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TRANSCRIPT OF PROCEEDINGS

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## 1 PROCEEDINGS

2 MARTY VIRGILIO: Ladies and gentlemen, could you please take  
3 your seats?

4 Okay. Good afternoon and welcome to our session with our  
5 regional administrators and industry representatives. Just a couple of notes  
6 before we start: As -- just as a courtesy to the presenters, we ask you to silence  
7 all of your electronic devices and if you need to leave the room during the  
8 session, please wait for the right opportunity between speakers. We'll have  
9 somebody walking up and down the aisles collecting questions but I also believe  
10 that there are -- I don't see floor mikes -- I guess just ask -- just use the cards and  
11 we'll get the questions up to the speakers. And questions that are not answered,  
12 we'll answer them and post them on our website shortly after the RIC is  
13 concluded. These sessions -- all of these sessions are being recorded so they'll  
14 also be available after the RIC. We think your feedback is very important to us  
15 and so on the chairs we've left some forms for you to complete, if you would  
16 please, and just drop them at the box at the back of the room.

17 So with me today, I'm pleased to have -- and I'll start over on the  
18 left with Mr. Ed Halpin, who is the chief nuclear officer for South Texas project.  
19 Dave Heacock next to him is our chief nuclear officer from Dominion. Elmo  
20 Collins, our regional administrator from Region 4; Cindy Pederson, who is our  
21 acting regional administrator from Region 3; Vic McCree, who is our regional  
22 administrator from Region 2; and Bill Dean, who is a regional administrator from  
23 Region 1.

24 What we're going to do this year is just a little different than the  
25 formats we've used in past years. We have canvassed the industry and received

1 a number of questions that we believe that are relevant to our programs and  
2 issues of the day and we're going to just do this in sort of a casual format of  
3 questions and answers. But that doesn't preclude you as the audience from  
4 giving us questions as we go along if anything that is said here triggers a thought  
5 or an issue; please do pass those questions forward.

6 So there are a number of issues and the first we're going to start  
7 out with is the reactor oversight process and the reactor oversight process and its  
8 reliability. And the first question that came to us is -- we're going to direct to Ed  
9 Halpin -- and it has to do with asking his perspective on the success of the ROP,  
10 particularly in terms of the NRC's performance and applying it consistently across  
11 regions.

12 EDWARD HALPIN: Okay, thank you. Is the mike on?

13 MARTY VIRGILIO: Yes.

14 EDWARD HALPIN: Okay, thank you. Marty, let me just start by  
15 first of all congratulating you. We heard of your retirement so I just wanted to  
16 thank you on behalf of the industry for your outstanding leadership in  
17 representing the NRC. I think it was example setting and we appreciate that very  
18 much.

19 MARTY VIRGILIO: Thank you very much, Ed.

20 [applause]

21 EDWARD HALPIN: And you said you wanted this to be  
22 conversational, right?

23 MARTY VIRGILIO: Right.

24 EDWARD HALPIN: Okay, good. So let's converse. A little bit on  
25 the reactor oversight process. In general, I would say that the oversight process

1 has done very well from the standpoint of predictability, from the standpoint of  
2 informing the general public and on plant performance and it is a process that is  
3 risk informed. I think overall, over the last decade it's done very well. So overall,  
4 I think from a general standpoint, the process has worked.

5           There are of course, when you talk about consistencies, there are  
6 always areas that you can focus on regardless of what process it is. So there are  
7 two that I would give you some areas to think about. The first is, when you look  
8 at the number of findings across the region -- and I know you've probably heard  
9 some of this before -- but when you look at the number of findings statistically,  
10 looking at Regions IV and III combined together versus Regions I and II -- and  
11 again, remember, we're on the topic of consistency -- what you find is that the  
12 number of findings in Regions III and IV are about 50 percent higher than what  
13 they are in 1 and 2. In addition, the findings that have cross cutting aspects to  
14 them are also about 50 percent higher when you compare Regions III and IV for  
15 two Regions 1 and 2. So I think that's probably an area to look at.

16 I know you've probably done some scrubbing on that in regard to statistically  
17 what does that mean. I would ask the question, is there some type of maybe a  
18 paradigm, philosophy, screening, behavioral difference between the regions? Is  
19 that difference okay? Does that work for you? But again, going back to the  
20 facts, there it is. That's -- those are factual and I think that that's an  
21 inconsistency that probably needs to be explored. Just a recommendation.

22           MARTY VIRGILIO: Elmo, did you want to -- did you have some  
23 thoughts on this?

24           ELMO COLLINS: Actually I do, Marty. I'm not -- I wasn't scheduled  
25 to respond at this point but I appreciate the insight. I think it's certainly a data

1 point and data input that we need to consider. And we've actually thought pretty  
2 hard about this over the years and it's information like this that caused us to  
3 begin what we call the reactor oversight process reliability initiatives. I would  
4 offer, our goal is to try to -- to put a finer point on it -- is not consistency as much  
5 as reliable outputs and reliable outcomes. Because, just -- we could be  
6 consistent and be consistently off base. And so we're aiming for reliability. And  
7 a number of findings, I don't think by itself, I've never been able to attach  
8 meaning to it. I would say that to the degree that high number of findings reflects  
9 the underlying performance, then that's reliable outcome. To the degree a low  
10 number of findings reflects an accurate input or assessment of licensee  
11 performance, then that's a reliable output. So the number by itself -- and this has  
12 become our challenge, right, as we try to analyze it and come up with meaning.  
13 What is it? It's just not the high or the low that flags this, it's trying to get -- to  
14 peel it back and go a little bit deeper and understand what's underneath the  
15 findings and what's going on. So that's what we try to do. It's a valid information  
16 input for us about what's going on and we need to pay attention to it, so...

17 CYNTHIA PEDERSON: And maybe just to expand a little bit on  
18 that, we've been striving for reliable outcomes, as Elmo has mentioned. We've  
19 tried to avoid the consistency issue because we all know plant to plant  
20 performance varies and consistency implies there should be some sameness or  
21 there should be some equivalency, if you will. And so we've been looking at the  
22 reliability. And the deputy regional administrators a couple years ago very  
23 creatively named an initiative the ROP reliability initiative and came up with some  
24 various activities to try to look at those kinds of potential differences. We've done  
25 more benchmarking between the regions; branch chiefs, for example,

1 benchmarking with their counterparts in other regions, sharing of resources at the  
2 inspector level and so forth. And we've been looking at this actively. And for this  
3 year we're going to focus specifically on the problem identification and resolution  
4 area. We're taking that subset and we're going to do those similar kind of  
5 benchmarking initiatives to try to look for potential differences and if there are, try  
6 to examine why those may exist and try to continue to drive closer together.

7 ELMO COLLINS: Yes.

8 EDWARD HALPIN: If I could chime in just for a second as well.  
9 This is on, right? I think I'm in a unique position. I have plants in Regions 1, 2  
10 and 3. Not yet in 4, though, so I'm working on that.

11 [laughter]

12 ELMO COLLINS: I have a welcome packet for you.

13 [laughter]

14 DAVID HEACOCK: We look at that very same thing as well. We're  
15 looking for consistency among inspectors and we don't detect that very often. If  
16 we do, we try to bring the agency's attention immediately and I think we get good  
17 response on that when that occurs.

18 CYNTHIA PEDERSON: And I think, just to continue on for just a  
19 second, we do appreciate hearing feedback and hearing examples. At times  
20 we're confronted with very generalized feedback of oh, you're different from  
21 another region, for example. But when we ask for that next level of data to  
22 actually look at it, either we don't get those general -- or we don't get beyond the  
23 generalization or we may not get hard core examples that really demonstrate that  
24 point.

25 And for things that are of a more significant nature, you're probably

1 aware we do agency panels for anything that's potentially greater than green as  
2 well as traditional escalated enforcement. We bring together a panel of the  
3 program office, the region and the Office of Enforcement to try to ensure, to best  
4 we can, to reliably implement the ROP and escalated enforcement guidance  
5 such that we don't have siloing. So for the more significant issues we do a very  
6 formalized process to try to come to a common reliable outcome.

7 MARTY VIRGILIO: Looking ahead pro actively, we'll be  
8 implementing our new EP rule in the very near future and starting to conduct  
9 inspections around compliance with the rule. What are your thoughts on how we  
10 should -- how we should move forward in a way that promotes consistency?

11 WILLIAM DEAN: Yes, before I answer the question, though, I just  
12 wanted to recognize Ed's comment as an individual who was involved in the  
13 organization when we formed and began the implementation of the reactor  
14 oversight process, Ed had all the characteristics that we were striving for in terms  
15 of predictability, transparency and risk inform. So I appreciate that feedback, Ed.  
16 That's, I think, a measure of what we're striving to achieve with the reactor  
17 oversight process.

18 Relative to your particular question on the EP rule, the agency has  
19 a lot of experience in terms of how do we implement and initiate activities in a  
20 new area relative to inspection? There's a great deal of collaboration between  
21 the program office and the regions relative to developing the inspection guidance  
22 that we intend to utilize. There is specific training to assure there's alignment on  
23 what that inspection procedure means. Many times the program office early on  
24 as we're rolling a new inspection will do inspection accompaniments to make  
25 sure that they see what we're seeing out in the field. We do a concerted effort to



1 look at the findings in an integrated manner amongst all the parties to make sure  
2 that we're viewing things similarly. So I don't see our implementation process  
3 associated with the EPA rule being any much significantly different than what  
4 we've done in other activities where we've initiated new inspection paradigms.

5 MARTY VIRGILIO: Thanks, Bill.

6 VICTOR MCCREE: Marty, if I could, just to close on the issue of  
7 ROP consistency, I think Ed was right in describing the characteristics of the  
8 ROP that we sought when we the founders created it almost -- a little more than  
9 10 years ago. Consistency was not one of those attributes. I listened very  
10 intently when Cindy characterized the development of the ROP reliability issue --  
11 initiative, rather -- as a creative one. It was less creative than it was recognizing  
12 one of the NRC's principles of good regulation and their clarity, reliability,  
13 independence, efficiency and openness. In reading the narrative behind the  
14 reliability principle, it was clear to us that that should be the focus of the oversight  
15 process. And that's what we ascribe to it and I believe it's been very successful.  
16 I recall, Marty, at the last regulatory commission conference that we did have a  
17 session on the results of the reliability initiatives. Perhaps for the 2013 RIC we  
18 may want to redo that since this is an ongoing initiative and I think it would speak  
19 to the concerns that Ed outlined previously.

20 CYNTHIA PEDERSON: Vic, I said we creatively named it the ROP  
21 reliability. [laughs].

22 VICTOR MCCREE: Oh, I got it.

23 EDWARD HALPIN: Marty, may I mention one more thing?

24 MARTY VIRGILIO: Sure.

25 EDWARD HALPIN: Because we were talking about consistency

1 and predictability as well in regard to the ROP process. I meant what I said in  
2 regard to how I think the process really has served the industry well. I think the  
3 staff has implemented it very well. And that is a shout out to the people that have  
4 to oversee it.

5 Let me just mention this topic we call substantive crosscutting  
6 issues because I know that's a topic that we've talked about in the past in regard  
7 to predictability and in regard to understanding. Big picture wise with  
8 substantive crosscutting issues and I'll put this in my layman's terms here for who  
9 I am, getting a substantive crosscutting issue basically you wind up with four  
10 findings that have crosscutting aspects in a certain bin and then the question  
11 comes up, does the NRC have confidence in you? Do they think that you  
12 understand the issue? Do you have a plan of action for moving through and  
13 resolving that issue? The concept of, do you have confidence in us, I'm not so  
14 sure is very well mapped out. That's not criticism but I'm pretty sure I understand  
15 when Elmo -- what Elmo Collins looks for when he looks for confidence because  
16 we had that conversation before. But from the standpoint of region to region, I'm  
17 not sure if it's consistent or if that -- if it is inconsistent, that's okay.

18 In addition, with substantive crosscutting issues really from the  
19 standpoint of a path for getting out of a substantive crosscutting issue, probably  
20 not as well defined. And I would finally add that in regard to those types of  
21 issues, they can lead to some unintended consequences and over focus, if you  
22 will, on a certain area, four procedural violations that have crosscutting aspects  
23 to them, we may get a substantive crosscutting issue. We perform hundreds of  
24 thousands of procedural actions throughout the year. So is it warranted to focus  
25 really on those four and go down that path?

1           And as you go down that path, it opens the door to other complex  
2 issues like safety culture and evaluating safety culture and again, you can wind  
3 up really putting undue emphasis on a small area that is a distraction which in  
4 turn also may not be consistent in regard to the regulatory process.

5           So again, I want to go back. I said the process was -- I thought was  
6 overall was very good in giving the public and you what it needs in informing  
7 everyone about our performance. I just mention those two items.

8           MARTY VIRGILIO: Thank you. I'd like to move on to the next topic  
9 if we could and that is industry trends. And I'll direct this first question to Elmo.  
10 And each of our regions just recently completed our annual assessment of  
11 operational safety performance for 2011. And what, if any, noteworthy insights or  
12 trends in plant performance were identified during these assessments?

13           ELMO COLLINS: Thank you, Marty. Everyone should know that  
14 twice a year we do assessment meetings mid cycle and end of cycle and it's a  
15 compact, intense period. We go -- we go -- and we go straight -- in Region IV, at  
16 least, we start one day and we go straight till we hit 14 sites.

17           The reactor oversight process is decidedly site specific. It's aimed  
18 at that site's performance. And we don't actually compare sites as we go through  
19 those meetings. But we're thoughtful people, I hope, as we go through that  
20 process and the whole notion of assessment as opposed to inspection -- how are  
21 things going? What's happening and what's not happening? At the end of that,  
22 we tend to -- we tend to sometimes we see things. I don't like the word trends  
23 but maybe patterns maybe we get too much of a certain type of information we  
24 go -- we wonder what that's telling us and we ask ourselves -- and we look for  
25 meaning.

1           And so a couple of things we looked at this time around, at least in  
2 Region IV was, from a maintenance rule perspective, look at the corrective action  
3 program, the number of systems in A1 and the length of time that they've been in  
4 A1. Have licensees -- are they cognizant of that and are their actions affective to  
5 actually get the issues resolved? And we had -- we came up with some  
6 interesting data points in Region IV. Some sites have had systems in A1 for  
7 eight to 10 years. And that just makes us wonder, is that really getting us to the  
8 issues resolved? Ultimately, I think that's the name of the game, would be for  
9 those types of things in the corrective action program is issue resolution. So that  
10 was a -- I don't know that that's a trend. It was an interesting insight for us when  
11 we looked at it from that specific lens.

12           And I think other insights or other issues from Region II, a number  
13 of DC issues battery related that make us wonder -- when you -- just kind of the  
14 fundamental battery 101 issues, lifetime design type issues that are surfacing  
15 with respect to that.

16           And just one quick other comment, Marty, is just for consideration.  
17 With a reminder of also to what we all know the corrective action program or  
18 problem identification and resolution is one of the fundamental pillars of the way  
19 our reactor oversight process is constructed. It gives a lot of credit to that  
20 program that is viable, it is online and its function -- I think on balance the  
21 industry has done a very good job with that, in working forward to it.

22           One insight is, issues close to trending is -- requires that that  
23 prioritization of that -- for that to work requires that that categorization be done  
24 well and be done properly. And I think, over time, there's been some instances  
25 where it's been fuzzy or that hard characterization, for any number of reasons

1 has resulted in a number of things going close to trending. And there's an  
2 underlying issue; it doesn't actually get resolved. So that's something I'm going  
3 to challenge and have challenged my PNR teams to go focus on those and try to  
4 look at that, flesh that out to see if there's any more to that. Those -- thousands  
5 of CRs get written and it's a challenge to prioritize and categorize them in a way  
6 that get everything touched on the way it needs to get touched on. So just a  
7 couple things that I would offer.

8 MARTY VIRGILIO: Vic, I heard Elmo mention Region II --

9 VICTOR MCCREE: Yes.

10 MARTY VIRGILIO: -- and battery financing.

11 VICTOR MCCREE: Yes. What I would offer, as Elmo indicated,  
12 we just completed our end of cycle assessment and when you go to the NRC's  
13 website what you'll find is of the 104 units, 90 are in the licensing response  
14 column, Column 1. Nine are in the regulatory response column, Column 2.  
15 Three -- or in Column 3, the degraded cornerstone column. One unit was in  
16 Column 4, multiple repetitive degraded cornerstone column. And of course  
17 there's one unit in Manual Chapter 0350. Of those 28 in Region 2 were in  
18 column 1. Four were in Column 2, and we had one, the Browns Ferry Unit 1  
19 that's in column 4. That's the first time, at least in Region II, we've had to  
20 oversee a unit that's in column four and we're doing that right now.

21 Elmo alluded to battery issues. There are actually two -- I wouldn't  
22 necessarily call them trends, but I'd call them insights that we glean from our end  
23 of cycle review. And of course the accident at Fukushima Daiichi certainly puts a  
24 spotlight on the importance of the station batter, the vital battery and we also  
25 have some insights on flooding issues.

1                   But in the area of battery issues, what we saw is a couple of  
2 examples of what I'd characterize as premature degradation of the vital battery  
3 where the 20 year service life was not achieved. We saw degradation around  
4 the 15 or 16 year point. And a related insight is that the five year capacity tests,  
5 at least the timing of that test wasn't timed, if you would, adequately to give an  
6 opportunity, give insights, if you would, on the fact that the battery was degrading  
7 prematurely. And again, that's important insight.

8                   Also, with respect to the flooding issues at three different sites.  
9 One site had a degradation in a flood barrier associated with the emergency  
10 diesel generator fuel tank enclosure that could have adversely affected the fuel  
11 oil tank as well as the fuel oil transfer pump. There were openings in the  
12 enclosure that were picked up by the senior resident during an inspection.

13                   We also saw issues at another site associated with changes in the  
14 site topography associated with construction near the site. And this changed the  
15 pathway, the normal pathway for rainwater runoff and they experienced a heavy  
16 storm last May and the rainwater overwhelmed the storm drain system and they  
17 actually had rain water, if you would, coming in to both the auxiliary building and  
18 the DC generator building.

19                   At another site, there were a number of temporary buildings, a  
20 number of trailers that were set up that also prohibited the normal egress path of  
21 rain water off the site and they had rain waters being diverted towards -- towards  
22 the auxiliary building. So very interesting insights, all of which I know will be  
23 factored into the guidance that the industry, the NRC develop for the flood walk  
24 downs.

25                   So again, those were insights from the Region II end of cycle

1 reviews.

2 MARTY VIRGILIO: Great. Thanks, Vic. Ed, would you like to  
3 provide a comment on what you see industry's prospective licensees operational  
4 performances today and any insights or trends you all are seeing?

5 EDWARD HALPIN: I sure would. But in the spirit of being  
6 conversational --

7 MARTY VIRGILIO: Sure.

8 EDWARD HALPIN: Can I just ask a question?

9 MARTY VIRGILIO: Yes, go ahead.

10 EDWARD HALPIN: Because I thought this was a good bubble up  
11 of, is it -- how do we get this information as an industry? I mean just as you  
12 conveyed. I just took a bunch of notes.

13 MARTY VIRGILIO: Okay.

14 EDWARD HALPIN: I'm just curious. Is it available publicly? Is it  
15 just -- and I'm not being critical, I'm just asking genuinely.

16 ELMO COLLINS: I think that what we document outside of the -- in  
17 the reactor oversight process and the assessment program is pretty well  
18 prescribed. So what we see are potential insights or focus areas we identify so it  
19 specifically doesn't go public. I think if you'd sit in a foyer, you'd get it.

20 [laughter]

21 EDWARD HALPIN: Okay. I'm glad I'm here.

22 ELMO COLLINS: But they're just insights for us. They're not  
23 regulatory products or outputs which we would think would need a lot more work  
24 and a lot more justification behind them.

25 CYNTHIA PEDERSON: One of the thing --

1 ELMO COLLINS: But they do become insights.

2 MALE SPEAKER: Very valuable information.

3 EDWARD HALPIN: Yes, I just -- I thought it was a good

4 discussion. I took --

5 VICTOR MCCREE: I think it's a very good question. Certainly if

6 any of these insights are such that they warrant any focused follow-on the

7 inspection by NRC, of course that would be a pathway for you to get that. Aside

8 from the fact that the flooding issues that we experienced in Region II last year

9 will inform the 2.3, the Enclosure 2 walkdown to the 50.54(f) letter. They had not

10 reached the threshold that we're about to change a baseline inspection to a

11 temporary inspection.

12 Having said that, I see Eric writing notes so there may be an

13 opportunity, whether it's during the RIC or perhaps even somewhere outside of it

14 that you could benefit from this collection of insights. Again, I would not

15 characterize those that I've mentioned as trends. And in fact, all three of the

16 issues that I mentioned are captured in the inspection reports for those sites that

17 I didn't name, although one of which involved a white finding.

18 MALE SPEAKER: Okay.

19 MALE SPEAKER: So it is publicly available. But there may be an

20 opportunity through some other form or means to share this with.

21 MALE SPEAKER: Yes.

22 CYNTHIA PEDERSON: I think we also consider is there enough

23 information to do an information notice? I know that's one thing. Operability

24 determination is something that we spent a fair amount of time talking about in

25 the Region 3 end of cycle meetings. And so it's one of those things we've been



1 talking about; is there some need for some generic communication or some other  
2 vehicle to put out that -- those insights, if you will?

3 MARTY VIRGILIO: Okay, thank you.

4 EDWARD HALPIN: Marty, you asked me a question so I'd better  
5 answer it.

6 [laughter]

7 You talked about -- in regard to overall industry performance -- so  
8 let me kind of give you just I guess a holistic, big picture view. 2009, 2010 the  
9 industry had operational events that -- where we lost margin and they were  
10 events that got our attention. From the standpoint of stepping up, the industry  
11 did step up and under the leadership of Jim Ellis from INPO, we actually had a  
12 call to action and focused on, looked at a common cause analysis as to overall  
13 performance and to put some things in place that I think we're continuing to work  
14 on but have served us well so far. Specifically, we focused on topics such as  
15 engaged thinking of our operators as well as operator fundamentals. We looked  
16 at SCRAM [spelled phonetically] reduction techniques as well as shutdown  
17 safety, and also some specific equipment liability issues like large transformers.  
18 All those things were put in place yet the industry moved to action on those items  
19 and although we still have work to do -- it's one of our main focus areas -- we  
20 have made improvements. Specifically, if you look at 2011 you'll see that the  
21 number of SCRAMS in the industry is really at an all time low, about 62, I think, is  
22 the number, which is good.

23 In addition, we have focused on goals such as having zero fuel  
24 leaks by 2010. We didn't get there but we got to 92 percent which I think is a  
25 plus. Our chemistry effectiveness indicator has improved. Our total industrial

1 safety accident rate has improved, as well as the force loss rate. So all of those  
2 indicators show that there is movement in the right direction.

3 In addition, in regard to the important topic of safety culture, the  
4 industry put the NEI process 0907 in place, which is a comprehensive review of  
5 safety culture on a regular basis. And we think that that will help us again, as  
6 you look across the broad spectrum of station performance.

7 Now going forward in regard to industry trends, we have to keep  
8 our eye on the ball. We have -- and it's about operating correctly and doing it  
9 with the right fundamentals and the right focus and not losing that focus. And I  
10 think there's been a lot of conversation in every session that's been here over the  
11 last couple of days in regard to the challenges of Fukushima, working through the  
12 orders, the 50.54(f)s, all the things that we have to do to properly respond to that  
13 issue by making safe plants safer. So as we do that, we have to make sure,  
14 though, that we take care of business, continue to implement the things that were  
15 put in place and keep our focus on safety.

16 WILLIAM DEAN: Ed, in the interest of continuing conversation, and  
17 I appreciate your reference INPO's SER 1002 because I thought that was a very  
18 powerful document and certainly captured a lot of issues I think resonating with  
19 us up here at the front table relative to what we were seeing, relative to engaged  
20 thinking organizations or lack thereof.

21 In our region, in Region I, we had two events in 2011 that, to be  
22 honest with you, would be appropriate supplements or addendums of SOER  
23 1002 where we had operating crews exhibiting the same behaviors and  
24 characteristics that were highlighted in SOER 1002. Things like lack of teamwork  
25 in communications, senior shift managers getting involved in manipulations, and

1 so on. And I know that industry just completed their efforts relative to  
2 Recommendation 1 on the SOER 1002 which involve things like going through  
3 case studies and observational programs. I'm wondering if you could perhaps  
4 summarize if there is some sort of industry-wide observations. I know you all had  
5 to submit input to INPO and I have not seen the accumulation of that input. But I  
6 was wondering if you could perhaps summarize sort of the big learnings for  
7 industry out of that, at least referencing recommendation one on the SOER.

8           DAVID HEACOCK: I think -- for one, that was my event so I'll  
9 comment on the [unintelligible] separately. On SOER 1002, a lot of industry input  
10 went into the development of all those individual items that went into that. In fact,  
11 there's several rounds that ultimately ended up in 1002 and Bill, you point out  
12 there's been events subsequent to that, which is true. It wasn't intended to  
13 capture all those going forward but in fact we used that Millstone case study in  
14 our 1002 recommendation one. Case study examined all our [unintelligible] so  
15 we took that example from within our fleet and used it with our own people to  
16 point out the deficiencies that still exist within our fleet.

17           EDWARD HALPIN: Bill, I would just comment as well, we're not --  
18 obviously, we're not done yet. This is, as I mentioned this before, this has got to  
19 be a continued focus area for us as we move throughout 2012.

20           WILLIAM DEAN: This is not something -- this is not something  
21 you're going to see overnight change. You're talking in some cases cultural  
22 changes for organizations.

23           EDWARD HALPIN: That's correct.

24           MARTY VIRGILIO: As a matter of fact, the chairman has just  
25 recently tasked us with going back and looking at our operator licensing program

1 and any issues that we see around that. And we owe a paper, I think sometime  
2 in the fall? Is that about right, Bruce? Yes, with our insights. It's a good  
3 conversation.

4 I want to switch subjects now and talk about security. I was told  
5 just as this meeting was starting that our press release is out with respect to the  
6 integration of safety and security and the -- or security and to our reactor  
7 oversight process and so I just want to touch on not and maybe Bill could give us  
8 some idea of what's next.

9 WILLIAM DEAN: Yes, thanks for that, Marty. First of all, I think this  
10 is something that's been a long time in coming. Obviously, the original design of  
11 the reactor oversight process had seven cornerstones which security was one of  
12 them. Unfortunately the events of 9/11 caused the agency to take a look at that  
13 structure and the decision was made that we should essentially segregate  
14 security into its own assessment process and basically almost drive the security  
15 organization back to the dark old days where nobody knew what was occurring in  
16 security and which the reactor oversight process I thought was successful in  
17 elevating security activities into a more open, transparent and predictable realm.  
18 And so I really applaud Eric and Jim Wiggins and their organizations for being  
19 able to finally achieve this which I was not able to do when I was in NSIR as the  
20 deputy director, even though I tried to do that. So congratulations on -- I think  
21 this is a major achievement.

22 The plans are that, beginning with the mid cycle letters, so basically  
23 after July 1st, we would see the reactor oversight process security cornerstone  
24 reintegrated. You will have just one assessment letter that would be sent to  
25 licensees, not two assessment letters. You will see on our website where we

1 have the colors for each plan in terms of how do they stand in each of the  
2 corners of the oversight processes' seven cornerstones. You will see security  
3 again. And you'll see green or if there's an issue greater than green you will not  
4 see white, yellow or red but you will see the color -- I think it's blue, Eric? We  
5 decided on blue?

6 [laughter]

7 Not vermillion?

8 CYNTHIA PEDERSON: Big discussion point.

9 WILLIAM DEAN: Which would indicate -- inside joke -- would  
10 indicate that there is a finding of some significance greater than green in security.

11 The issue of security findings and information and while I personally  
12 believe -- and this may not be the agency's belief as a whole -- but I believe we  
13 could still be more open and transparent in terms of what we share with the  
14 public, our observations and inspection findings relative to security. The real  
15 issue associate with security is not to reveal information or insights that could  
16 reflect a potential vulnerability that could be exploited by a malevolent individual  
17 or organization. And typically, by the time our inspection reports are written, the  
18 licensee has well addressed whatever sort of issues that we've identified and  
19 appropriate compensatory measures or appropriate changes have been made.

20 So I think we could continue to make progress in this area but I  
21 think this is a great first step and I really applaud the agency for getting back to  
22 this.

23 MARTY VIRGILIO: Thanks, Bill. Elmo, can you speak a little bit  
24 about how we're going -- and when we're going to start the inspection  
25 integration?

1 ELMO COLLINS: Well I think Bill talked about the effective date  
2 probably will be July 1st of this summer for the integration. So the risks just  
3 came out today now, so I've got to go back and read it and make sure that's what  
4 it say, so....

5 WILLIAM DEAN: I think that's right. I think you have the right day.

6 ELMO COLLINS: So it will become part of the assessment will  
7 become part of the assessment program following that date.

8 I was just sitting here reflecting on one of my first regulatory  
9 information conferences. I think Joe Shepard was here and he said, because of  
10 some of the challenges South Texas has had with -- a few years back -- with  
11 some of the softer issues in the area of security -- you'll remember those -- he  
12 said, you can't treat security like a stepchild organization. And so we split out  
13 security from the oversight process with very -- for very good reasons. But it's  
14 kind of -- it's something else but it's not organizationally and so I'm really pleased  
15 that this integration to bring it back to be integrated as an organizational piece, a  
16 cornerstone that we'll look at back to the corrective action program that it's also  
17 integrated in there. And it's a little bit harder functional area to bring in because  
18 it's not like nuclear safety but is important nonetheless that it be done. So I think  
19 this is a positive move.

20 MARTY VIRGILIO: Elmo, while you've got your microphone open,  
21 could you talk a little bit about cyber security and how that's going to make its  
22 way into our inspection program?

23 ELMO COLLINS: Yes, just a couple of quick items on that. Of  
24 course everyone -- the cyber security plans are in, are under review. I think we  
25 are planning to begin some inspection in that area. It's a new area for us. In

1 2013 we'll begin those inspections and we'll need to get some contractor support  
2 for that. And that will be conducted out of the regions. So I think this is changing  
3 in a dynamic area. I think we're going to be learning some things as we go. But  
4 we understand that going into it and in the interest of consistency and reliability  
5 we already know we're going to need a security issues forum. So when we do  
6 get input or feedback from those inspections or even potential findings, we'll get -  
7 - they'll get a good vetting agency wide before we move forward on this.

8 MARTY VIRGILIO: Great. Thanks, Elmo. Dave, do you have any  
9 thoughts on this security and our inspection program?

10 DAVID HEACOCK: Since ERISA's out, we're now in favor of it.

11 [laughter]

12 Seriously, I think it's -- I think it's a good idea to integrate these two  
13 items. Bring security back into the ROP process. In the past it's sort of a -- you  
14 have a behind the curtain sort of thing. Security happened; no one knew much  
15 about it. It's now a blended option. As you mentioned, there will not be any  
16 colors beyond green. So we're still going to have a little suspicion or mystery  
17 associated with ROP process it's not a green finding or not a green window on  
18 the web page. People can say, well what is it? So I think it then falls to  
19 licensees to be able to figure out a way to answer that question without revealing  
20 the safeguards information. So it's going to be a little more challenge, I think, for  
21 licensees going forward, to have to deal with that. Some of the inflation is now  
22 public but not all of the information is public.

23 Overall, I think it's a good idea to integrate the two programs. I  
24 don't know if you've looked yet to see whether any site would change their ROP  
25 column as a result of integrating security with no other change in performance. I

1 presume that there's not any, but that's one potential issue identified by the  
2 industry.

3 MARTY VIRGILIO: Does the -- does the notion of not having colors  
4 cause you, as an industry, problem? Or do you like that greater than green to  
5 blue concept?

6 DAVID HEACOCK: I think you have to have a color of some sort. I  
7 think the green and blue were probably the best two choices. I would have voted  
8 for a different color, but --

9 [laughter]

10 MALE SPEAKER: So would have our staff. And that's the inside  
11 joke we were talking about.

12 MALE SPEAKER: Vermillion.

13 MALE SPEAKER: Vermillion, right.

14 EDWARD HALPIN: Marty, let me just -- in regard -- I'm not hung  
15 up on the colors but just -- and you can set me straight on the change  
16 management process here, but is it possible for -- I think it's possible for, in  
17 security, for an organization to get, for example too wide findings and for the  
18 station from a performance standpoint to move to the right on the action matrix.  
19 Is that right?

20 VICTOR MCCREE: If it's in the same corner [unintelligible].

21 EDWARD HALPIN: Right. So I think the issue there, from the  
22 standpoint of, I call it change management in communications is if that happens,  
23 and the -- I'll say the general public sees a slip in performance, but all they see is  
24 either a blue indicator or they see the slide with no comments and understanding  
25 that it's in security, that may pose some problems from the standpoint of public



1 trust and confidence. So it's just the -- I guess it's the communication issue in  
2 regard to the new process with the general public. How are you going to tackle  
3 that? You don't have to that here, but that's just a thought that -- actually we  
4 shared with you last week as well, so...

5 MARTY VIRGILIO: I know that one of the things we've talked about  
6 is communicating that any time that we leave the site after we have a security  
7 finding, that the issue has been resolved. There's an agreement about what  
8 needs to be done and the actions are being taken if there is a finding in the area  
9 of security. But you're right, I think we do need to consider how best to  
10 communicate to the public about this. I know that we're working on a  
11 communications plan that will roll out at the appropriate time associated with this  
12 change in the process.

13 EDWARD HALPIN: Marty, just a comment on cyber security as  
14 well, if I may add to that? We certainly received, as the industry, working hard on  
15 this. There's obviously a lot of resources that are going into it in all organizations.  
16 We received the word from, it was Mike Vasilio [spelled phonetically] who talked  
17 to us last week in regard to the milestones that have to be met before the end of  
18 the year and so we'd better make sure that they're on track. And we are. So  
19 we've got that dedicated focus and I thought it was good for us to talk that  
20 through. But there is a lot there with cyber security. It's an important topic.  
21 Pleased that the pilot plants are being run. I think that will happen in 2013 to  
22 help solidify the inspection process and what you're looking at.

23 There is somewhat of a concern by the industry -- and just, again,  
24 for dialoguing purposes -- in regard to how -- we understand that there's a new  
25 reg that's being formed to help inform the overall process on implementation.

1 And even though we have -- I think we're close on the 1004 which is the NEI  
2 document for cyber. I don't think we're completely there yet. There's somewhat  
3 of a concern that the NUREG will then inform the process and how cyber is  
4 inspected which may -- where we may have, I guess, disagreements on what  
5 was agreed to with the overall templates going forward. So that's just a  
6 information. It was a concern about the NUREG.

7 MARTY VIRGILIO: Okay, we'll take that. We got it. Thank you  
8 very much.

9 Switching topics again. This is now talking about operating  
10 experience, our inspection program and how we deal with findings that might be  
11 considered generic. Some licensees have commented on what they perceive as  
12 a practice on our part of issuing findings at multiple sites for an issue that's  
13 common to all those sites. And the concern or the comment that's been brought  
14 back to us is, isn't that something that's more of a generic issue and should be  
15 dealt with on an industry basis? I think examples cited included our component  
16 design basis inspection program, where in one inspection we identified an issue  
17 which occurs with regularity at a number of sites. Are there better ways to treat  
18 this then we're currently doing on a site by site basis in the inspection activities.  
19 And Ed, I'll ask you if you've got a view on that.

20 EDWARD HALPIN: I do, and let me approach it from, I'll say, an  
21 organizational standpoint. I'll make this comment that, going forward from the  
22 standpoint of resources, we don't have one hour to waste, as an industry and I'll  
23 even say the NRC with the challenges of Fukushima. And what I mean is that all  
24 of our efforts can't be counterproductive. They have to be focused on the right  
25 priorities moving forward.

1                   And the one thing that I would mention -- I'll go back to Chairman  
2 Jaczko's comments in his discussion -- he talked about resolving key issues that  
3 were generic, specifically emergency planning as well as a safety culture policy  
4 statement, where it was done in a manner that was collaborative, that had key  
5 stakeholder input. And as a result of that and that effort, we're able to bring  
6 those issues to closure quickly.

7                   What I would add is that in regard to some of these findings that at  
8 times seem to be going from plant to plant like degraded voltage as an issue,  
9 wouldn't it be better to use the process that we have put in place and tried with  
10 submerged cables, specifically the regulatory issues resolution protocol that's in  
11 place. That's a good process. That's a good problem solving process. It's one  
12 that takes issues that are generic in nature which, I think degraded voltage to a  
13 certain extent really is, and it allows you to go through a framework that resolves  
14 the issue holistically and across the board. And so I would encourage it. I think  
15 when you go from site to site with findings and violations, it is -- it's a lot of effort.  
16 Let's face it, on the resident, on the inspectors whether it's component design  
17 basic or goes back to the region, there's lots of discussions. A risk gets written.  
18 A letter from NEI gets written. That's all energy. That's all energy being  
19 expended. That's time, et cetera. There's got to be a more efficient process and  
20 I would recommend considering using the regulatory issues resolution protocol  
21 more often or as much as possible.

22                   MARTY VIRGILIO: Thanks. Cindy?

23                   CYNTHIA PEDERSON: Yes, a couple of comments and I'm  
24 certainly not going to speak on behalf of NRR and the regulatory issues process.  
25 They may want to jump to a microphone if they'd like. Using a little bit of data

1 information when I was in NRR a year or so ago, that process wasn't working real  
2 efficiently. There wasn't the ability to kind of come together on what issue or  
3 what issues might be tackled. So I don't know if there's been progress made on  
4 that but it did seem to struggle a bit as a process.

5           Regarding, for example, the CDBIs which I agree tend to drive a  
6 number of these, we do look at findings from previous CDBIs as one form of  
7 operating experience. We all know how important operating experience is. We  
8 all learn a great deal from it and the goal of course is to prevent similar issues  
9 from cropping up at other places, so being proactive to get those dealt with.  
10 So a suggestion based on our current way of doing business is, all of our CDBI  
11 reports of course are publicly available and would certainly be an input into your  
12 operating experience program. Because we certainly look favorably upon  
13 licensees identifying their problems in advance. Our expansion program credits  
14 that and we encourage that. That's a healthy, healthy thing.

15           And looking at another generic process that we have that  
16 sometimes gets referenced here is the generic issues process. And looking at  
17 the criteria for the generic issues process, these generally don't tend to fit into  
18 that process and so for those who might be thinking that's a logical avenue just to  
19 look at a couple of the criteria where they're likely not going to fit into these  
20 findings. If something is already being dealt with in an existing process, for  
21 example an inspection process, you wouldn't put into the generic issues process.  
22 And similarly, if it's addressed by current regulations, there's current regulatory fix  
23 to it, we wouldn't put it in the generic issues process, too. So that's another  
24 process that frequently gets referenced and based on the current structure of that  
25 program, it probably is not a particularly good fit with these findings.

1 WILLIAM DEAN: Yes, I was just going to offer, I think the  
2 observation is potentially a valid one. The question then gets back to some of  
3 the -- your comment about resource limitations is how much effort do we need to  
4 go through as an organization in whether we want to pursue something as a  
5 generic issues or resolution or develop a generic communication. We have a  
6 well defined, very focused operating experience branch in Eric's organization that  
7 does a tremendous job looking across the board at all sorts of input, not only  
8 input that comes out of NRC inspections, but Part 21 reports and things that  
9 come out of industry's assessments and evaluations, and I think they're pretty  
10 proactive in terms of putting out generic communications, whether it be  
11 information notices or regulatory issue summaries.

12 And even for more significant issues, I think for example the agency  
13 dealt with the issue of operator manual actions associated with Appendix R  
14 concerns where we actually had a period of enforcement discretion because that  
15 was a very widespread generic issue in terms of how industry was applying or  
16 potentially misapplying operator manual actions in terms of -- associated with fire  
17 protection. And so, I think the agent takes a graded approach in terms of what  
18 are the things we want to deal with generically, but what are things that, in an  
19 operating experience realm, we learn from other inspectors, through counterpart  
20 meetings or through branch chiefs talking to each other through operating  
21 experience. Smart samples, which are developed by NRR to give us insights in  
22 terms of things that we ought to look at in terms of preparing for our inspections.  
23 Litany [spelled phonetically] -- we had one issue that was issued this year related  
24 to high wind missile hazards that looked at three years of information and  
25 insights garnered from inspections and other observations that now provide our

1 inspectors, here are some things you ought to look at and focus on when you're  
2 preparing for certain inspections, to look at potential vulnerabilities with high  
3 missile -- high wind hazards.

4           So I think we have a great approach to this. I think we can take on  
5 board the issue about, we don't want to be in a situation where we're sort like this  
6 copycat inspection program -- oh, there's findings here; so let's do it here. And  
7 we had a good example from Region I a couple years ago where we had, in the  
8 security area, a finding of significance associated with how a particular  
9 organization was doing vehicle inspections for access authorization. And it turns  
10 out that this was something that was prevalent at a number of sites across the  
11 country. And so instead of doing it inspection by inspection, we had one finding.  
12 We issued a generic or a security advisory to inform others and industry took  
13 care of that issue based on that sort of generic concern that was raised. Such I  
14 think we're capable of doing it. Whether we do it on a consistent basis, maybe  
15 that's a topic for discussion.

16           WILLIAM DEAN: Perhaps we should do it on a more reliable basis.  
17 And perhaps better communicate those instances when we do exactly what  
18 you're talking about.

19           MARTY VIRGILIO: Just a slight twist. Bill, some licensees have  
20 expressed a concern for issuing multiple or separate findings for one  
21 performance deficiency. Would you care to comment on that?

22           WILLIAM DEAN: Yes, I'll comment on that. This is typically --  
23 typically these are in the realm of low findings, findings of green significance, so  
24 low safety significance. And there is, I think, some discretion on part of our  
25 inspectors and branch chiefs in terms of how do they want to characterize issues

1 that might have some similarity and some relationship or synergy amongst them.

2           And some of the things I know that we look at in Region I relative to  
3 whether something should be characterized as a single inspection finding or  
4 whether it should be categorized as a number of aspects of the same finding, is  
5 exactly what you mentioned is that first of all, is the performance deficiency the  
6 same? If it's the same performance deficiency, then that potentially is a clue that  
7 maybe it's worthwhile to link these. You also want to look at things like, are there  
8 any crosscutting aspects to these findings and if the crosscutting action is similar,  
9 or if the corrective actions to address these issues are going to be similar, it's  
10 probably better and more effective and efficient to categorize those as one  
11 finding with multiple examples as opposed to a number of individual findings.

12           And there may very well be some disparity amongst the regions.  
13 And maybe that contributes to the 50 percent issue that you were talking about  
14 early on, Ed, in terms of perhaps the regions are not potentially treating this as  
15 consistently as possible. But I would offer that these typically are in, like I said, in  
16 the green finding area, not areas of significance, not areas where we're creating  
17 really any necessary or unnecessary regulatory impact other than do you have  
18 more findings here than they had on this inspection? And I think it's potentially a  
19 valid issue but it's not one that I lose a lot of sleep over.

20           MARTY VIRGILIO: Cindy, any thoughts?

21           CYNTHIA PEDERSON: Just to maybe highlight one of the areas  
22 that Bill mentioned and that being, are the causes the same and are the  
23 corrective actions the same? That really kind of gets down to the fundamental  
24 issue of, are they the same problem or not? So that's I know certainly one of the  
25 things that we look at.

1                   MARTY VIRGILIO: Thanks. Ed, would you like to comment on  
2 that?

3                   EDWARD HALPIN: I appreciate that feedback in regards to the  
4 explanation. I would just say and add and just give you something to think about  
5 that I think that having multiple findings for the same performance deficiency that  
6 what it does is it complicates the issue and then it also makes it probably more  
7 difficult for us to resolve. So just something to consider.

8                   MARTY VIRGILIO: Okay thanks. Cindy, I know we've touched on  
9 this a little bit but could you speak a little bit more about how we use operating  
10 experience --

11                  CYNTHIA PEDERSON: Sure.

12                  MARTY VIRGILIO: -- and the inspection program today?

13                  CYNTHIA PEDERSON: Couple of pieces to that. You heard  
14 reference to -- there's an organization in the Office of Nuclear Regulation, the  
15 Operating Experience branch, that on a daily basis is focused on operating  
16 experience, both domestically and internationally. So these are folks looking for  
17 potential significant items, issues that maybe show trends, those kinds of things,  
18 do in depth analysis. And then they communicate that out to the organization.  
19 We get daily summaries of events that occur across the nation and we use those  
20 in a couple of different ways. Formally, the operating branch puts out smart  
21 samples that you've heard reference to earlier that we have as part of our  
22 baseline inspection program where we go out and look at a very specific issue  
23 that came in through the operating experience program. But also these  
24 summaries get used by our inspectors reading them and saying, oh, you know?  
25 Let me look into that. That maybe is part of my baseline program; I'll use that for



1 a sample selection.

2 But also, we have inspection procedures that are very specific on  
3 having us prepare using operating experience. The CDI is one of those; the INR  
4 is another of those. And also of note in the PINR inspections problem  
5 identification and resolution inspections, we look at how licensees deal with  
6 operating experience. So we use it both to inform our inspection procedures and  
7 inform our inspection work, as well as evaluating how well licensees use  
8 operating experience.

9 MARTY VIRGILIO: Thanks. Ed, do you have any suggestions on  
10 how we're proceeding with the use of operating experience and how we can do it  
11 better.

12 EDWARD HALPIN: So the comment there is, in regard to  
13 operating experience, we live and die by operating experience. It's essential to  
14 us. We're learning organizations. It is vitally important for us to understand the  
15 experience that has gone before us and to act upon it. So it is high on our list.  
16 We know that. I think the issue here in regard to, for example, the smart samples  
17 and the use of operating experience is the question of, what is operating  
18 experience? And we have to ask that question because part of the process is  
19 that you do evaluate us, inspect us in regard to our use of OE and if there is, I'll  
20 call it, a performance deficiency we can have findings in that area. So the  
21 question is what is operating expense? Especially, what is operating experience  
22 in this multimedia world that we live in today? Is it experience that you can get  
23 off of YouTube or is it -- where do you draw the line? Where's the framework  
24 around that? And I would suggest that we have maybe more of a conversation in  
25 regard to that topic as to what is and what should be the accepted operating

1 experience? But keep in mind, we want to learn. We're learning organizations.  
2 We certainly value operating experience.

3 CINDY PEDERSON: I'd say at this point it's very broad but I don't  
4 think we've defined it specifically.

5 ELMO COLLINS: We do have a manual chapter, Manual Chapter  
6 25.23, I think which is operating experience in the reactor oversight process. So  
7 I haven't read it recently but I'm sure it has some definition there but Ed, you  
8 raise a good point. Maybe we need to take a look at that in terms of, what does  
9 the NRC rely upon in terms of input for operating experience?

10 MARTY VIRGILIO: Great. Thank you. Good conversation.

11 Let's shift the topic to natural events. For those of you that were  
12 there in the plenary sessions this morning, and I think it was Commissioner  
13 Ostendorff making his point about communications, displayed a number of, I  
14 thought, very good pictures that reminded us, reminded me for sure of some of  
15 the events we had this year: Tornadoes, the hurricane and the earthquake.  
16 What I'd like to do is start a conversation on, what we've learned from those  
17 natural events and how they've impacted our processes and programs over the  
18 course of this year and Vic, you were involved in several of these. If you'd like to  
19 start us out...

20 VICTOR MCCREE: Yes. Thanks, Marty. You've indicated over  
21 the last couple of there's been discussion about the natural events that have  
22 occurred in this country, certainly. A year ago, almost a year ago in April  
23 tornados struck in Northern Virginia near the Surry station, in fact in the Surrey  
24 switch yard. And less than two weeks later, April 17 in fact, near Browns Ferry,  
25 in fact there was a considerable outbreak of tornadoes throughout the Southeast

1 over a few days. And of course in August, August 23rd, 13:08 in the afternoon,  
2 was the 5.8 magnitude earthquake epicentered in Mineral, Virginia.

3 I guess I'd say that in terms of lessons learned, Marty, we've  
4 learned lessons, if you would, in three areas. One is plant performance. In all  
5 three cases, the events resulted in reactor trips, multi unit, dual unit at both  
6 Surrey and at North Anna and, of course, all three units at Browns Ferry and loss  
7 of site power. The safety functions were maintained throughout for all three  
8 different events. The emergency diesel generator started, picked up the safety  
9 buses and aside from that relatively soft landing, if you would, at North Anna, I  
10 think less than an hour into the event, they lost -- they had to shut down,  
11 manually shut down one emergency diesel generator, the two hotel diesel,  
12 because of a jacket water cooling leak unrelated to the seismic event.

13 What that gave insight on, I think, all three events was the  
14 importance, reemphasis on the importance of emergency AC power. Certainly,  
15 had North Anna lost additional emergency diesel generators, the event response  
16 would have been much more complex and perhaps a much more significant  
17 event. But as it was, they were able to start this station blackout, emergency  
18 diesel feed that vital bus and all was well. But again, it underscores the  
19 importance of emergency AC power.

20 The other insight I'd offer from the people perspective, it certainly  
21 underscored the importance and the value of highly trained, capable people, both  
22 the operators at all three of those units as well as the folks in Region II and  
23 certainly in headquarters in the Incident Response Center. They had been  
24 trained. They had gone through emergency drills, emergency exercises. They  
25 understood what the protocol was so it was not new, if you would. The one

1 challenge we did have was certainly the North Anna event. There were a  
2 number of sites in Region I and I think Cindy, you may have had had one and a  
3 number in Region II that felt the ground motion and either declared unusual  
4 events or went into their response procedure. And that resulted in a number of  
5 folks on the headquarters operations line with the headquarters operations officer  
6 and we needed to do some triage there. And I know some learning came out  
7 that in terms of, again, how to triage a multi site even due to a natural event such  
8 as the -- such as the earthquake.

9           But it certainly underscored to me the importance of people  
10 capacity, investing in training and challenging operator re-qualification scenarios  
11 and challenging emergency preparedness drills and exercises so that we put  
12 ourselves in the environment that's as realistic as practical so that if, and, or  
13 when such events do occur we are able to respond to them well.

14           The third area I'd offer -- I don't know how Commissioner  
15 Ostendorff stole my notes -- but it was in the area of communications. Certainly,  
16 when the events occurred the licensee reported it to the NRC. We were able to  
17 respond and go into the monitoring mode and get the right -- our right people in  
18 the right positions. And that all went smoothly for the several days in each case  
19 that each site was in an unusual event and/or in alert. And again, we were able  
20 to get the right people in the right places.

21           What was much more exciting, challenging, but also reassuring  
22 was a communications we're able to exercise with members of the public, the  
23 media, certainly interested members of the public in each case. Again, as I  
24 indicated, there were no safety significant issues at either site but the amount of  
25 public interest for each of these events I think was extraordinary. I believe it was

1 partly influenced by the events at Fukushima Daiichi but it really did call upon us  
2 to exercise the best in communications suite that we have to be able to be  
3 informative and responsive to the members of the public. And we did do a very  
4 rigorous study of NUREG 0308 before we had several meetings with the  
5 licensee, especially those that we had in Mineral, Virginia. And several other  
6 features we used really did come in handy to have us be successful there.

7 MARTY VIRGILIO: Thank you. Elmo, you were in the midst of the  
8 flooding in Fort Calhoun event this year. Could you speak a little bit about your  
9 insights?

10 ELMO COLLINS: Thank you, Marty. I'll just say that Jeff Clark,  
11 one of the branch chiefs in Region IV, gave a pretty good -- gave an excellent  
12 presentation in a technical session that just preceded us specifically on this  
13 aspect of what was going on at Fort Calhoun. I'll take a little bit of a different  
14 approach, just philosophically for starters. In the book, "Managing the  
15 Unexpected", Wyck and Sutcliffe, he talks about, "events are like sudden brutal  
16 audits that come upon us unannounced and all the weaknesses come rushing to  
17 the forefront." And so there was -- nothing tested the strength of Fort Calhoun's  
18 flood protection quite like having to do it for real and go through the actual event.

19 So in that book it talks about the unexpected or what surprises us,  
20 and I got some things that I'll say I didn't anticipate and call them unexpected,  
21 call them surprises or whatever you want, but maybe they'll be insightful for you.

22 And I'll say Calhoun did a remarkable job working through these  
23 because no one else has ever done that before first. The site was literally  
24 transformed by the conditions that were on site. It was a different organization.  
25 It was a different facility. And the taken for granted things, and Jeff touched on

1 just a little bit in his presentation. Just getting around the site and being able to --  
2 it was a different place. And so the normal routines, the normal ways of doing  
3 business, the normal ways of looking at things to a larger degree didn't fit or were  
4 completely disrupted or stopped because that was a challenge for the licensee.

5           Vic talked about public interest for seismic at North Anna. Because  
6 of the events at Fukushima that preceded the flooding at Fort Calhoun and the  
7 Internet and I don't know what all else contributed to it, there was a worldwide  
8 level of interest that, I just admit, caught me by surprise. And when you went on  
9 the Internet and searched for Fort Calhoun and flooding, it was amazing, even  
10 shocking to me to see some of the stories that were out there internationally.  
11 They were basically complete fabrication. One of them had the headline that  
12 "President Obama Orders News Blackout at Nuclear Accident at Fort Calhoun".  
13 That was the headline that was out there on the Internet and going around. So  
14 that's a huge challenge, though, for us. It's a big enough challenge for public  
15 communication but even worldwide and how do you communicate into that?

16           And so the other factor -- and this is not really a surprise -- but  
17 when you have the photograph of this -- I'm not going to show the photograph  
18 again. But communicating into that photograph and that imagery about the site  
19 safety was really a challenge. And it did help when reporters were on site and  
20 got the tour and got to take some photos. I think that was a big plus. But talking  
21 about it really didn't get us -- and the blog really didn't help us all that much on  
22 that front.

23           The duration, Jeff talked about this. It was unanticipated largely.  
24 No one thought ahead of time, what's it going to do to a site when grade level is  
25 under water for 60 days. That was something that had to be thought about. But

1 even in terms of incident or emergency response, you're in an unusual event.  
2 You are -- how do you maintain that for 60 days, that level of intensity and that  
3 focus that's necessary? We don't drill it that way and that's also a lesson out of  
4 Fukushima, right? And there was a plume phase and ingestion phase in parallel  
5 for months on end. So when you have real stuff, it could be for a protracted  
6 period of time and that was one of the experiences at Fort Calhoun.

7           And just something that doesn't get a lot of talk or mention or press,  
8 if for good reason, security impacts, that was the licensee worked through it but it  
9 was a very significant challenge. And the B.5.b equipment found itself not  
10 intentionally but inadvertently, the fire truck was under water. That's one of the  
11 things we're directing our orders at is protecting that type of equipment. And so  
12 protective steps that were taken and it just gets complicated in unanticipated  
13 interactions and challenging that come to the site.

14           So these events are not hypothetical. And while they're low  
15 probability -- you can go a whole lifetime and never experience one of these  
16 things -- there still has to be credible, protective features in place to protect the  
17 facility if they happen. And so the degree that the NRC and the industry believe  
18 that these things that will increase the degree that the sites truly are protected  
19 credibly for these types of things; and we really can't live with any less than  
20 having solid, credible protection.

21           MARTY VIRGILIO: Thanks, Elmo. Dave, I know we had met  
22 before the great Mineral earthquake but I got to know you, I think, and we all got  
23 to know you a little better around that event and there's so much we could talk  
24 about there but I just wondered if you could focus in on helping us understand  
25 design and how the design of the plant actually put you in good stead with

1 respect to the earthquake.

2           DAVID HEACOCK: Yes. I think I'll back up just a little bit. It  
3 started about 35 days after the Fukushima event, we had the tornado at Surrey  
4 and Victor mentioned that.

5           MARTY VIRGILIO: Yes.

6           DAVID HEACOCK: Because they all kind of run together after a  
7 while. We had, in 2010 a lightning strike at North Anna, took one unit offline.  
8 Then the tornado took two units offline which Victor mentioned. And that  
9 exposed a number of things. I don't recall having but one dual unit trip in my  
10 career, 32 years at Dominion, and we had two in one year, starting with Surrey in  
11 April. And what we discovered -- this was about 19:00 at night when that event  
12 occurred, so accountability in the dark with no power is different than  
13 accountability emergency drill. So that's one lesson we learned, that  
14 accountability not just onsite but offsite. Since the tornado struck in the switch  
15 yard, we were in processing about 1,600 workers for a very large turbine  
16 replacement outage that was scheduled to begin at midnight that night. So we  
17 had a tremendous number of people on site. We had people in the in processing  
18 center which for us, happens to be at the switch yard. So the trailers got  
19 displaced. One of the devices you saw that Commissioner Ostendorff showed  
20 was one of the trailer pieces went through the switch yard at Surrey.

21           So anyway, it was a pretty interesting event and as Elmo pointed  
22 out, that's when you expose any weaknesses in the process because it's thrust  
23 upon you. Now we had several hours of potential warning, but a tornado in  
24 Virginia is a pretty rare event, an F3 magnitude, so that was not something we  
25 expected to occur, much less spawning within visual sight of the switch yard then



1 transversing 200 miles through Virginia. So we learned a lot from that.

2           We didn't get as much attention as I thought because it was a  
3 Saturday evening. We got calls from the governor's staff at home and the  
4 governor's staff was out there the next day. And we were able to bring offsite  
5 power back and we didn't really talk about this much but the reason we were able  
6 to do that is we had done some Martin [spelled phonetically] improvement  
7 activities in the switch yard over the previous years. We had added additional  
8 bus in the switch yard and that was the bus that we restored in four hours. It was  
9 not any existing station buses. And that bus allowed us to restore offsite power  
10 to both units in a very short period of time. Had that bus not been installed, it  
11 may have been days before we had offsite power restored. It would have been a  
12 very different event.

13           Fast forward 135 days, 134 days to the North Anna August 23rd  
14 event. For that there was no warning whatsoever. Seismic events in Virginia are  
15 very rare, 5.8 magnitude extremely rare, tens of thousands of years in between  
16 them. Not something you would anticipate occurring. It happened during  
17 daylight hours, which was fortunate but you still have accountability, loss of  
18 offsite power, dual unit trip, all those things to deal with. So you rely upon the  
19 training of your operations staff.

20           As Ed mentioned earlier, 2011 was a record low year for the  
21 number of trips. Victor just mentioned seven of them from natural events that  
22 occurred in a three week period. That's included in the number. That's a record  
23 low for 2011. Part of the point is that we're becoming less skilled as dealing with  
24 trips because we're not seeing them as often as we did in the past. It's one of  
25 those ironies of good performance. You have to practice those things in the

1 simulator. When I first came to North Anna I was a shift technical advisor and I  
2 wrote the post-trip reviews. I think I have my name on 50 year 60 of those in the  
3 first 12, 14 months of time because they were pretty frequent events. And that's  
4 something that's not acceptable anymore. There's not that many in the whole  
5 industry in a year anymore. So that's another lesson that we learned here.

6           Communications, and I think Elmo said it and Victor said it, the  
7 interest in the media was intense, immediate and long lasting. At North Anna we  
8 had CNN, ABC camped on site within hours of the event. CNN called my cell  
9 phone in 72 minutes after the event. Think about the event occurring: There's  
10 no public notice to the event occurring. We notified the NRC within 15 minutes, a  
11 notification of an unusual event alert like we're supposed to. That's not public  
12 notice. So they know about it, figured it out and called me within 72 minutes.  
13 That's pretty impressive. So lot of intense interest. We also learned that the  
14 public and the governor did not follow our prescribed plan. They had their own  
15 plans in effect.

16           [laughter]

17           We followed his plan in this case.

18           So that was a lesson for us on communications, how to keep  
19 people engaged in our -- the technical spokesmen were called to the governor's  
20 office, immediately went and did a conference and they're out of the loop for  
21 about 30 minutes. So a lot of interesting lessons learned in that process as well.

22           The state and local communications were a big issue for us. They  
23 wanted to have a tremendous amount of updates which we provided. After the  
24 event at North Anna, within 24 hours we had the governor and the majority  
25 leader of the House on site walking around. So very, very interesting from that

1 perspective. A lot of local interest as well.

2           So we learned how to cope with that and adjustor plan accordingly.  
3 It didn't last as long, 81 days, and the news media attention dropped off over time  
4 but the four public meetings helped that quite a bit.

5           I will say and I have to note that the communications I dealt with at  
6 the NRC were very smooth throughout the entire event. We spent a lot of time  
7 communicating back and forth.

8           Back to Marty's original question about the hardiness of the plant, I  
9 think it really impressed upon me how hardy our nuclear plants are. When you  
10 have an event that the accelerations exceed your design basis, even for a short  
11 duration, there was almost no damage. You saw pictures today from  
12 Commissioner Ostendorff's view of the cracks and he made some comments  
13 about doing that. That presentation was intentional to draw the public in provide  
14 information to them. And that's the best way to do it, with photographs. In fact, I  
15 make a decision within 24 hours of the event to bring news media and the  
16 cameras on the plant premises and take video to show them what we saw in real  
17 time because if you don't fill that void, people will fill it for you. Like Elmo pointed  
18 out, they'll make things up that seem to make sense to them, and those will be  
19 published in the way you can do it today with the internet.

20           So it's important to me to get the real information out as quickly as  
21 possible. The extensive walk downs and inspections we did gave me more and  
22 more confidence in the ability to illustrate to the NRC our confidence at the plant  
23 was safe to restart, and it's also important to illustrate to the public that the plant  
24 was safe to restart, so it's important for us to educate not just the NRC folks, but  
25 we're finding there were people on site constantly to get the information, but also

1 the general public because it's important for all stakeholders involved to make  
2 sure they feel comfortable with the restart decision that was ultimately made.  
3 That answer your question Marty?

4 MARTY VIRGILIO: Yes, thank you.

5 EDWARD HALPIN: Marty, let me just -- if I may mention just one  
6 thing because I know Dave won't do this in his modesty, but I just wanted to  
7 recognize, certainly, the men and women at those nuclear power plants who, I  
8 think, in those stressful events, especially with Dominion, North Anna, Surry, all  
9 the stations, Fort Calhoun, Brown's Ferry, all of them that went through these  
10 events, just -- these are difficult, they're almost life-changing moments for people,  
11 and in many cases unanticipated, in some cases first of a kind with flooding and  
12 the earthquake. So I just wanted to recognize the job that has been done by  
13 those stations, the men and women, the leaders who led them through it, as well,  
14 from a communications standpoint and oversight of the Nuclear Regulatory  
15 Commission.

16 MARTY VIRGILIO: I want to deviate from the script just to catch a  
17 conversation around questions that we've received, and -- from the audience,  
18 and this is -- given the time frame, this is probably the last conversation we're  
19 going to have, but I'll start off with Vic and then -- and maybe see, Ed, if you'd like  
20 to weigh in, and it has to deal with the inspection program for new construction,  
21 and the question that we're being asked is: As we transition from licensing to the  
22 actual construction of the new plants, what is NRC essentially going to do to  
23 ensure that the inspection process isn't overly burdensome and is appropriately  
24 focused?

25 VICTOR MCCREE: Well, we've been -- thanks Marty -- we've been

1 spending quite a bit of time working with the Office of New Reactors and creating  
2 a construction reactor oversight process that's structured with the same  
3 principles that Ed alluded to in the beginning for the reactor oversight process  
4 that will enable us to produce reliable, as opposed to consistent, results, but it'll  
5 enable us to have a transparent, open, scrutable if you would, process and that  
6 process is being piloted now. We have staffed up the center for construction  
7 inspection in Region II that was ably led by Chuck Casto [spelled phonetically] for  
8 a few months as he departs now to Region III, but Fred Brown, who's not in the  
9 room, will help us lead that group forward, but we have about 60 staff, most of  
10 whom are qualified inspectors and we're ready to implement the process now.  
11 We are working very closely with Southern Company and the applicant for the  
12 Summer site to develop a schedule that will enable us to have the right people in  
13 the right place at the right time to carry out the inspections, most of which are  
14 associated with inspection test analyses and acceptance criteria, but I believe  
15 that -- I'm confident that between having a very clear and well-understood  
16 oversight process for construction and having a schedule that's well understood  
17 and predictable, so the licensees will know when we're there, will enable us to  
18 succeed.

19 MARTY VIRGILIO: Great, thanks Vic. Ed, do you have any  
20 thoughts?

21 EDWARD HALPIN: Chairman Jaczko mentioned this yesterday  
22 when he talked about proactive versus reactive, and he mentioned how the NRC  
23 has worked hard in regard to the new licensing process that -- has done that  
24 proactively, and I think we certainly have. And so I think the process that's in  
25 place is well thought through, it's one that will serve us well as we move ahead,

1 we have the, certainly, licenses issued with -- for the Vogtle units, we think that's  
2 a very positive development. As he mentioned in his comments, now it's time to  
3 get on with the oversight for the construction. So I think even though we have a  
4 process, it's important to know that it's been a while, and it is a new process from  
5 the standpoint of building new plants, and in some cases, you're going to build  
6 the bridge as you walk on it, and what that requires -- it requires transparency, it  
7 requires collaboration, it requires excellent communication, it requires lots of face  
8 to face time as those steps are taken.

9           So I would just -- I think the process is good. Again, it is a bit of  
10 building the bridge as it's walked on, even though it's there, and you've got to  
11 have that communication and collaboration.

12           MARTY VIRGILIO: Great, thank you.

13           VICTOR MCCREE: Yeah, Marty, the only thing I'd offer on that is  
14 that we're not new to the game. We've had several years of experience doing  
15 construction inspections. Watts Bar Unit 2 is under construction, and we have  
16 construction folks involved there. In fact, we have three resident inspectors --  
17 four actually -- assigned to Watts Bar to oversee the construction of Watts Bar  
18 unit two. We've also conducted a number of inspections at fuel cycle facilities  
19 and so we have -- we have sufficient inspection and experience, rather, in that  
20 area that, you know, gives me confidence that we'll be successful going forward.

21           MARTY VIRGILIO: Great, thank you. Well, in view of the time I  
22 think it's appropriate that we wrap up this session. I'd like to thank the members  
23 of industry that provided us these questions that form the basis for our  
24 conversation today. Thank you in the audience for your participation in the  
25 questions you passed forward, and finally I'd like to thank the panelists if you'd

1 join me in a round of applause.

2 [applause]

3 Thank you all very much, well done. Good afternoon.

4 [Whereupon, the session concluded]