touching every single employee. I'm at about 825 employees so far, and what we discuss is the safety culture assessment results. We discuss safety conscious work environment and the

importance of the corrective action program, and I'm getting really good feedback because I've tried that in bigger forums before, but I think I'm really hitting home, really hitting the mark by doing that in the smaller groups.

And then the Red inspection finding corrective actions in the last outage, we looked at extending conditions of the MOVs, and we actually had to disassemble numerous MOVs, look for weld issues, and we didn't find any issues.

So, on Page 11, initial successes, and, again, I want to emphasize that we do have a long way to go. By no means are we declaring victory here, but safety during this outage, Preston touched on this. We reduced exposure by 35 percent versus the last Unit 3 outage, and we significantly reduced the injuries during this outage compared to previous outages, and I've been in the industry 22 years, and I really grew up in the outage world. We had zero OSHA recordables and only four first aids. That's the best I've ever seen in any outage.

Equipment reliability: We've had two consecutive records for continuous operation of all three units. It may sound insignificant, but prior to these records, which were over 100 days a piece, the best we had ever done was 75 days and we were averaging 32 days. So to try to instill any changes in the organization, when a unit was coming offline every month, it's pretty hard because you shut down and then have to start going back up.

Plant material condition improvements: We did numerous improvements. Preston touched on a lot of those. But at the end, we did have the three Scrams, two of those were caused by what I would say one of our fundamental problem areas, which is technical rigor. The first one had to do with an improper design on a relay, input into a relay, and the last one it had to do

with improper testing. We actually had one of our current transformers was delivered to us that was, it was reverse polarity, it was labeled wrong, but we should have been able to catch that in the testing.

Corrective action program: We are seeing changes in the corrective action program. We're seeing improved quality problem evaluations, improved timeliness of fixing problems. Really what this goes back to is another one of our fundamental problem areas of accountability. We've started Saturday accountability meetings. If the quality wasn't right or someone was late on an action, we'd bring him in on Saturday, not only that individual but that individual's boss, boss's boss, all the way up to my direct report or the plant manager's direct report, and we're seeing real good results out of that.

The last one here is accelerated instillation of modifications to reduce fire risk. This outage we rerouted some cabling for our reactor core isolation cooling system. This modification wasn't really scheduled until the next outage in two years, but we saw the opportunity that we could pull that up because of reduced risk. We also have eight design change packages in progress right now that will correct 47 different component separation issues, and we're going to start implementing those in July of this year.

So, our path moving forward, we want to finalize the Integrated Improvement Plan. We want to start executing the plan. And then, like Preston said, we're going to -- we'll ask for the 95003 inspection readiness. We have set a criteria. No risk significant events or conditions resulting from a cause that would alter the basis of our Integrated Improvement Plan, or results from the Integrated Improvement Plan corrective actions not being effective. Also, all the designated corrective actions to date have been completed and all the long term

corrective actions are on track. The metrics that we've established have to indicate that we're making progress and we're improving, and then the assessments by our governance and oversight organization support that we're ready for that inspection.

And then, long term success criteria: We want to really regain regulatory confidence by being moved back to licensee response column. We need to execute the Integrated Improvement Plan and we really want to get back to our standard programs, procedures, and processes and then make sure that that's absolutely sustainable. So with that I'll turn it over to Tim.

TIM CLEARY: Thank you Keith, Commissioners. As mentioned by Preston, strong governance and oversight is going to be the key to the sustainability, the improvement performance at Browns Ferry. We're utilizing several different methods to increase the governance and oversight. First, within our quality assurance organization we have added assessors from both Browns Ferry or from Watts Bar and Sequoyah to the Browns Ferry staff to help perform targeted assessments. Additionally, we are adding five fulltime staff members at Browns Ferry to support day-to-day assessments of the 95003 activities and the implementation of the Integrated Improvement Plan. The output and the results of their inspections go directly to Keith and Preston, so they can see what changes are occurring and how the site is responding to the implementation of the plan.

Additionally from governance and oversight, we've implemented a new and specifically targeted 95003 executive oversight board, which consists of the TVA senior nuclear officers, as well as three current industry experts to, on a monthly basis, review the project, looking at the status, processes we're

employing, the results, and challenging us on are we dealing hard enough, looking deep enough, and will we be effective going forward.

Supplementing that, we continue to use our nuclear safety review board, which is a fleet board that travels to all three sites, consisting of five retired industry experts and they are, again, reviewing what we are doing here. But looking at it from a fleet standpoint, what lessons are we learning? What is coming out of Brows Ferry to ensure that those are also applied to Sequoyah and Watts Bar?

And, then, the last oversight consists of a committee of our board of directors. It's our Nuclear Oversight Committee. They interface directly with, by having presence onsite, meeting with Preston, looking at what is occurring within the project, and providing feedback to both the board and to the line on their thoughts and perspectives relative to this project. So, utilizing both the increased QA, quality assurance efforts in these external and internal oversights we're confident that we will be able to sustain the performance and help Keith and his team move the performance further. Turn it back over to Preston.

PRESTON SWAFFORD: Thanks Tim, Keith. So, in closing, we do believe we're starting to understand our fundamental issues. That part is becoming clearer, so I think how we go forward to target real corrective actions should be meaningful and directly impacted. Now we're getting close to finishing the IIP, and once that's done that will be our road map that we move forward with and it's, all of it is the goal of how do we sustain the performance improvement and reduce risk at the station. And I think we have been doing those in parallel as we move forward, and I think there's been some results, albeit the last couple of weeks isn't my finest hour to showcase them; but, on the other hand to

balance the plant, we responded fairly well. Our operators responded fairly well and the transient was kept to I'm going to say the initiating event. So with that, that concludes the TVA's report, Mr. Chairman.

CHAIRMAN JACZKO: Thank you. We'll start with Commissioner Svinicki.

COMMISSIONER SVINICKI: Well, again, welcome and thank you for your detailed presentation. I noted something that really caught my ears, as you stated, it was talking about cyclical performance and perhaps getting in a position where that even if it is your past, it won't be your future, but something in my experience in coming to these AARM meetings over the years is that if we look at stations that have declining or challenged performance, it's sometimes you learn that there have been periods in their operating history of substantial duration, at times, where they've been a very high industry performer nation-wide. So that's been of interest to me over time, even if at an AARM meeting a licensee gives a very coherent presentation of they understand where they are and they are building an improvement plan going forward. What's of some curiosity to me is if you don't have a good diagnosis of how you got there and why it is perhaps that you didn't observe an arrest declining performance earlier, I think that cyclical performance is going to be inevitable if you don't know that.

Could you speak at all to whether you've examined other U.S. nuclear power plants that have ended up in Column 4 and in any of the discussion of how they might have got there, what they could have observed earlier, what kind of metrics or kind of station conduct and behavior, perhaps, could have been recognized earlier? Is that part of crafting your improvement plan? Maybe Preston, you want to speak to that?

PRESTON SWAFFORD: Commissioner it is. Matter of fact, Tim here and his team have benchmarked heavily the other Red finding, Column 4 plants. We've gotten great access to their root causes, their corrective actions, what they're defining as problem, fundamental problems were. We've taken those and bounced them into our program, as appropriate. And I'll let Tim speak to the little detail. But I do want to address one other piece in terms of kind of how you get there and doing that retrospective look.

I really believe that the TVA model, even though we had a corporate entity with a fair number of corporate players and whatnot in position. Their role was not one to be really intrusive. Their role was almost to be reference players. And so what you essentially ended up having is at each site a vice president, depending on their strengths, would build programs that they deemed appropriate and put in place. And some of them have been quite strong players and the plants have performed quite strong, where at one time the entire fleet was, if you will, top performing across the board. But as people changed out, the infrastructure, the programs and processes and the fleet approach, and then all of the checks and balances that should be in place to go, addressed them early, weren't there because they were mainly reference players at a corporate level. So each time you made a mistake on a individual move at the top head of a station, that station then ended up receiving -- I'm going to say -- a decline because they didn't have the support, maybe financially or other issues that go with it. But to me that's a big piece of it.

COMMISSIONER SVINICKI: And I want Tim to address this but I was going to ask, although I think you just responded to it, you have a comment here that strong corporate governance and oversight is key to sustainability of

improved performance, so I was going to ask you, is it, then, also a contributor to declining performance. But I think it can be. You just addressed that. Thank you, Tim and you wanted to add to that?

TIMOTHY CLEARY: Yes, as we embarked on looking at what do we have to do to find our fundamental problems. We did benchmark -- some of our predecessors had been in Column 4 -- and what we have seen from them, what we gleaned, I would start with that there are always a series of events -- disparate events that get a plant in declining performance. The common thread that we've seen, and we've seen with our diagnostics, is that the use of our corrective action program. Rigorous and effective use of that will prevent you from having multiple events, because you're learning from that. And what we've seen is, and as we've heard, that is a focus area for us. As we implement and improve our corrective action effectiveness, the events that lead to different desperate issues don't exist because you're getting them while they are smaller.

So as we benchmarked, that is a common thread we've seen from the other plants that have been in Column 4. That they have each had problems along -- that helped, not identify the issues that eventually rolled into more significant risk issues for the site. And so I think that...

COMMISSIONER SVINICKI: And on the related element, then, of sustainability, going forward, do you spend time in developing your improvement plan, looking at which elements and components are going to need to be permanent and which of those are just maybe more perishable, they're part of the improvement process and then they will go away. And do you spend a lot of time being very deliberate about those elements?

KEITH POLSON: Well, almost all the elements that we have in the

Integrated Improvement Plan, we have to capture them in some kind of permanent matter, such as procedures. That's been part of our problem, is that we would have an issue and we wouldn't get it captured in the procedure. So, moving forward, to have that sustainability, not only do people have to learn and that the culture has to change, but if you heard people talking earlier, there's new people continuously coming in. So you have to have everything captured so that as newer people come in, you don't fall back to where you were.

COMMISSIONER SVINICKI: And there was, in our interaction with the staff in the previous panel, another purpose of this meeting is the Commission is looking at the annual assessment of the ROP and any recommendations that the staff has and, in general, we're looking at whether the ROP is achieving its stated objectives. Representing both the fleet but also a particular station that is here at the AARM to discuss your improvement plan and your current performance, how would you assess as the ROP from the vantage point that you have? Is it predictable, scrutable, clear? Is it achieving the regulatory objectives? As a licensee, do you feel that the ROP is achieving its regulatory objectives or would you propose any changes?

PRESTON SWAFFORD: Currently, we're -- obviously, we're learning it to a different degree than we had in previous years. But the process – is forcing us to spend -- I'm going to say, a great deal of time data mining, doing the assessment, doing -- this type of energy is completely one for one, well-spent for the going forward for us. So what we're coming out of it is these 15 fundamental, but it's great -- I don't want to say there was hundreds of corrective action entries -- probably thousands. All of these are completely germane. So, obviously, we're identifying them. So it's not like the regulator is telling us what

weaknesses. So we're doing what I think the intent of it is, is to self-identify. We've clearly struggled some with the fact that we're not the strongest in using our corrective action tools, but we have just revamped even those tools from a benchmark standpoint. And I mentioned a few minutes earlier how much structurally we've now put in place, where I feel confident that our tools, even in the CAP area are strong, and now the remaining piece is, frankly, using it, and having our people do it.

So I think it's working. I think it's working to your intent. I obviously don't enjoy being in this Column, but if you're going to be here as a troubled plant and you got to focus on how do you get out of the ditch, I think the roadmap's fairly clear we're building. And I think the next step is as we build the Integrated Improvement Plan, obviously, letting Region II look at that and document and make sure there's some consistent belief that these are also the right parameters. I'd like to not spend a great deal of energy running down the wrong path, so to speak. But I have fairly high confidence that the tool we're putting in place ought to be at least a 90 percent product to get us where we need to get to.

COMMISSIONER SVINICKI: Okay, thank you. Thank you, Mr. Chairman.

CHAIRMAN JACZKO: Commissioner Apostolakis.

COMMISSIONER APOSTOLAKIS: Thank you, Mr. Chairman. This question is for Mr. Polson. You presented on slide six and seven, the Integrated Improvement Plan, which is within the bigger picture of safety culture, broader context. And you talk about the corporation's focus, decision making, and equipment reliability and so on. I didn't see anything on accident sequences or the importance of equipment to risk, and I'm wondering aren't these important

to an improvement plan to improve safety culture, to help people understand what the dominant accident sequence is of the plan and in particular a piece of equipment may be very important or less important? So I didn't see any of that. I mean, is it buried there or is it ignored?

KEITH POLSON: Well, if you look at the 15 fundamental problem areas, we do have equipment programs and system management, design and configuration control, strategic equipment management, equipment performance, so it is covered within those fundamental problem areas.

COMMISSIONER APOSTOLAKIS: So that's the importance of the components? Is there? I mean, somebody -- you do have a PRA, I understand.

KEITH POLSON: Right.

COMMISSIONER APOSTOLAKIS: So, as you know, there are lists of systems, structures and components according to contribution to core damage frequencies, so on. So these people will be aware of these? I mean, they will understand that this piece of equipment is very important to when they have to deal with it? Is that part of the process?

KEITH POLSON: Yeah. That's part of process and people understand that now, and even what we're doing right now as far as safety, system, reliability effort. We're putting a huge focus on our safety related equipment and then we're moving on to the other higher risk equipment as far as getting it back to a, you know, back to the design basis.

COMMISSIONER APOSTOLAKIS: Now, there is in several places a statement that you are reducing risk through an NFPA-805. Is fire your major contributor to risk? It is?

KEITH POLSON: Well, through 805 it is, but there's other risk at

the plant that we reduce, you know, through our decision making. For example, like even during this last outage, there were a lot of decisions that were made. We could have -- we were going to replace a diesel generator, and then we had a failure on another system where we had a leak on our RHR service water system. We could have went out and worked on both of those legally per the technical specifications, but we got together as a collective team and we looked at the risk of doing both of those evolutions together, and we decided to push out the generator work further out into the outage, even knowing that that was going to add two days to the outage. But as far as the NFPA-805, the fire risk, we have installed numerous mods out in the plant that are actually reducing risk. We've installed incipient detection on some of our ROMV boards. We've put in covers on cable trays where safety-related cable trays cross non-safety-related.

I talked about the cable that we rerouted for the RCIC system. We took it out of a heavy fire zone in the battery room and moved it into a lower risk area for fire. So we're going to continue to do those to reduce fire risk.

COMMISSIONER APOSTOLAKIS: And just a last question -- maybe a naive question. Mr. Cleary, you are the vice president for regulatory recovery projects. Recovery projects. You expect to have a lot of those that you have to recover?

TIMOTHY CLEARY: Not at all. [laughs]

COMMISSIONER APOSTOLAKIS: Thank you, Mr. Chairman.

CHAIRMAN JACZKO: Commissioner Magwood.

TIMOTHY CLEARY: This has a finite duration on his position.

[laughter]

COMMISSIONER MAGWOOD: You do have other plants. It’s an

opportunity. Well, thank you for your presentation. Just a few questions. I wanted to follow up on the dialogue between Preston and Commissioner Svinicki about how you got here. I appreciate your answer and coming back to your, I think, one of your key points about the corporate governance role. But I was in conflict -- I really think I heard an answer -- a kind of answer I'd like to hear about this, which is when you look at it from the plant perspective, you know, how did you get here? I mean, at what point did people decide that adhering to procedures wasn't important? That's the sort of things, I think, Commissioner Ostendorff sort of was talking about this and during his questioning with the staff. It's a pretty basic aspect of nuclear operations that you follow the procedures. What -- let me say I also appreciate the fact that you've gone through the effort of sitting with individual or small members, small groups of staff people to talk about these issues. How do you feel now having gone through these discussions that you got to this stage?

KEITH POLSON: Well, let me start the description that you gave earlier about a high-performing plant and then all of a sudden kind of becomes a low-performing plant. That describes Browns Ferry. We were a high-performing plant and then really what happened to Browns Ferry, the Unit 1 recovery. We totally underestimated, as TVA, the impact that that recovery effort and getting that unit online, the impact that that would have on the site and the resources. So that played a part into it.

The other part with procedures. I go back to cultural. I mean, this is really what this is, is changing the culture at Browns Ferry. Procedure use and adherence -- if you go back to the old timers that were there, the culture was is that if a procedure didn't work, we would work around it. In fact, my first day that

I was at Browns Ferry as a site VP, I walked out by the stator cooling skid because I knew we were having issues, and my OPS manager was actually directing a non-licensed operator to open valves and close valves, without a procedure. And I immediately -- that person lasted about another two days before I forced him to resign because that's not the standards that we needed, that we were going to move forward with. But I'm trying to deal with the cultural aspects right now. If you come back and look at Browns Ferry right now, we do have -- obviously you're always going to have minor blips in performance, but people do use procedures. If the procedure is wrong, they stop. We saw that numerous times during the outage. They would come back to our outage control center, say the procedure doesn't work, and in the past we probably would have tried to figure out a way to work through it, but we took the time even though it added duration to the outage -- we took the time to make sure that that procedure was right.

COMMISSIONER MAGWOOD: So does that example you gave suggest that there was -- that there's been long-term issue with procedure adherence at the site?

KEITH POLSON: No, I think we're turning that. I mean, that was --

COMMISSIONER MAGWOOD: I mean in the past.

KEITH POLSON: Pardon me?

COMMISSIONER MAGWOOD: In the past. Because you said when you were -- I think, well, historically.

KEITH POLSON: Yeah, historically, I think what happened is we had a highly trained people that had been at the plant, had operated the plant for numerous years -- 20 or 25 years. So they knew that plant inside and out. And

they felt comfortable operating outside of procedures. Now, as you're bringing in newer people, those people are retired and newer people coming on shift don't have that type of experience. So we're really drilling into them that you have to use a procedure. You don't manipulate equipment out in the plant without a procedure in your hand. Period.

COMMISSIONER MAGWOOD: Okay. That, essentially, resonates with I think the comments that Bill Borchardt made about generational shift and the loss of experience. But, yeah, again, I mean, it's not a new story. I've heard this and seen it many times where -- I'm not even sure if complacency is the right word to use. It's maybe a technical arrogance more than anything else. And very difficult to weed out, so I appreciate hearing that you've identified that. Let me -- one thing, I was looking at your slide six, and where you talk about the -- I think you listed the 15 fundamental problems. One of the problems you've listed was inappropriate reliance on processes. Can you explain that a bit further? I wasn't sure I understood that one.

KEITH POLSON: Okay. Really, that was one that I added because we have a culture at Browns Ferry. So even though the processes are designed to work, the attitude was, "Okay, I just get it into the process and then I wash my hands of it, and I don't have to deal with it anymore." And that the process is going to go take care of it versus taking the ownership, getting it into the process and then following it through to make sure that it gets completed and gets completed correctly.

COMMISSIONER MAGWOOD: Okay, so it gets back to the point of personal responsibility, personal --

KEITH POLSON: Personal accountability.

COMMISSIONER MAGWOOD: That makes a lot of sense. One last -- well, actually a couple of things for you. One very specific thing. It was certainly good to hear you've reduced personal exposures in your last outage. I think you said 35 percent. What sorts of measures did you take to achieve that and, quite frankly, why weren't you doing them before?

KEITH POLSON: Oh, some of them are long-term efforts, like on the turbine, on the low-pressure turbines, we're replacing all of those blades with stellite-free, and that's the biggest contributor to source term. So that was completed on Unit 1 during recovery, and if you look at Unit 1, that's the lowest does BWR plant in the country. So on Unit 2 and Unit 3, we've replaced two of those low-pressure turbine rotors on each unit with a stellite-free. Also, it's just a personal accountability, making people aware, not going into the high-dose areas, preplanning the job, and then we also implemented a flushing plan that, prior to the outage, we go through and flush all of the hotspots in the high-traffic areas out in the plant, so that during an outage you've got thousands of people out there, so that also helps reduce the dose.

COMMISSIONER MAGWOOD: Appreciate that's good and interesting to hear. One last thing for you -- and that is, you look at the many issues you're dealing with under your improvement plan, including the NFPA-805, but you also have a lot of other things to deal with, including the new orders from the post-Fukushima actions we've instituted. How are you prioritizing? This -- as you go through this is, with all these activities going on at the same time, how do you prioritize when you put your plans together?

KEITH POLSON: Well, it is true there's a lot of things going on and then it complicates when you have a three-unit site. However, you know,

everything regulatory is of the highest priority. So if I don't have the resources that I need at the site to be successful, that's when I go to Preston and he helps me with the resources. So it's just a matter of dividing and conquering, and I have the right staff there. Everybody on my staff is new -- they signed up for this, they weren't there when I got there, so they know that there's a lot of things going on that we have to get done. But to answer your question directly, regulatory comes first on everything.

COMMISSIONER MAGWOOD: So, all the regulatory actions get equal priority and equal attention?

KEITH POLSON: That's correct.

COMMISSIONER MAGWOOD: Okay. I think that covers it for me. Again, appreciate your --

PRESTON SWAFFORD: Obviously operating the plant materially is top priority, you know, I mean, that's our obligation, so [laughs]. I just want to make sure that, you know, they're chasing the regulator. Direction is clearly important but doing the right thing by -- physically and materially by the plant is top priority.

COMMISSIONER MAGWOOD: And I appreciate -- I also appreciate hearing how you're trying to take these lessons and use them corporately, fleet wide. I think that's going to be very important. Actually, just for you, Preston, just in closing, as you've gone through the exercise of spreading the lessons learned from this experience across the fleet, did you find that some of these issues existed elsewhere in the fleet, particularly things like this procedure adherence issue?

PRESTON SWAFFORD: In many cases. For example, CAP, right,

is so much at the root of the issues. Our CAP compliance across the fleet -- I mean, obviously, not all my sites are performing at the same level. Some are performing at much stronger levels. But deep in it, our effectiveness of our CARB, or corrective action review boards, how the line is actually reviewed and bought in to closures, we found things like -- I might issue you this PER, that's our corrective action tool, and it might not get anything other than a first-line supervisor review for significant high-level issues. So when you get that lack of ownership across the board, you could have the latent issues hiding in your CAP program that you've not fully vetted. So, getting the new program in place, changing expectations, doing simple things like reviews, signatures, appropriate steps, should start to change it. But that would be clearly one of the biggest takeaways for us, is the complete overhaul and approach of behaviors around CAP for the TVA group, so that was clearly showcased out of Browns Ferry.

COMMISSIONER MAGWOOD: Okay, I appreciate that. Just a closing comment. I thought that one thing that Keith said was particularly interesting was that you had underestimated the impact of the Unit 1 work on the rest of the site. There's a lot of instances across -- not a lot, but several instances across the country where sites had major projects, including some new reactors. As you're talking with your colleagues in the industry through INPO or others, any observations you have about lessons learned on that to share with them from an operational standpoint, certainly encourage you to do that.

KEITH POLSON: Well we actually, after Unit 1 came online, and there were -- a big investigation was done because of the quality of the work, and there were seven scrams in seven months. There was a paper published with INPO that goes through every lesson learned that came out of that Unit 1

recovery. So that document is actually out there right now.

COMMISSIONER MAGWOOD: Okay. Is that a publicly available document?

KEITH POLSON: Yes, yes.

COMMISSIONER MAGWOOD: Okay, I'd like to see that. All right, thank you very much. Thank you, Chairman.

CHAIRMAN JACZKO: Commissioner Ostendorff:

COMMISSIONER OSTENDORFF: Thank you Mr. Chairman. Thank you for your presentations. I think, similar to Commissioner Magwood's line of questioning, I'm going to focus my questions on your slide six and ask you a whole host of questions, looking at some of these specifics. Mr. Polson, the accounting of the procedural issues you found, or the lack of procedures, and your discussion with Commissioner Magwood, I found that very helpful.

Let me ask you a question. You mentioned you'd been meeting in smaller groups. I think you said you met so far with 825 employees, and it seems to me like some of, you know, these things you don't get into a situation overnight. This happens over -- at least my experience elsewhere -- over a longer period of time. And while there are benefits to historical corporate institutional knowledge, you know, of having long-term employees there that -- remember way back when, when something was done a certain way. Some organizations also find that it's harder to change behavior of people been there a long time. I'd be interested in any comments you can provide as to how your small group meetings were perceived by Browns Ferry workers. How did, you know, is there acknowledgement of a problem?

KEITH POLSON: Yeah, there's an absolute acknowledgement of a

problem. I probably had at least 25 different people from all levels of the organization, after that meeting, catch me in the hall, or catch me on my way into the plant. I had a radiation protection technician walk with me on the way into the plant, and he said that he had just sat through my meeting the day before, and he said he thought about it all night, and that he was going to absolutely change his behaviors, how he dealt with people, back at the plant. Instead of turning his head, he was going to talk to them, coach them, even if they were on a peer level. And I've heard that across the board, and then, as part of our safety culture follow-up assessments, when they're interviewing the people in some of the higher priority groups, they said there's a distinct difference with the people who have been through my meeting and the people who haven't. And the people who have been there say, you know, that they get it, that they understand.

COMMISSIONER OSTENDORFF: Okay. I'm going to go to Preston to query here -- if you want to pass this to somebody else, please feel free to do that, but I'm going to the accountability piece, because that starts at the top of the organization. And I want you to specifically give me an example or some context for the management and leadership standards. What do you see as being broken in that area, from where you sit as the CNO?

PRESTON SWAFFORD: The -- specifically to accountability, I -- like Keith mentioned, the one that he drove to the top, this is the one that I drove to the top. And it hit me, frankly, at the PINR exit, where we sat across from Region II staff and countless of examples, most of them didn't necessarily rise to high level, but they were cases where we were late, we didn't do what we said we were going to do, we had people sign off on things that said they did them and they found out that they weren't done.

And after literally a litany of probably 35, 40 minutes, it hit me that I've been holding back a little bit in accountability as the big stick issue from the CNO spot, because our infrastructure was so poor. And I've never been a big fan of going out and, you know, kind of stringing up the folks when their tool they use is frankly poor, and not able to be followed in some cases. But I clearly don't feel that way anymore. We've invested so much that I've done so many with our corporate functional area managers to assure that our tools are right, and then watching that PINR discussion just says I have to turn this at a fleet. So this accountability is clearly at Browns Ferry. This is a fleet initiative across the board.

So we're building now new metrics around “we're going to do what we say we're going to do,” and I'm going to have coming into my office, so to speak, those tools that showcase we're actually doing it. And I'll be measuring them routinely, and we will clearly get into performance based step wise, if you will, accountability models as the individual. But that has to start.

But eventually, when you win is when the individuals hold themselves accountable. You know, it's kind of hard to describe, I'd like to just preach that and people would get it one day, and they would be there. But when each of us – it’s like, when I know I've made some significant kind of missteps, even through this process, right? But when I come into the CEO, you know, if I show a card that it's kind of almost the question that you pointed to me first time we met, or is this a defensive -- somebody else to blame? Well, people read that in you clearly, immediately. And if I look like a victim, the whole organization will take on that look, and so from this accountability of starting at the top, we're going to start putting the tools in place. We're not going to walk by it anymore

and, in turn, I'm hoping that the people realize that if they self-police themselves, we'll be a much stronger organization, but in the end we're going to do what we say we're going to do and we're going to comply with the programs, processes, and procedures we've put in place.

COMMISSIONER OSTENDORFF: Well, that's a very thoughtful answer. I'm going to react to it just with one observation. I heard, I think, Keith mention -- I can't remember the name of the group -- you had some kind of a group coming in, outside consultants to help with --

KEITH POLSON: Accelerated Leadership.

COMMISSIONER OSTENDORFF: Yeah, and I know you had a different group come in and do a safety culture assessment, and I know you've done -- I think Commissioner Svinicki asked you, I believe, about benchmarking against other people who've been in Column 4. And while I think we all benefit from external views, whether it be from consultants who are helping you with your corrective action program, with your IIP approach -- at some point and time, it's all got to be within TVA, it's all got to be within Browns Ferry and there has to be this accountability of the management to make things happen, not saying, well it's this outside consultant group's responsibility to hold me accountable. And that crossover point is just something I caution you all to be careful of, because if it's the outsiders coming in to provide advice, and you're reacting to what the outsiders are saying as opposed to your people holding themselves accountable, you'll never get better.

PRESTON SWAFFORD: We would agree with that. This particular firm is a little bit unique in that we deployed them up at our Watts Bar plant, because we're starting to see some lack of teamwork going on, and the

basic plan has been doing reasonably well, but in our monthly management review meetings, we were seeing signs that it wasn't gelling right. And so this team kind of comes in and follows them and gives them direct input into their behaviors, so if they also are looking for that accountability element that's germane to, kind of, our fleet turnaround, they might actually supply that real-time feedback to actually adopt it sooner. But they're not going to be our crutch, as a leadership development tool, but they are a tool that will clearly --

COMMISSIONER OSTENDORFF: No, I understand. I've just seen lots of different organizations that rely upon the “outside experts” to come in and, you know, the inherent sense of organizational responsibility of the leadership, there's no substitute for that.

PRESTON SWAFFORD: That's right --

COMMISSIONER OSTENDORFF: There's no substitute.

PRESTON SWAFFORD: We completely agree.

COMMISSIONER OSTENDORFF: One last area, Mr. Whalen. Let me ask you a question. The equipment reliability -- I think that's your area, is that right? As head of engineering? And I was troubled by the recent scrams and Mr. Swafford mentioned some of the high level, some of the recent experiences. Can you, you know, look at your work management design, configuration, control, technical rigor, those kinds of bullets underneath the equipment reliability header on slide six, can you provide a lesson learned or two from these recent scrams that you think are applicable to your area of responsibility?

ROBERT WHALEN: Yes, there are two of them. As was mentioned earlier, are directly in engineering house and they hit right under this technical rigor fundamental problem. Basically, the first one -- both of them have

to do with replacing the main power transformers and also a unit station service transformer, that was definitely a worthy project. Transformers needed to be replaced and upgraded, and as part of that, new digital relays were being installed. Also, a new automatic voltage regulator was installed this outage on that unit as part of the equipment reliability plan as well, to reduce single-point vulnerabilities.

First one -- the first scram was directly caused by a design error -- that unit station service transformer. The digital relay had incorrect phase input specified by the AE, and it was not caught internally, and it was not caught during post-maintenance testing, such that that digital relay then acted incorrectly. The most recent event --

COMMISSIONER OSTENDORFF: Let me just stop right there because running out of time – just, to me that -- so what are you going to change about how you're doing business as a result of that one incident? Let's just talk about the specifications being in error.

ROBERT WHALEN: Well, --

COMMISSIONER OSTENDORFF: It seems like that's significant.

ROBERT WHALEN: Yeah, absolutely. And clearly we have to improve on our thoroughness of review of an AE-supplied product. There is an owner acceptance review that took place, and it was not done thoroughly to catch that. Also, we need to look very closely at the rigor of the logic testing, to catch something like that.

The other thing -- the other scram, the most recent one -- is similar but different. It involved a current transformer in that logic for those transformers, and there was a series of, I believe, 24 current transformers that were involved

with this logic and this mind. After the first scram, we did a very detailed extent of condition regarding potential mis-designed relays. Went back and looked at the design paperwork for all relays that had been affected, also their field setup. Over 600 line items were checked and it was a several day effort before that startup was allowed.

But then, as the unit then ultimately progressed to 75 percent power, we had this most recent scram. That one is a little more complex because a current transformer in the logic was manufactured incorrectly, such that it was reverse wound. And so, as you applied load to the system, you get to the 75 percent power area, all the relays were correct, and the extended condition on relay setting was satisfactory. Nothing was missed in that review. However, this mis-manufactured CT had not been identified.

Now the similarity is the issue of post-mod testing. How does one catch a mis-manufactured part of that type? And that's a very significant issue for us. We're taking it very seriously. My general manager of design has been helping Keith's team lead the independent reviews. There is also independent corporate challenge going on later today, regarding all the activities that were taken. There was very complex series of immediate checks throughout the entire logic train and other similar logic trains that have gone on over the last four days. Yes, sir.

COMMISSIONER OSTENDORFF: Thank you. Thank you, Mr. Chairman.

CHAIRMAN JACZKO: Just following up on Commissioner Ostendorff's point here. So as you look at your Integrated Improvement Plan, were -- the issues related to the unit that made some of these issues that you

talked about -- were they things you thought you had fixed already, or were they things you were planning to fix?

ROBERT WHALEN: Mr. Chairman, that's a very good question. Interesting point on that first trip is that error was actually committed over a year ago, and that's a significant lesson for us. Also, in terms of what's in the box --

CHAIRMAN JACZKO: [affirmative]

ROBERT WHALEN: -- as we implement designs -- now we are, as part of our excellence plan -- we're putting a lot of attention to meeting milestones, getting things ready a year in advance, so that they can be thoroughly planned and worked into the work management process. Also, as part of this learning, we'll be going back and looking at every design that's in the box, to make sure it meets today's new standards.

CHAIRMAN JACZKO: Anyone else want to add anything to that? Well, one of the things that, you know, I think is a -- sometimes an artifact of how we do things but not necessarily how you do things -- is that we put Unit 1 in Column 4, and the other units are in Column 1, I think both for them. Obviously with the three trips you'll go to Column 2 on Unit 3, but from your perspective, you know, as we get to Column 4, you know, as a three-unit site, if you have one of your units in Column 4, is that invariably always going to be a situation in which its site-wide problems, that the challenge is really broader than just the one unit?

PRESTON SWAFFORD: I believe while the initiating event could probably, nine times out of 10, be tied to only a unit, but I think how you get there is endemic of the site. So there's, to us, all three units are essentially identical. We're all in Column 4 dealing with the Red issues that we have to fix for the fleet.

So there's been no example from myself, or my team, where we've looked uniquely to Unit 1 as only the issue, because it's just not. And I think that's what the Column 4 really displays. It's much broader. And that's why the inspection's broader and that's why we're finding what we're finding.

CHAIRMAN JACZKO: Yeah, it's an interesting question. I mean, it's very much -- certainly been my observation, too. I mean, given what -- usually the sites that get into Column 4 do, they deal with everything site-wide. We generally deal with everything site-wide. I mean, the 95003 tends to be programmatic, they tend to look at things site-wide so that -- it tends to be that way. The only thing that really doesn't technically treat it site-wide is the ROP where, you know, it's still only one unit that's in Column 4. And maybe something long-term for us to look at. That if you get to Column 4, at that point -- if you're multi-unit sites, it's probably all the units are really in Column 4.

PRESTON SWAFFORD: Even with the White finding we had at Sequoyah that we just moved out of because of scrams. That affected one unit but all corrective actions affected both units. You know, you just can't approach it for only one unit.

CHAIRMAN JACZKO: Yeah. Well, it's an interesting insight and something that, down the road, eventually maybe we want to look at with the ROP is maybe these unit distinctions aren't as important as we think they are.

I just had, one, well, two last observations. One, you know, this is -- I don't mean this to be cheeky, but if the goal of your Integrated Improvement Plan is sustained excellence, I would suggest that sustained excellence is the last box and not exit Column 4. And, you know, I don't know if you use that slide with your staff or I don't know if that's just a slide that you put together for us, but

if what you really mean is not just exit Column 4 -- and, you know, I'll be quite honest, when you said that your goal was sustained excellence, it struck me, what a difference it makes to have those words there as opposed to "exit Column 4," which looks very much driven by "we want to get out of the regulatory process and get this monkey off our back," and then we'll be fine. Anyway, and that's what we've seen, certainly with, you know -- the performance at Browns Ferry. I mean, there has been a yo-yo. I mean, you were in Column 3, got out of Column 3 and then back in Column 4. So, you know, to the extent that that means anything to you. Just an observation.

And, sir, again, I appreciate you being here and I think you all did a very thorough presentation, and, you know, obviously Vic and his team will be doing the -- ultimately doing the 95003, which is going to be the important inspection and then, you know, get a CAL established and then ultimately see the performance improve. So they'll be doing their jobs and watching carefully, so, appreciate you all being here and sharing your thoughts with us. With that, we'll adjourn. Thank you very much.

[Whereupon, the proceedings were concluded]