

1 UNITED STATES NUCLEAR REGULATORY COMMISSION  
2 BRIEFING ON THE AGENCY ACTION REVIEW MEETING –

3 REACTORS

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5 THURSDAY

6 May 31, 2007

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8 The Commission met at 9:00 a.m., in One White Flint North, 11555 Rockville Pike,  
9 Rockville, Maryland, the Honorable Dale E. Klein, Chairman, presiding.

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11 NUCLEAR REGULATORY COMMISSION

12 DALE E. KLEIN, CHAIRMAN

13 EDWARD McGAFFIGAN, JR., COMMISSIONER

14 JEFFREY S. MERRIFIELD, COMMISSIONER

15 GREGORY B. JACZKO, COMMISSIONER

16 PETER B. LYONS, COMMISSIONER

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ATTENDEES:

LUIS REYES, Executive Director for Operations

JIM DYER, Director, Office of Nuclear Reactor Regulation

ELMO COLLINS, Director, Division of Inspection and Regional Support, NRR

JIM CALDWELL, Region III, Regional Administrator

BRUCE MALLET, Region IV, Regional Administrator

WILLIAM KANE, Deputy Executive Director for Reactor and

Preparedness Programs

SAMUEL COLLINS, Region I, Regional Administrator

WILLIAM TRAVERS, Region II, Regional Administrator

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

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2 CHAIRMAN KLEIN: This morning we get to follow up and look at the AARM  
3 now on the reactors now that I've learned what that acronym stands for. So we look forward  
4 to hearing the summary of that process as it applies to reactors since we heard how it  
5 applied to other materials yesterday. Any comments from my fellow Commissioners before  
6 we start? Luis, it's all yours.

7 MR. REYES: Good morning, Chairman and Commissioners. The staff is here  
8 today to brief the Commission on the results of the Agency Action Review Meeting.  
9 Yesterday we briefed you on the nuclear materials portion of the meeting. Today we will be  
10 briefing you on the reactor portion of the meeting. This meeting is held each year in  
11 accordance with Management Directive 8.14, Agency Action Review Meeting. The first  
12 speaker today will be Jim Dyer, the Director of the Office of Nuclear Reactor Regulation who  
13 will start the discussion this morning. Jim?

14 MR. DYER: Thank you, Luis. Good morning, Chairman, Commissioners. As  
15 we said in accordance with Management Directive 8.14, we held the Agency Action Review  
16 Meeting which intended to look at four objectives. One is to review the industry trends and  
17 see if there's any adverse trends in the industry and licensee performance; to review the  
18 results of the annual Reactor Oversight Process or ROP self assessment; thirdly, to review  
19 the actions we've taken over the past year on plants previously identified as needing  
20 additional attention; and forth, to review our go-forward approach for any new plants that we  
21 anticipate that are moving into Column Four of the Reactor Oversight Process.

22 Today's agenda - can I have slide 2 please - today's agenda is developed to cover

1 those four objectives. First, Elmo Collins will review the Industry Trends Program and the  
2 Reactor Oversight Process self assessment results. And then the Regional Administrators  
3 for the affected plants, Jim Caldwell and Bruce Mallett will present the results of the overall  
4 planned assessments. I would note also that in the slide package, slides 23, 24 and 25 at  
5 the end of the package include the acronyms that we'll try to use first before we slip into our  
6 jargon, but they're there as our backup.

7 COMMISSIONER McGAFFIGAN: Mr. Chairman, one thing I will say. I love  
8 the new BRIIE acronym that Commissioner Merrifield will probably not memorize, but it will  
9 be introduced to us today. But somebody in the staff has a sense of humor.

10 MR. REYES: We all have a sense of humor.

11 MR. DYER: Additionally, to support the presenters today, in addition to the  
12 people at the table, we also have the other Regional Administrators and the Roy  
13 Zimmerman, Director of Nuclear Security and Incident Response to assist us with any  
14 additional questions. At this point, I will turn the meeting over to Elmo Collins. Elmo?

15 MR. COLLINS: Good morning. My name is Elmo Collins. I'm the Director of  
16 the Division of Inspection and Regional Support for the office of NRR. The first topic I'd like  
17 to address this morning is the Industry Trends Program. This program looks at overall  
18 industry performance by tracking various industry performance indicators combined with the  
19 results of the Accident Sequence Precursor program. Industry Trends Program process  
20 consists of collecting indicator data, mostly from licensee event reports, identifying  
21 short-term issues with prediction limits, and identifying long-term trends which would be  
22 statistically significant if any are identified.

1           The results are reported on our public website and are reported to the Commission in  
2           our annual Commission paper which was SECY 07-0063 where we reported the results of  
3           this program. The industry program also complements the Reactor Oversight Process and  
4           is an input to the agency performance goals which were reported to Congress. Next slide,  
5           please.

6           In fiscal year 2006, there were no statistically significant adverse trends in overall  
7           industry performance identified based on the long-term trending.

8           On an industry-wide basis, the performance indicators that we trend remain  
9           significantly improved when you look at a 10 to 15 year period. We also look at changes in  
10          short-term. In fiscal year 2006, none of the indicators exceeded short-term prediction limits  
11          and no issues were identified that warranted further analysis or program adjustments.

12          The Accident Sequence Precursor program, which is implemented by the Office of  
13          Research, did not identify any significant accident sequence precursors in 2006. There was  
14          a change to the Accident Sequence Precursor program just to note in fiscal year 2007 which  
15          increased the numbers of events which were reported to us. This included external events  
16          and significant determination process findings. Next slide, please.

17                   COMMISSIONER McGAFFIGAN: Mr. Chairman, I might just put an emphasis  
18          on a couple of the points that Elmo just made. There were no significant precursors.  
19          There's been one significant precursor in my time and in Jeff's time on the Commission, but  
20          my time goes back a little longer in over 11 years. That's terribly significant.

21          That one was Davis-Besse and we don't ever want have another Davis-Besse and I  
22          think our strategic goal now is to not have any significant precursors. I think it's important to

1 emphasize that and I think it's important also to emphasize - last year, I believe was the first  
2 year the industry as the whole averaged less than 100 person rem per plant. That's an  
3 extraordinary achievement compared to when I arrived. Will they hold it this year? I don't  
4 know. There is some variation.

5 But I think when compliments are due and they're due to both us and them. They're  
6 the ones who have to - getting the doses down to their workers is extraordinary. Nuclear  
7 power plant workers as we all know are not the most exposed population in America. It's  
8 the people who fly planes and work on plane crews that get more doses; although that's  
9 documented they don't wear badges like our folks do. But the average nuclear power plant  
10 worker, especially with person rem dropping below 100 per plant, is getting a very, very low  
11 dose.

12 I think it's important when we talk about things, we tend to be pretty dry, but I think  
13 what I would like to see as we talk about these things and we had some of the same  
14 conversation yesterday with the materials folks is to have a sense of pride that we don't do  
15 it, it's the combined system that does it. There is still a search for excellence. There's some  
16 outliers, as I said on another occasion very recently, but our goal is to minimize the outliers  
17 and recognize the extraordinary improvements that have been made over the last 15 years.

18 COMMISSIONER MERRIFIELD: Mr. Chairman, I'd like to jump in on that  
19 thought because I completely agree with Ed. One always looks at what's in front of him at  
20 any given point and we'll be reflecting on issues associated with three licensees today, but  
21 when you do look at it from a historic perspective of where we were as Elmo's comments  
22 say, 15 or 20 years ago, and the number of plants that were on the watch list, the number of

1 plants that were in regulatory shutdowns, many more significant challenges.

2 We have today what we will be talking about this morning to some extent would have  
3 been lost in the noise, unfortunately. That's a past we don't want to relive and I think there  
4 is always a value in recognizing that and recognizing success. I think there has been true  
5 success there.

6 I would also say I completely agree with Ed on the significant reduction in exposure  
7 to workers. I think that is a real unheralded milestone in this industry and its safety. I think  
8 it is even more noteworthy and I'd make the point it comes at a time when this industry has  
9 been very involved in replacing steam generators, replacing heads, doing very significant  
10 maintenance and overhauls associated with the life extension programs that our reactors  
11 are going through.

12 So it's not really that these folks are able to do the refueling outages and normal  
13 outages and reduce their exposure to their workers. They're doing it at a time where they're  
14 doing more and more work and I think that is even more of a milestone to be recognized. I  
15 completely agree with Ed.

16 When I first got here, we were talking about Millstone. That was the first thing I had  
17 to deal with was the events at Millstone and Com Ed. As I'm getting ready to depart, it's a  
18 lot better place that we all leave then certainly when I came.

19 CHAIRMAN KLEIN: As a follow-up to Ed's point, we don't want to be  
20 perceived as a promoter, but on the other hand we should communicate good news as well  
21 as bad news. And so I would encourage you to look at how - you might check with Elliott,  
22 and see how we can have an appropriate way of communicating good news. I think all of us

1 tend to concentrate on the bad news.

2 We want to stop bad things happening and we often don't compliment and  
3 knowledge good news because we're looking at the negative side. We really need to do  
4 both. I always warn my employees that I tend to forget about the good things that they do  
5 and remind them of the problems that might occur.

6 MR. REYES: Will you remember that when you appraise me?

7 CHAIRMAN KLEIN: Sometimes they're waiting for that good news.

8 MR. DYER: Chairman, actually the Industry Trends Program is one of the  
9 areas we cover in the Regulatory Information Conference and this year we sort of took it  
10 out, but one of the action items we have for the next years Regulatory Information  
11 Conference is to use basically the poster board opportunity to show the industry trends as  
12 part of the Regulatory Information Conference.

13 CHAIRMAN KLEIN: I was looking more, I think, to Ed's point more broadly  
14 based. While it's good to let the industry know, we need to let the public know number one  
15 that the NRC is looking and doing its job and then what the results are from that process  
16 that we have. So I would look more broadly than just internal communication to the industry  
17 and to us.

18 COMMISSIONER McGAFFIGAN: Even the precursor program, as the staff  
19 knows and Jeff knows, but I think it may have just predated the rest of you, but a couple of  
20 years ago there was report on precursors. They call precursors ten to the minus six event,  
21 one in a million events, significant near misses in this particular report and they claim the  
22 trend was upward. The trend isn't upward, even for those tiny precursors. I think your

1 report shows that.

2 If we're not properly, in layman's terms, describing the data we have, somebody else  
3 is going to do it for us and perhaps not very properly and alarmistly. I don't think it's  
4 promoting nuclear power any more than discussing the number of millirems you get if you  
5 sleep in a double bed. It's just facts. We're just presenting facts that people can interpret  
6 for themselves and not have somebody else interpret the facts differently. It's an aside.

7 MR. COLLINS: Slide five, please. As a next step to enhance the Industry  
8 Trends Program, the staff has developed the baseline risk index for initiating events. This  
9 index is an industry-wide, risk informed indicator that tracks specific initiating events. The  
10 indicator combines the events using risk weights and sums the information to arrive at an  
11 integrated risk informed indication of industry performance at the initiating event cornerstone  
12 level.

13 This index is intended to enhance and complement the Industry Trends Program and  
14 is not a replacement for other initiating event indicators. It is being incorporated into our  
15 Manual Chapter 0313, Industry Trends Program, and the staff will use this indicator and  
16 report these results in the Industry Trends Program report for FY2007.

17 COMMISSIONER MERRIFIELD: For a point of clarification, can you just  
18 describe with a little bit more specificity what events you're taking a look at and what you're  
19 attempting to accomplish with this?

20 MR. COLLINS: In summary fashion, some of the events which are modeled in  
21 probabilistic risk assessments today, the loss of feed waters, the scrams, steam generator  
22 tube rupture, if we have any, those types of events. There's about 10 of them that we pull

1 from the reported data and then using the PRA information are able to assign a risk  
2 significance index, sum them up, at the industry level, to see how the industry is performing  
3 with a risk measure associated with it.

4 MR. DYER: Commissioner, I think in comparison, right now all initiating events  
5 are treated equally. We just count the number of initiating events. What we recognize is  
6 that some initiating events are more challenging than others. What this will do is start taking  
7 a look at the initiating events based on their risk significance and how great a challenge are  
8 they to the plants. We have created these risks bins, if you would, based on the severity  
9 and complications of the initiating event and we'll have more of a graded approach, if you  
10 would, to how many challenges are occurring within the fleet of U.S. operating reactors.

11 COMMISSIONER MERRIFIELD: I don't want to digress too far because  
12 you've got more material to go through. I think one of the things you have to be very careful  
13 about - we're going to be presenting this information to Congress. It seems to me while it  
14 could be a very useful tool for us and while we are very comfortable with using risk analysis  
15 and risk tools, I think how we explain the details of this, particularly to laymen and 25-year  
16 old staffers on Capitol Hill is going to be a bit more of a challenge because my sense is it  
17 will seem somewhat like a black box where we said we've got this snazzy new risk informed  
18 program that we'll be using to judge how the industry as a whole is doing. I think we've got  
19 to be able to explain it in a way that's going to make sense to folks who aren't as familiar  
20 with risk tools as we are.

21 COMMISSIONER McGAFFIGAN: If I could follow up, we are sort of diverting  
22 from our normal thing. In the paper you said you're going to publish something in May

1 which will provide historical results in the technical basis for the BRIIE index, and then the  
2 next sentence says that you started data collection on January 1<sup>st</sup>, 2007. Presumably in  
3 putting this together look back at several years' worth of results and that's going to come out  
4 or already has come out this month?

5 MR. COLLINS: It hasn't actually been issued yet. We have the development  
6 work complete and it is in concurrence.

7 COMMISSIONER McGAFFIGAN: How many years back did you go?

8 MR. COLLINS: It dates back to 1998, so there will be a report back and you'll  
9 be able to see the trends of this indicator over a significant period of time.

10 COMMISSIONER McGAFFIGAN: I look forward to that paper. I think all of is  
11 will. This sort of caught me in - I sort of teased about the BRIIE earlier, but the fact that this  
12 was this far along, maybe you mentioned it last year but it wasn't highlighted as much last  
13 year.

14 COMMISSIONER MERRIFIELD: What kind of paper will that be? Will it be an  
15 information paper or a voting paper?

16 MR. COLLINS: I think right now we intend to report to Commission the first  
17 results in our 2007 Industry Trends Report paper. The paper that exists right now is just at  
18 the staff level.

19 COMMISSIONER MERRIFIELD: I think my only sensitivity - when do you think  
20 you're going to get this paper out?

21 MR. COLLINS: At the staff level?

22 COMMISSIONER MERRIFIELD: When will the Commission see it?

1 MR. DYER: Results will be published in a NUREG. It's scheduled to come  
2 out shortly.

3 COMMISSIONER McGAFFIGAN: It's not something they normally send to us.

4 COMMISSIONER MERRIFIELD: Well, I'm not going to be here much longer.  
5 If we are going to be using this as a new tool to inform ourselves and inform Congress  
6 about where we stand on risk issues and how we oversee the plants, I would think you'd  
7 want to make sure that the Commission would bless that before we start sharing that with  
8 Congress just to make sure that we agree with the methodology that you're using and the  
9 way in which it could be communicated.

10 MR. DYER: Yes, sir.

11 MR. COLLINS: Next slide.

12 COMMISSIONER MERRIFIELD: Not to say I have any problems with it, by the  
13 way, I don't want to leave any doubts.

14 MR. COLLINS: Slide six, please. I'd like to turn now to the discussion of the  
15 results of the staff's annual self assessment on the Reactor Oversight Process. This self  
16 assessment is an opportunity for the staff to assess whether the program is meeting the  
17 goals that have been set out and whether the program is achieving its intended outcomes.  
18 It is also an opportunity to consider what we are doing well and where we can improve our  
19 performance.

20 As you know, we perform a self assessment each year and report the results in an  
21 annual Commission paper to Congress and this year that was reported in SECY 07-0069.  
22 One of the strengths of the self assessment process is the variety of inputs that feed into it.

1 Inspection Manual Chapter 0307 describes the process and includes a number of  
2 performance metrics.

3 We received a lot of feedback from industry staff and we've had the benefit in 2006 of  
4 both an internal and an external survey of stakeholder views of the Reactor Oversight  
5 Process. We also received feedback during our monthly meetings with stakeholders and  
6 during the Regulatory Information Conference.

7 The Office of IG completed several audits of the oversight process during the last few  
8 years and the Government Accountability Office recently completed their audit of the  
9 Reactor Oversight Process. The self assessment included a review of the performance  
10 indicator program, the inspection program, the significance determination process, the  
11 assessment program, ROP deviations, and resources and resident demographic  
12 information. Next slide, please.

13 Overall, the results indicated that the Reactor Oversight Process provided effective  
14 safety oversight as demonstrated by meeting the seven program goals and achieving its  
15 intended outcomes. The Reactor Oversight Process was successful in being objective, risk  
16 informed, understandable, and predictable in ensuring safety, openness, and effectiveness.

17 The staff concluded that the agency has appropriately monitored the performance of  
18 operating reactor plants and is focused inspection resources on those facilities with  
19 relatively weaker performance. The staff continues to emphasize stakeholder involvement  
20 and openness. As a result of meaningful stakeholder input, we continue to improve various  
21 aspects of the Reactor Oversight Process using feedback from meetings and surveys and  
22 lessons learned.

1           Based on the internal and external survey results which were similar to previous  
2 years, the views of stakeholders about the Reactor Oversight Process remains somewhat  
3 mixed. The self assessment did conclude that there are areas where we should focus our  
4 resources and attention to further improve the processes. I will cover those in the next few  
5 slides. Next slide, please.

6           The first of the four major program areas of the Reactor Oversight Process that I'll be  
7 presenting today is the performance indicator program. As I noted earlier, we received  
8 program input from various internal and external stakeholders.

9           Overall, the performance indicator program brings value to the oversight process  
10 because it highlights the need for proactive response to indications of declining  
11 performance. In addition, trending of the performance indicators allows licensees to take  
12 corrective actions early before the NRC needs to engage.

13           In calendar year 2006, about 20 performance indicators crossed thresholds. This  
14 resulted in appropriate heightened oversight on the part of the agency. The majority of the  
15 threshold changes in 2006 were as a result of the Mitigating Systems Performance Index.  
16 Mitigating Systems Performance Index or MSPI as it is more commonly called was  
17 implemented in the start of the second quarter of 2006.

18           The first performance indicator submittal occurred in July. The staff has ensured that  
19 the MSPI is as transparent as possible and continues to discuss MSPI during routine public  
20 meetings, primarily due to the complexity inherent in the Mitigating Systems Performance  
21 Index. We work with industry to clarify and revise the guidance. We trained regional  
22 inspection staff. We developed a web page and we issued a press release and Regulatory

1 Information Summary describing the Mitigating Systems Performance Index.

2 More quarters of data have been now been reported since the implementation and  
3 our preliminary assessment of the effectiveness of MSPI is confirmed that we continue to  
4 have challenges with the definitions of component failures and the use of PRA information  
5 to calculate index results.

6 COMMISSIONER McGAFFIGAN: This is a very good indicator, compared to  
7 what preceded it. It's much more risk informed and I credit NEI for pushing it. I think I said  
8 previously they were disappointed that some of their outliers, which frustrate everybody,  
9 delayed the onset of the system. You originally hoped to have it started three months  
10 earlier and the PRAs weren't up to it.

11 COMMISSIONER JACZKO: Mr. Chairman, could I just ask for clarification by  
12 what you meant about challenges with the use of PRA information. Can you expand on the  
13 a little bit?

14 MR. COLLINS: I think we have to continue to make sure that the definitions  
15 and the guidance for the information that feeds in this index and as you consider the  
16 unavailability and the reliability which is in essence the probability of failure and how that's  
17 calculated and come together to produce the index are consistently produced, such that we  
18 get good results across all of the plants, and our inspectors are looking at it consistently. It  
19 boils down to the probability of failure in that calculation.

20 MR. REYES: It boils down to a very complicated equation. I don't know if you  
21 had an opportunity to look at it.

22 COMMISSIONER JACZKO: I did at one point and I quickly stopped. I'm just

1 trying to get at what the problems are. Are we finding that one facility will calculate a  
2 probability of failure differently than another facility for things that should be equivalent?

3 MR. COLLINS: I think the implementation of the guidance in terms of items  
4 such as when the failure is identified, the lengths of time that come into play, when they  
5 should have known, the guidance and consistent implementation of that guidance in  
6 implementing the interpretations of it is where we're coming up with consistency issues.

7 COMMISSIONER JACZKO: I guess the final thought on that, how moving  
8 forward, how do you see resolving those as revisions to the guidance?

9 MR. COLLINS: The process we used - we have monthly meetings with  
10 stakeholders where the issues and they surface via our frequently asked questions process,  
11 where licensees can submit questions requiring amplification and when those come  
12 together and we see that the guidance needs to be enhanced or ways it can be enhanced  
13 then we turn around and implement those enhancements to the guidance. We work  
14 collaboratively.

15 COMMISSIONER JACZKO: So it's kind of an iterative process, I guess is what  
16 I'm saying. So in a year from now we'll probably be at a much better place.

17 MR. COLLINS: That's our goal. We're early into this and so we've learned  
18 some things and we expect there will be more that we learn as we implement this index.

19 COMMISSIONER McGAFFIGAN: Is there any trends in terms of people with  
20 really good PRAs, the South Texas' or the San Onofre's or whatever being punished or is it  
21 the folks who have lesser PRAs who are being challenged more?

22 MR. COLLINS: It's a little early in the process, I think, to actually make that

1 judgment, Commissioner. Where the indicator has crossed thresholds has reflected  
2 legitimate equipment performance issues, so we feel it's been very good so far.

3 MR. REYES: The issue is more with the plant design. Some plants don't have  
4 the dependencies that other have, so from that point of view it's good. But a failure of one  
5 component in one plant has much more significance than in another and it should be  
6 highlighted that way.

7 MR. COLLINS: Slide eight, please. Excuse me, slide nine. Going forward,  
8 there are aspects of the Performance Indicator Program that do need attention and need  
9 improvement. This input came from a range of stakeholders including internal staff, the  
10 states and members of public citizens groups. These stakeholders remain concerned that  
11 PIs do not provide an adequate indication of declining performance or enhance public  
12 confidence.

13 As a result of this specific feedback, two of the seven PI self assessment metrics  
14 were not met in 2006. We recognize the need to improve the PI program to better identify  
15 outliers and to provide more meaningful indications of declining plant performance and we  
16 are addressing these issues. We've been working with industry on a new unplanned  
17 scrams with complications performance indicator and are scheduled to replace the existing  
18 unplanned scrams with loss of normal heat sync indicator in the third quarter of this year.

19 During calendar year 2007 we will continue to monitor the MSPI implementation  
20 issues, evaluate the first year of submitted data and incorporate lessons learned to further  
21 improve these indicators. We also plan to explore additional potential PI revisions to further  
22 improve the program's effectiveness in contributing to the identification of declining

1 performance.

2 CHAIRMAN KLEIN: Could you clarify – you said that the stakeholders remain  
3 concerned that it doesn't enhance public confidence. Is that because they don't understand  
4 it or they don't trust it?

5 MR. COLLINS: The comments seemed to reflect that some PIs either they  
6 don't cross thresholds, they don't change and in some cases the scales make the public  
7 wonder if they're even registering at all, I think. That was my understanding of the  
8 comments that we got from the surveys.

9 MR. DYER: Chairman, previously some of the feedback we got some of the  
10 PI's have always been green and so what value do they add was some of the feedback we  
11 got as far as providing a benefit to safety.

12 MR. REYES: People are looking at it today not the way it used to be, so what  
13 we need to do is when you get performance go to a particular level, you have to be careful  
14 because that is the performance. If you're not trying to discern between 98% and 100% on  
15 something and you change all your indicators to get you there, so I think we are still looking  
16 internally how to do this, but the indicators just reflect the performance that was commented  
17 to here earlier. We need to be careful as we change things so we don't keep ratcheting up  
18 to a point that's not appropriate.

19 COMMISSIONER McGAFFIGAN: Mr. Chairman, when we started the ROP,  
20 Jeff may remember this, one of our mantras is green is not good. You may be green, but  
21 green doesn't mean - and what we provide the public is the exact numbers. They can see  
22 how deeply green they are. They can look at trends within it. They might not be risk

1 significant but we're not hiding anything. Our mantra from the beginning has been green is  
2 not necessarily good. I'm glad you're green, it's better than the alternative, but green  
3 doesn't mean you're perfect or anything. It's just one indicator.

4 COMMISSIONER MERRIFIELD: Right. Mr. Chairman, I agree with that. That  
5 was precisely what we said. There are a couple other things, too. Number one, I  
6 appreciate you, Luis, making that comment. We have all the licensees hitting the green  
7 mark on a certain issue and that doesn't means there's a problem with the indicator. Our  
8 role as a regulator is to set of boundary of what we think is appropriate, safe performance  
9 for the reactors we oversee. It's the job of INPO to think about excellence and it is not our  
10 job to keep ratcheting up our indicators so that we always seem to be dinging someone on a  
11 given issue.

12 In a perfect world, we would set a regulatory standard that we believe is appropriate  
13 and we would not have to have these kind of meetings because everyone would meet it.  
14 Now, they don't and so we do.

15 The second thing is I remember at the time when we were talking about this. There  
16 has always been an issue about not being able to fully identify declining performance. I  
17 remember at least in some of those meetings or subsequently saying we've got to be very  
18 careful that we're not searching for the Holy Grail. I think there are some folks on our staff  
19 who are continuing to search for that Holy Grail. I'm not certain we're going to get there.

20 I'm not certain you can really create performance indicators that are going to  
21 anticipate declining performance. The performance indicators are but one tool. The most  
22 important thing we have is our on-site resident inspectors. Those are our indicators. Those

1 are the people who we train and who are knowledgeable and should be able to pick up on  
2 issues going on at the plants. The discussions I've had with most of the people here - we've  
3 got four either current or formal Regional Administrators and we've got a couple of Regional  
4 Administrators in the back row.

5 The discussions I've had with them over the time that I've been here is this is what  
6 my residents are seeing out at the plant. Now one of the issues we're going to have today  
7 is talking about Palo Verde. Bruce has been talking to me for years about concerns he had  
8 because of what he's seeing with the resident inspectors. That is identification of belief we  
9 have some declining performance. I had the same discussion with most of the people here.

10 I personally believe - I credit you guys for trying to improve a product that I think is  
11 already pretty good, but I do caution not to search for the Holy Grail and just because we  
12 got green on an indicator doesn't mean it's bad.

13 MR. COLLINS: Slide 10.

14 COMMISSIONER JACZKO: Mr. Chairman, if I could just add a little bit to this  
15 discussion. While I agree with some of the comments of my fellow Commissioners I do  
16 think there are some performance indicators that are probably always going to be green.  
17 Those indicators are not indicators that I think are useful indicators for us. The one that  
18 comes to my mind most readily is the reactor coolant activity indicator. The threshold for  
19 transition to white and yellow are extremely high to the point where we would be in an  
20 accident scenario, I believe, or something close to that.

21 MR. REYES: If I could jump in.

22 COMMISSIONER JACZKO: If that's incorrect –

1 MR. REYES: That indicator has changed from green to white at several times  
2 at several sites, but on the other hand, the utilities have done a very good job of keeping the  
3 reactor coolant system leak free. In recent years, it has been green. It hasn't changed. But  
4 I think if you go back to when the ROP started, that indicator did change and there were  
5 some work to be done by several utilities about fixing problems.

6 COMMISSIONER McGAFFIGAN: The ones that I remember never did.  
7 There's some EP ones that were above green and ones we used to use for security for the  
8 years we did use them, they were always green.

9 MR. REYES: If I could follow with the Commissioner, what happened is that  
10 now in response to our indicator those utilities who didn't do as good a job on keeping the  
11 primary system leak free do and so the question goes back to the earlier discussion. Okay,  
12 do we change the perception of risk simply because everybody's doing a good job and  
13 change the indicators? Or do we say that happens to be the status of the fleet and it was  
14 not that way five years ago or 10 years ago. So we're wrestling with how to have good  
15 indicators and then balancing with not overreacting.

16 COMMISSIONER JACZKO: I appreciate that. We've had discussions about  
17 this particular indicator before. I think it's one I'm not fully convinced that it is an indicator  
18 where the thresholds are appropriate. I think this is one where we have had discussions in  
19 past AARM meetings where it has been my understanding that the staff is looking at  
20 evaluating this indicator and the industry is looking at evaluating this indicator as well  
21 because it's not providing useful information at this point. Whether we're chasing the Holy  
22 Grail or not, I don't know that that's the case here.

1 I think this is one industry considered looking at the WANO indicator in lieu of using  
2 this particular indicator to measure a similar type of information and that indicator has also  
3 turned out to be problematic, I think. While I may have overstated some of the threshold  
4 levels, I think that this is an indicator that is one that we should look at and take a look at  
5 trying to improve because I don't think that necessarily the fact that there were some  
6 changes in the threshold earlier necessarily means it's a useful indicator.

7 Again it doesn't mean we have to try and find places where people are going to go  
8 into white, but the indicator should be providing some kind of useful information. I don't get  
9 the sense right now that this particular indicator is doing that.

10 CHAIRMAN KLEIN: I assume though, based on what Ed said, that you can  
11 dive down into that and look at the numbers that will tell you more fine trends, so I guess if  
12 you just look at the color, that may not tell you. But if you look at the numbers and how they  
13 got there, it should be value added.

14 COMMISSIONER JACZKO: Absolutely. I think that's always there. It comes  
15 down to the question in the end ultimately, as I always understand the performance indicator  
16 and I think Commissioner Merrifield raised an interesting point, is that the performance  
17 indicator as I understood them is trying to identify leading indicators of declining  
18 performance. And they have not been doing that successfully. That doesn't mean that  
19 they're not useful and the ROP is not successful. I don't want to leave with that sense but  
20 they have not necessarily been able to provide that kind of information which is, I think,  
21 something to keep in mind.

22 COMMISSIONER McGAFFIGAN: One of the first lectures I received at this

1 place, this was before Jeff. He was the deputy EDO. He had the Maine Yankee - Ed  
2 Jordan. Ed Jordan was also head of the group that did indicators at that time. I think it was  
3 1997. He gave us the lecture as we were starting to do the ROP about the NRC's endless  
4 search for a leading performance indicator. Many a time they sort of look good and then  
5 they test them out a little bit more and it turns out they're not a leading indicator.

6 If we had a leading indicator, if there's anybody in this room who had a validated  
7 leading indicator, we would be using it. I think Jeff is right. The ROP was designed with  
8 these indicators and with our inspectors and what got Palo Verde into Column Four was  
9 inspections and inspection results, I think. It may have a few non-green indicators, but what  
10 got them in there was their inspection results. We have been doing a pretty good job and  
11 David Lochbaum complimented us.

12 It was one of the Nebraska facilities where we got ahead of it several years ago in the  
13 ROP. The ROP as a whole has to be looked at as a whole and we're committed to constant  
14 improvement. We've said that. This is going to be a work in progress as long as the NRC is  
15 here, but it's an extraordinary improvement compared to anything we've ever had before  
16 and I think, I personally think that what Nils said as he was leaving last year, this is the best  
17 overall system on the face of the earth, probably for any regulator.

18 I was looking at something last week; there was a plane that got pulled back because  
19 it lost an engine. The typical aircraft industry fashion you can't get any data about what the  
20 hell had happened with that aircraft being brought back because it's much more secretive  
21 regime. You learn how often planes are on time and you can learn about other things, but  
22 you can't find out what the maintenance was on that aircraft recently. So we're the most

1 open, the most committed to continuing to improve, but I think we have right now a process  
2 that is a model for everybody on earth in terms of its openness, in terms of its attempt to  
3 anticipate and I would say in every regulatory area - FDA. Nobody comes close to us.

4 COMMISSIONER LYONS: Mr. Chairman, since we seem to discussing PIs  
5 well beyond perhaps the kinds of questions that we might be asking, let me just jump in, too.  
6 At least in my mind, and I very much appreciate the comments Luis made as well as several  
7 of my fellow Commissioners.

8 In my mind the PI's can be viewed either as leading indicators and to the extent that  
9 we can identify a leading indicator that would be wonderful. But I also appreciate, as Ed  
10 said, that folks have been trying to do that for years and it's really hard to find. But in my  
11 mind, the other point that you made Luis, at least I think it was Luis or Jim, that the PI's  
12 serve to focus the attention of the licensee in that area and the fact that a PI may have in  
13 the early days fluctuated between green and white and now stays green, to me says it  
14 probably worked.

15 It focused attention and we should be pleased with ourselves. I'm not saying don't  
16 continue to look and seek ways of improving. If we can find the Holy Grail of a leading  
17 indicator, that's wonderful. But at least as I understand the PI program it is working.

18 MR. REYES: If I could add. I'll use the same example, reactor coolant  
19 leakage. I'll go back a quarter of a century when I used to be a young inspector. What  
20 happens is that it may be green, but every morning when the resident inspectors check this  
21 parameter in the control room, if it changes from .0125 to .02, right away there's a reaction  
22 from not only the organization but from the regulator. It doesn't get printed in the indicators

1 and before anything right now, that day they start looking for where is that change from at  
2 those levels. The indicator has worked.

3 MR. COLLINS: Slide 10.

4 CHAIRMAN KLEIN: You're sure taking a long time.

5 MR. COLLINS: I'll try to do better. To the inspection program. This was  
6 another major area of our self assessment as it is every year. We believe this forms the  
7 backbone of the Reactor Oversight Process. This is where the NRC performs its  
8 independent verification of the safety of on-site activities. We believe that inspectors have  
9 appropriately identified performance issues and have ensured the adequacy of licensee  
10 corrective actions to address noted performance issues.

11 In 2006, the staff closed remaining items from the December 2004 audit at the  
12 baseline inspection program completed by the Office of Inspector General. We also  
13 completed in 2006 the development of the Reactor Oversight Realignment Process. This is  
14 a formal disciplined process that requires detailed biennial evaluation of the baseline  
15 inspection procedures in order to more efficiently allocate the inspection resources.

16 The revised engineering inspections known as Component Design Basis Inspections  
17 or CDBIs were developed to focus on risk significant, low-margin components and operator  
18 reactions that could potentially affect risk significant structure systems and components.

19 We've conducted these revised engineering inspections at over half of the sites  
20 across the country and we will complete inspections of the CDBI at all sites by the end of  
21 2007. All ten inspection performance metrics met their criteria in 2006, including completing  
22 the baseline inspection programs at all nuclear power plants. Next slide, please.

1 We're currently in the process of performing the 2007 realignment review and we will  
2 adjust inspection resources as a result of this formal detailed review. We expect to  
3 complete the component design basis inspections at all facilities in 2007. We are currently  
4 evaluating these inspections for potential improvements based on lessons learned. We also  
5 plan to monitor the changes made to the inspection program to implement safety culture  
6 and I'll address this in more detail in a few moments as part of the assessment processes.  
7 Next slide, please.

8 Over the past year, we made a number of changes to improve the timeliness and  
9 efficiency of the Significance Determination Process. These improvements have resulted in  
10 efficiencies and finalizing significance determinations for inspection findings and the SDP  
11 timeliness goal was met for the first time since ROP implementation.

12 The remaining objectives of the SDP improvement plan were completed including  
13 issuing a risk assessment standardization project handbook, providing additional guidance  
14 regarding the quality of licensee probabilistic risk assessments and perhaps most  
15 significantly, we streamlined the process and began training on the use of pre-solved tables.  
16 These tables provide the regions with significance results where a variety of scenarios in an  
17 easy to use table format. Of the eight significance determination performance metrics  
18 having to do with consistent -- excuse me, one of the eight performance metrics having to  
19 do with consistency of regulatory response across cornerstones was not met.

20 The staff believes that relative parity has been achieved among the cornerstones.  
21 We will continue to review findings to determine the need for adjustments, particularly in  
22 emergency preparedness and public radiation safety cornerstones. In the near term, the

1 Commission will be receiving a paper that provides recommendations to better determine  
2 and characterize the significance of findings in the public radiation cornerstone.

3 COMMISSIONER MERRIFIELD: Mr. Chairman, I would just make a footnote  
4 here. One of the things Elmo said here is very significant. The SDP timeliness goal was  
5 met for the first time since ROP implementation. Now again, you guys get tired of the  
6 history lessons that Ed and I seem to give, but we first started the ROP in the first couple  
7 years, that was a very difficult issue in terms of timeliness.

8 We didn't do the job we wanted to do and we had huge fights with utilities in terms of  
9 exchange of information and analyzing of some of the issues associated with the SDP.  
10 Achieving this is a big deal. This is a big deal. I think the staff are to be complimented. The  
11 question really going forward is sustainability. Can you sustain that timeliness? I do think  
12 it's worth stopping, in my view, to compliment Jim and Elmo and their staffs for what I think  
13 is an important accomplishment.

14 COMMISSIONER McGAFFIGAN: I totally agree. There hasn't been a  
15 corresponding increase in the number of appeals of decisions, but it is better to get the  
16 decision out and then start the process of appeals like going all the way to Luis. They start  
17 with Elmo and is there an intermediate between you and the EDO on these appeals?

18 MR. COLLINS: It actually begins with the Region. The Region issues the  
19 appeal and it's reviewed in the appeals process. That's the intermediary with Headquarters  
20 involvement.

21 COMMISSIONER McGAFFIGAN: I think it's more efficient to issue it and then  
22 see if the appeals are necessary then to sit for months and months and months.

1 COMMISSIONER MERRIFIELD: Months and months and months. Some of  
2 those it was like waiting for Gödel.

3 COMMISSIONER McGAFFIGAN: I remember back in the Davis-Besse days  
4 talk to people on elevators; is it red yet? Because the initial staff determination using a bad  
5 model didn't have it red. It got to red. I think Bill Kane had something to do with that. It was  
6 forever. It was forever coming to a conclusion - I think today we come to more quickly. I  
7 know we don't want any more reds.

8 MR. KANE: We obviously placed emphasis on meeting those goals and I think  
9 measuring those, tracking them, and keeping those in bright lights has led to the success. I  
10 would acknowledge that also the Office of Nuclear Security and Incident Response that has  
11 responsibility for two of these seven cornerstones that success has been achieved there as  
12 well.

13 CHAIRMAN KLEIN: I have just a clarifying question. You said that one of the  
14 eight SDP performance metrics having to do with consistent regulatory response was not  
15 met. Can you elaborate a little bit on - is this just a subjective evaluation between Regions?

16 MR. COLLINS: This was primarily based on feedback we received from the  
17 surveys. Some perceive that there was not equal significance across the cornerstones for  
18 different findings. We think relative parity has been achieved, but we are continuing to find  
19 those areas where we can better determine the significance, make changes to the SDP if  
20 we need to and also better characterize the significance of determinations. I think  
21 sometimes there's at least a potential for confusion on the language we use when we  
22 communicate a low to moderate safety significant item. There might be some confusion

1 there.

2 MR. KANE: I think an example that is in the radiation safety cornerstone, I  
3 know Commissioner McGaffigan has talked eloquently on this issue. And so we have  
4 finalized, I guess we'll be coming up shortly with information on how we're going to make the  
5 adjustment on the radiation safety cornerstone. The characterization is low to moderate  
6 safety significance, it was not appropriate. That was one of the lessons learned from the  
7 task force that was convened and we made the adjustments and the change.

8 CHAIRMAN KLEIN: Thanks.

9 MR. COLLINS: Slide 13. As noted earlier, significance determination process  
10 timeliness improved significantly and the SDP timeliness metric was met for the first time  
11 since implementation. We plan to closely monitor the process improvements to ensure  
12 continued timeliness in coming years. We also intend to provide additional guidance on the  
13 use of the pre-solved tables and conduct additional training on this time saving tool for the  
14 inspectors. These positive changes have improved the timeliness of the process.  
15 Additional focus in this area will continue to improve inspector efficiency. Next slide, please.

16 Our conclusions regarding our program to assess and respond to licensee  
17 performance were generally positive. The assessment program ensured that staff and  
18 licensees took necessary actions to address performance issues and adjust resources to  
19 focus on significant performance issues. We've made significant enhancements to the  
20 program guidance to more fully address safety culture.

21 We completed staff training and we've implemented the revised program for safety  
22 culture in July of 2006. The Government Accountability Office completed an independent

1 evaluation of the ROP in 2006 which provided generally favorable results and included three  
2 recommendations related to evaluating and implementing additional methods to assess  
3 licensee safety culture.

4 The first two recommendations will be evaluated along with the lessons learned  
5 during the initial 18 month implementation period of the enhanced Reactor Oversight  
6 Process. The third recommendation was for the staff to provide more information about  
7 plant safety culture on the ROP Web site.

8 As a result, we created a new web page that summarizes those plants with  
9 substantive crosscutting issues with links to the related plant assessment letters. Several  
10 additional enhancements were made to the Web pages in 2006. All ten performance  
11 metrics in the assessment program met their criteria in 2006. Next slide, please.

12 The staff is monitoring the safety culture enhancements and is compiling lessons  
13 learned during this 18 month initial implementation phase of the enhanced ROP and we'll  
14 present the evaluation to the Commission in the calendar year 2007 ROP self assessment.

15 In addition, as noted earlier, the GAO recommendations will be addressed as part the  
16 staff's evaluation of the safety culture implementation. Staff considers consistency in the  
17 implementation of the ROP to be an important factor in the determination of whether the  
18 oversight process is effective. As such, we've established a multi-office team to review  
19 issues associated with the safety culture enhancements.

20 In addition, Region IV is leading an effort to review staff consistency in implementing  
21 crosscutting issue guidance. The Commission has recently provided direction. Within six  
22 months of a licensee being placed in the Column Four of the action matrix, the licensee will

1 meet with the Commission to discuss actions being taken to improve performance. We plan  
2 to incorporate this guidance into the ROP in 2007.

3 CHAIRMAN KLEIN: I'd like to just make a comment on the safety culture,  
4 having just come back from the INRA meeting where you look at the International Nuclear  
5 Regulatory individuals. A lot of discussion about safety culture and this obviously was  
6 triggered by the events in Japan where there was information covered up. So this program  
7 on safety culture is really being watched, not only in the U.S. by us, but by other countries  
8 on how can they learn and how can they implement safety cultures.

9 I think that's really an important aspect that we can provide other countries as we  
10 learn lessons and we transfer those to other nations. It's very important because of the  
11 events in Japan; it's triggered a very international discussion on the importance of the safety  
12 culture.

13 COMMISSIONER MERRIFIELD: Mr. Chairman, I think you're quite right to  
14 raise that. One of the challenges I think that we've had internationally in discussing safety  
15 culture is how you put your hands on metrics that can give you a more consistent  
16 methodology for assessing that. I think one of the things that we have done with the  
17 development of using crosscutting issues as a means of identifying that, is we have a  
18 specific tool and specific indicators we can talk to.

19 One of the challenges I think you're finding internationally is some of our counterparts  
20 use a much more subjective process based on their impressions of how utilities are acting.  
21 So I hope the results will continue to prove that we are right and you'll have more of that  
22 story to share internationally because I think it's an important one.

1 MR. COLLINS: Slide 16. The staff evaluated the three action matrix  
2 deviations from 2006 for the need for potential program improvements. The staff approved  
3 a one time deviation for Waterford Unit 3 in June 2006 due to unique circumstances with  
4 two safety system unavailability performance indicators crossing thresholds. The situation  
5 is not likely to reoccur because the safety system unavailability indicator has been replaced  
6 on the Mitigating Systems Performance Index.

7 We extended the deviation for Indian Point in December 2006 to allow for an  
8 increased level of oversight for two issues - groundwater contamination from cracks in the  
9 Unit 2 spent fuel pool and problems with the alert and notification system. At Davis-Besse,  
10 the deviation to allow for increased inspection was extended. This was put in place to allow  
11 for the transition out of Inspection Manual Chapter 0350. We revised program guidance in  
12 this area to make this part of the program.

13 In summary, these deviations will cause no additional changes to the ROP beyond  
14 those which are already implemented or already planned. Next slide, please.

15 The last slide addresses resources and resident inspector demographics. ROP  
16 related resources had increased for three consecutive years through 2005, primarily due to  
17 implementing lessons learned from Davis-Besse and increased efforts in the security area,  
18 but the resource expenditures remain stable in 2006.

19 At this point we appear to have reached an equilibrium in terms of resources required  
20 to respond to the challenges just mentioned. The 2006 demographic data indicated that the  
21 experience levels of both resident inspectors and senior resident inspectors remained  
22 relatively high and the resident and senior resident inspectors' staffing levels we're good

1 and the turnover rate was low. However, we do plan to closely monitor resident  
2 demographics at the sites in 2007.

3 We do anticipate influences on the program as a result of the expansion of the  
4 nuclear industry and our own growth to support the formation of the New Reactors Office.

5 COMMISSIONER MERRIFIELD: Elmo, before you pass it back to Jim  
6 Caldwell, we implemented a program a while back where we went back from N + 1 for a  
7 number of reactors equals the numbers of residents plus one to the N Program. Assuming  
8 one unit site we have two inspectors, at multi-unit sites we have the same number of  
9 inspectors as the same number of reactors. We had in the past deviations from that based  
10 on circumstances present at those given sites. Do you know how many sites at which we  
11 currently have deviations from the general guidance and which sites that is the case?

12 MR. REYES: Regional Administrators are here. They can answer specifics.

13 MR. CALDWELL: None in Region III.

14 MR. MALLETT: None in Region IV that I know of.

15 MR. TRAVERS: I'm Bill Travers, Region II. At Browns Ferry we've been  
16 operating with a higher number of crew principally focused on recovery operations  
17 associated with the Browns Ferry Unit 1 reactor. That's the only exception we have in  
18 Region II.

19 CHAIRMAN KLEIN: Just a clarifying question on Palo Verde. Didn't we  
20 increase some attention?

21 MR. MALLETT: We did. In fact, we did that by transferring people from the  
22 Regional office and moving other residents there. We did have increased attention for the

1 past year. We have and it has been approved now increased the residents presence there  
2 for about a year-and-a-half and that will start sometime probably in the July/August time  
3 frame of this year. The total number will actually be four residents at Palo Verde.

4 CHAIRMAN KLEIN: I thought at first you said you didn't have any.

5 MR. MALLETT: We haven't until today, but we will have as of August.

6 MR. SAM COLLINS: Sam Collins, Region I. In Region I it's a culmination of  
7 technology challenges which is unlike technology on site. Examples of that would be the  
8 Salem/Hope Creek site, for example, the Millstone site, and also the culmination of sites as  
9 a result of license transfers, and Indian Point would be an example of that.

10 We are in the process of working with the program office on unique site budget model  
11 which recognizes these changes and the transitions. That process has been approved,  
12 Elmo, I understand, and it's in place for '07. There will be some changes with that  
13 depending on how plants actually combine Indian Point for example as we go through the  
14 years. But there's also a sensitivity to appropriate oversight.

15 COMMISSIONER McGAFFIGAN: So your exceptions Sam are Millstone,  
16 Indian Point, Salem/Hope Creek and the plants in northern New York?

17 MR. COLLINS: Nine Mile was an exception, that has been stabilized.  
18 Millstone was an exception and has been stabilized.

19 COMMISSIONER McGAFFIGAN: So they're back to N?

20 MR. COLLINS: Yes. Right now the exceptions would be Indian Point which is  
21 being treated at a dual unit. It is a dual unit site, but it's been treating as separate units and  
22 Salem/Hope Creek because of the differences in technology.

1 COMMISSIONER JACZKO: At Indian Point it's treated as a dual unit sight but  
2 each site so to speak has N?

3 MR. SAM COLLINS: We have two on site because of the ownership. We  
4 don't intend to change that until performance stabilizes and that of course will be  
5 coordinated with the Commission through the program office.

6 COMMISSIONER McGAFFIGAN: And at Salem/Hope Creek is it four; the two  
7 PWRs and two for the BWRs.

8 MR. SAM COLLINS: Salem is a dual unit PWR and a single unit BWR as you  
9 know and there's four individuals on site.

10 COMMISSIONER McGAFFIGAN: And two of them are assigned to Hope  
11 Creek?

12 MR. SAM COLLINS: That's correct. That's recognizing the technology  
13 difference.

14 MR. MALLETT: Let me clarify something, too. Excuse me. At Arkansas  
15 Nuclear One, we do have an additional resident there. We don't call it N+1, but that's  
16 actually a two-unit site and we for the same reasons as Sam because of the different  
17 technologies of the two units, we do have additional residents there. We've had that for  
18 about a year-and-a-half. So that record could be straight, I'll change my answer.

19 COMMISSIONER MERRIFIELD: I guess the point I asked in the clarification is  
20 there are some exceptions but they're smaller than they used to be. There were a lot more  
21 exceptions previously which I think is the result of better performance, most notably, Region  
22 III and obviously some changes given some technology issues. The Commission went

1 down a road based on the recommendations of staff to go to that and it seems to have  
2 worked.

3 MR. CALDWELL: I'd be glad to add n+1 since everybody else has.

4 COMMISSIONER MERRIFIELD: No, no. That's not necessary.

5 MR. COLLINS: This completes my presentation. I'd like to turn over to Jim  
6 Caldwell.

7 MR. REYES: Well, we'll stay on schedule if you discount the clarifying  
8 questions. We try and run this with a chronometer because we want to make sure we give  
9 you time for questions.

10 MR. CALDWELL: Thanks, Elmo. Good morning, Chairman and  
11 Commissioners. I'm here today to discuss a change in status of two Region III sites, Point  
12 Beach and Perry. They were in the multiple repetitive degraded cornerstone column or  
13 Column Four of the Reactor Oversight Process action matrix in calendar year 2006, which  
14 as you said before I believe this is good news. I'll let Bruce do the bad news.

15 As in the past four years since I've been discussing these plants, I want to take just a  
16 minute to thank headquarters and the other three regions for all the support they provided  
17 us this past year and of course thank the Region III staff for their efforts. We have a little bit  
18 of a twist here this year because of our recruiting success of our recruiting efforts and our  
19 management tools and we've been able to provide multiple FTE worth of resources back to  
20 the other three regions and headquarters this past year. So we're very happy that we're  
21 now paying back the effort that was provided us over the years. Slide 18.

22 The first plant I'll talk about today is Point Beach. This is the fifth time Point Beach

1 has been discussed at an AARM Commission meeting. Point Beach entered Column Four  
2 in April 2003 due to performance deficiencies associated with the auxiliary feedwater  
3 recirculation lines. These deficiencies resulted in three red findings and one yellow finding.

4 Region III completed the inspection procedure in 95003 in December 2003 and  
5 issued a Confirmatory Action Letter or CAL in April 2004. The CAL identified five focus  
6 areas; emergency preparedness, engineering operations interface, human performance,  
7 corrective action program and engineering design control.

8 As I discussed in the last AARM Commission meeting, we closed the crosscutting  
9 issues of human performance and corrective action program as well as four of the five CAL  
10 focus areas during the end of cycle progress in February 2006. Consequently the CAL was  
11 modified in April 2006 to focus Point Beach on the remaining open item of engineering  
12 design control. Following the completion of an expanded Component Design Basis  
13 Inspection or CDBI in September 2006 and an expanded Problem Identification Resolution  
14 or PI&R inspection in November 2006, both of which had a focus on engineering activities.

15 Based on inspection processes and assessment identifying Point Beach's  
16 improvement engineering, we closed the final CAL item. Point Beach was informed in  
17 November 2006 letter of the closure of the CAL and the one yellow and three red findings by  
18 transitioning them out of Column Four.

19 Point Beach is currently operating both units safely and throughout the past -- it  
20 should be noted throughout the past almost four years was able to maintain safe operations  
21 while continuing to address their performance deficiencies and increase their margins of  
22 safety.

1           Going forward, Region III will implement the baseline inspection program with the  
2           exception that's included in Inspection Manual Chapter 0305 of an extra 200 hours to focus  
3           on the licensee's assessments in the areas of engineering and corrective action program.  
4           That will occur later on in 2007.

5           In summary, Point Beach has achieved the necessary performance improvements to  
6           transition from Column Four to the licensee response column or column one of the ROP  
7           action matrix. Region III will continue to monitor their performance through the slightly  
8           modified baseline inspection program through the rest of the year. That concludes my  
9           remarks on Point Beach. Next I will discuss Perry. Slide 19.

10           This is the third time we've discussed the Perry plant at the AARM Commission  
11           meeting. Perry entered Column Four in August of 2004 due to multiple white findings  
12           resulting in at least two white findings being present for greater than four quarters. Region  
13           III completed the inspection procedure 95003 in May 2005 and issued a CAL in  
14           September 2005. The CAL identified four focus areas: corrective action program, human  
15           performance, inspection procedure 95002 follow up, and emergency preparedness.

16           Over the next year Region III conducted CAL follow up inspections assessing the  
17           adequacy of Perry's performance improvement plan, inspecting the implementation of the  
18           improvement plan as it related to the CAL focus areas and finally the effectiveness of  
19           various improvement activities in each of the CAL focus areas. We completed all of the  
20           CAL follow-up inspections in December 2006.

21           Following the assessment of our inspection results, we concluded during the end of  
22           cycle process in February 2007 that the crosscutting issues of human performance and

1 corrective action program as well as the CAL focus areas could be closed. Perry was  
2 notified in writing in May 2007 that the crosscutting issues the CAL and the two remaining  
3 white findings were closed resulting in Perry transitioning out of Column Four.

4 Perry has just returned to power operation after an overall good performance during  
5 a refueling outage. The plant continues to operate safely as it did the last greater than three  
6 years while addressing their performance deficiency.

7 Going forward, Region III will implement the ROP baseline program again with the  
8 exception of the extra 200 hours allowed by Manual Chapter 0305. These hours will be  
9 used primarily to focus on the licensee's assessment of their corrective action program later  
10 this year.

11 Additionally, following the end of the first quarter of 2007, Perry reported a white  
12 Mitigating Systems Performance Indicator issue in the emergency AC power area and  
13 consequently will transition to Column Two of the ROP action matrix. Therefore, in addition  
14 to the baseline and the extra 200 hours, we will be doing an inspection procedure 95001 to  
15 address the MSPI white.

16 In summary, Perry has significantly addressed their performance deficiencies to  
17 transition out of Column Four and as I said above to transition to Column Two of the action  
18 matrix. Region III will continue to monitor their performance and that concludes my  
19 comments on Perry.

20 MR. MALLETT: Good morning, Chairman Klein, Commissioner McGaffigan,  
21 Commissioner Merrifield, Commissioner Jaczko and Commissioner Lyons. I'm going to  
22 summarize for you our assessment of the performance of the Palo Verde nuclear plant in

1 2006. As you recall, Palo Verde is a plant with three Combustion Engineering designed  
2 reactor units and is located about 34 miles west of Phoenix, Arizona. It is operated by the  
3 Arizona Public Service Company and we have the senior leaders from that company here in  
4 the audience today. If you could turn to slide 20.

5 The performance of the plant is being discussed today since it declined to the extent  
6 that Unit 3's performance was assessed as being in the repetitive degraded cornerstone  
7 column, or Column Four, of the reactor oversight action matrix. Unit 3 was placed in this  
8 column for two reasons.

9 The first was a white level risk finding that we assessed at the plant for inadequate  
10 maintenance and corrective actions for an electrical relay problem on one of the emergency  
11 diesel generators for that unit. That occurred during the last quarter of 2006.

12 The second reason that they were placed in this Column Four was because they  
13 operated in the degraded cornerstone for all three units since 2004 for a yellow finding  
14 having to do with voiding in their suction line for some of their emergency core cooling  
15 system pumps. The reason they operated with a yellow finding was they didn't completely  
16 address all the programmatic and contributing causes to why they had that yellow finding.

17 In the background information we provided you there's a good chart that depicts the  
18 performance of these indicators. I would now like to highlight some of the performance that  
19 formed the basis for our current assessment and Palo Verde's performance in 2006 along  
20 with some of the root and contributing causes.

21 First of all as Jim Caldwell said for his plants, Palo Verde operated all three reactor  
22 units sufficient to protect the public health and safety and the environment in 2006. But

1 second, there were a number of problems that challenged the operation of the units in 2006.

2 In the interest of time, I will highlight them into three areas. There were equipment  
3 problems, human performance problems, and what we refer to as problem identification and  
4 resolution problems or corrected action program. Rather than go into the details of those, I  
5 would simply say in some of the background information we provided we listed or  
6 highlighted some examples of those.

7 In addition to these equipment problems and human performance problems, there  
8 were two problems that caused the NRC to perform two special inspections at the site. One  
9 in the June time frame of 2006 to follow up on a spray pond chemistry problem where  
10 essentially it caused fouling of some of their heat exchangers, most notably for key safety  
11 systems such as shutdown cooling.

12 The second issue that we followed up on with a special inspection was in the  
13 September time frame of 2006. This was the problem I referred to earlier with the electrical  
14 relay on the Unit 3 emergency diesel. In fact, that problem we issued the final white finding  
15 in February of this year for that issue.

16 The significance of both of these issues is that the causes for them were similar to  
17 the programmatic causes that were associated with the yellow finding and the reason they  
18 hadn't completely addressed all the issues of that. To list a couple: one was incomplete  
19 technical rigor when they evaluate problems and another was incomplete consideration of  
20 all aspects of those problems and what might be the extent of condition.

21 As I indicated at least two times in my presentation, the yellow finding for the suction  
22 line voiding has been open for the entire site, all three units, since 2004. The NRC did

1 perform two independent inspections to determine whether these root causes and  
2 contributing causes for that yellow finding could be closed.

3 One we completed in December of 2005 and the second one we completed in the  
4 August 2006 time frame. I think in some of your background information it says June, but  
5 we actually started the inspection in June and completed it in August of 2006. In both of  
6 these we're trying to examine the causes for the yellow findings and the licensee's  
7 corrective actions. We often refer to this as our 95002 inspection procedure.

8 Although the licensee we determined had address the technical aspects of resolving  
9 that problem that were associated with the yellow voiding, in other words they filled the pipe  
10 and resolved their procedures, they had not completely addressed all the contributing and  
11 root causes of the programmatic aspects of those problems. The licensee's performance  
12 during 2006 also warranted the issuance of two substantive crosscutting issues.

13 In fact, these were issued in the area of problem identification and resolution and in  
14 the area of human performance in 2005. They remained open in the year 2006 because  
15 they continued to have the similar problems that occurred that impacted plant performance  
16 in these areas. The licensee did initiate an integrated performance improvement plan in the  
17 fall of 2005. It was in the October time frame.

18 The plan describes their actions that address really the scope of these contributing  
19 and root causes of the performance problems, but they've been slow in actually  
20 implementing the actions to turn performance around. We still note problems with similar  
21 causes to the voiding issue and similar causes to the human performance and problem  
22 identification and resolution crosscutting areas. I will highlight a few of them.

1           One is they're not performing thorough review of issues when they occur. I think the  
2 Chairman referred to this as fixing symptoms rather than looking at the root causes.  
3 Another is that they are accepting incomplete answers and actions. For example,  
4 operations is not accepting less than what they would like to have from the engineering  
5 department. They're failing to question the impact of actions in some instances. There  
6 operability determinations have not been thorough in some instances. And as I mentioned  
7 before, their corrective action program or problem identification and resolution program has  
8 some problems.

9           We did take some key actions during 2006 to address this performance. We met  
10 with licensee senior leaders about every six months to understand what they believe were  
11 the root and contributing causes of this and what actions they were taking to make  
12 progress. We did increase some oversight at the site. We didn't increase the permanent  
13 resident function there. I'll try to redeem myself here, but we did increase our presence at  
14 the site with additional inspectors from the regional office.

15           We sent strong messages to them in our mid cycle letter that we issued in the August  
16 time frame of 2006 and in our letter we issued to them at the end of cycle, the March 2<sup>nd</sup>,  
17 2007 letter.

18           We also sent strong messages to them when we reviewed the special inspections for  
19 the spray pond issue and when we reviewed the special inspection for the emergency  
20 diesel. In fact, one of them you may remember the paper quoted me as saying this was  
21 egregious performance. I'll probably use a different adjective in the future.

22           We did present the results of our assessment for 2006 in an April 3<sup>rd</sup> meeting and

1 because of the performance entering the Column Four of our action matrix, Bill Kane and I  
2 participated in that assessment meeting with the licensee and it was a public meeting. If  
3 you could turn to slide 21, I'd now like to talk about the next steps.

4 Since Unit 3 is now in the repetitive degraded cornerstone, but the root and  
5 contributing causes for problems are programmatic in nature across the entire site, we are  
6 increasing our efforts to oversee and ensure the licensee takes necessary actions to correct  
7 these root causes and contributing causes to the problems. I would highlight five actions  
8 that we have laid out on our path going forward.

9 The first is the licensee is performing a detailed assessment of the cause of the  
10 performance problems and determining the steps they need to take to turn their  
11 performance around. I would highlight these are steps in addition that they believe they  
12 might need to take to what they already have in their performance improvement plan. The  
13 NRC is performing an independent assessment of this and we refer to this as our 95003  
14 inspection procedure.

15 The licensee has started their reviews in this month, May of 2007, and we have also  
16 started initiating our process. The licensee expects to complete their process sometime in  
17 late summer and we expect to complete our inspection of this area somewhere in the  
18 September/October time frame of this year.

19 The second action is the licensee is also performing a safety culture review for two  
20 reasons. One, because they're in Column Four of the action matrix but also because they  
21 have had significant crosscutting issues in human performance and problem identification  
22 and resolution since 2005. The NRC has discussed the scope of this with them. Both the

1 Office of Nuclear Reactor Regulation, Jim Dyer's staff and mine, met with the licensee to  
2 discuss the scope of this in March of this year and they have already started their  
3 independent assessment in the safety culture area. We expect to complete our review of  
4 this safety culture area in also the September/October time frame of this year.

5 The third action that we are taking is once the licensee has identified all the actions  
6 they need to take and we've agreed with them, we will issue a Confirmatory Action Letter.  
7 In fact we may issue one along the way just to get some things set down as a road map for  
8 things that they need to correct.

9 The fourth action is the NRC will inspect those areas once they are laid down on  
10 paper to assure that they meet those items before and correct them before we remove the  
11 Confirmatory Action Letter. We'll meet with them quarterly to address those and talk about  
12 progress.

13 The last action, I maybe should have mentioned this one first, the Region IV has  
14 reorganized similar to what we've done in the past in other regions. We now just have one  
15 branch focusing on Palo Verde. Then we also have an oversight group looking at that and I  
16 have in the audience Mr. Tony Vogel, who is our Deputy Director of our Division of Reactor  
17 Projects in Region IV. He's leading that charge. We have members on that group from the  
18 Office of Nuclear Reactor Regulation, Office of Enforcement and other areas.

19 We also as I mentioned earlier increased - we haven't, but we plan to increase our  
20 resident presence at the site with a permanent additional resident. It should take effect  
21 sometime in July of this year. The NRC senior managers agreed with all these actions at  
22 the agency action review meeting. I think the licensee recognized they must change their

1 performance at the site and these five actions I've outlined we believe will aid in that  
2 change.

3 This concludes my remarks and I will be glad to answer any questions at the  
4 appropriate time. I now turn the discussion back over to Jim Dyer.

5 MR. DYER: Thank you, Bruce. Chairman, Commissioners, that concludes our  
6 presentation. Can I have slide 22, please.

7 In summary, during calendar year 2006, two plants at Point Beach and Perry exited  
8 Column Four as Jim Caldwell discussed and Palo Verde entered Column Four as Bruce just  
9 completed, Bruce Mallett just completed.

10 Our review of the Industry Trends Program in fact identified that there was no  
11 adverse performance trends throughout the fleet and our assessment of the Reactor  
12 Oversight Process indicates that it continues to improve.

13 It's a successful program and we have an effort to continually approve through  
14 established metrics and a formalized survey of our stakeholders, both internal and external  
15 to the NRC.

16 In summary, though, the Reactor Oversight Process continues to be a vital and  
17 critical element to the NRC in ensuring that we protect public health and safety. That  
18 concludes my remarks. Luis?

19 MR. REYES: Chairman, Commissioners. That concludes our prepared  
20 remarks and we welcome any questions.

21 MR. MALLETT: This is probably dangerous. Excuse me. There was an  
22 additional point that Bill Kane just pointed out to me that we did as an action. We've also

1 extended our senior resident at Palo Verde for an additional time. He would normally be up  
2 for rotation at the end of this year, but we felt given the stage that Palo Verde is in their  
3 approval program it would be prudent to leave him there for least another year. Sorry for  
4 the interruption.

5 CHAIRMAN KLEIN: I'm sure this will surprise you, but I'm sure the  
6 Commissioners will have questions. Commissioner Lyons?

7 COMMISSIONER LYONS: Thank you, Mr. Chairman and we'll see how long  
8 my voice lasts. I really did appreciate the presentation. I think, Elmo, the extent of clarifying  
9 comments and questions that you got certainly indicates the extent of Commission interest  
10 and appreciation and I think also understanding of the importance of what you're  
11 accomplishing in those programs. They truly are critical.

12 As far as Point Beach and Perry, Jim, I certainly appreciated your comments  
13 describing how those plants have exited Column Four and Bruce, of course, we're sorry to  
14 see a plant entering Column Four, but I very much appreciate what you went through in  
15 terms of the actions that the Commission has taken, that the agency has taken, the actions  
16 that have already been taken as these problems became evident and the actions that you  
17 described that we'll be taking in the future. I have confidence that with those actions we can  
18 look toward resolution of that. But again, I really appreciated the overall presentation.

19 I have relatively few comments and they're probably both for Elmo, but others may  
20 want to comment. Elmo, you talked about the resident inspectors and I've taken any  
21 number of opportunities in the short time I've been here to compliment the performance of  
22 the resident inspectors without exception at every plant I visited, every fuel facility with

1 inspectors. I have been uniformly impressed with the quality, the dedication, the care that  
2 they bring to those tasks.

3 You mentioned that at least in the foreseeable future we appear to have a stable  
4 population of resident inspectors, but I wonder if there has been any thought to perhaps -  
5 this might be a survey of the present resident inspectors - to better understand both the  
6 positives and the negatives of that job and to perhaps see if there's anything that we can be  
7 doing to make even easier to attract resident inspectors in the future.

8 MR. COLLINS: I appreciate your comments. The resident inspector program,  
9 I think, has to be one of the strongest features of the agency's oversight processes with the  
10 independent verification of activities that it provides us. I think it's the nature of that work - I  
11 probably will need some help from the Regional Administrators at the right time in here to  
12 chime in about the challenges and the good parts about staffing the programs.

13 It's that feature, I think, which attracts people to the program and attracts high-quality  
14 people. The nature of the work is independent. It's very technical. I think people find it very  
15 rewarding as an inspection program and they get to go on site and get to see immediate  
16 safety feedback. So for those people who are really interested in the agency's safety  
17 mission, this really becomes a very, very good place for them.

18 It's because of those qualities and those capabilities and those competencies that  
19 they have and the insights they gain while they're on site that create the challenges for us  
20 on the other end where they become very competitive for really many, many positions within  
21 the NRC.

22 I think we do see some challenges, probably in the somewhat near-term just in terms

1 of turnover and as these people do get promoted and as they do receive other assignments,  
2 a lot of them within the agency. I don't think we've actually planned a survey to try to pull  
3 from that, but there may be some merit to what you say.

4 MR. KANE: I can talk a little bit about it – actually, some of the residents have  
5 gone on to very high places.

6 COMMISSIONER McGAFFIGAN: How many people sitting at the table are  
7 former residents, senior residents? Is everybody at the table former senior residents?  
8 Almost everybody.

9 MR. KANE: In terms of going back in history, Luis and I were in different  
10 regions running the Division of Reactor Projects which has the resident inspector program  
11 and the quality of people we were able to recruit and bring into the organization has I think  
12 been successful, but I would note over the years we are tapping into a much more  
13 experienced group as a plant has been operating for an extended period of time and so  
14 we're getting people at the front end who have really pretty good plant experience and  
15 building into their training how we operate as a regulatory agency.

16 But at the same time as Elmo points out they become extremely competitive within  
17 the agency at really all of the offices here because they bring the field experience. So that's  
18 a constant challenge for us for all the regions.

19 But I would say that in discussing it earlier and we do it on an ongoing basis, are we  
20 managing that challenge and are we dealing with it? I think uniformly you'll hear from the  
21 Regional Administrators that we are and I believe we are.

22 MR. REYES: If I could add, this is a perspective that goes back a quarter of

1 the century. I'm a graduate of Class One, the first-class ever for resident inspectors. What I  
2 was going to tell you is through the years we have done the survey because resident  
3 inspectors are pretty vocal so they don't need a survey to tell you. We have changed the  
4 rotation policy. We had to adjust the relocation factors. There are some very expensive  
5 areas.

6 We continue since the program was started more than a quarter-century ago, to try to  
7 deal with the irritants. I can tell you right now and that was the first thing I told the Chief  
8 Information Officer. We need to improve the communication, electronic communication with  
9 the site. The speed is not there and we're budgeting for that. I guess the answer is we  
10 have a continuing way to make sure we provide those individuals the best equipment, the  
11 best communications. They give us a lot of feedback on the inspection procedures.

12 There's a process in NRR where they give us feedback in terms of inspection and  
13 execution. So it is an ongoing survey that has matured for the last quarter of a century. But  
14 we do have a challenge coming up, I think, Regional Administrators can enhance this. We  
15 have a dual situation; a growing agency looking for that talent and now a record of success  
16 in the private industry. There is a number of very successful executives in the private  
17 industry who used to be resident inspectors and some of them actually worked for me. And  
18 so now you have a larger market out there looking for talent. So my point being is we  
19 cannot be static on how we look at this.

20 COMMISSIONER LYONS: I guess perhaps my question then is should we be  
21 doing anything specific as far as a pipeline leading toward the inspector core? And  
22 certainly, personally, I would be very, very receptive to any ideas or suggested changes that

1 the Commission might entertain to ensure that we have that pipeline and that we have very  
2 well qualified individuals coming up to take those absolutely vital positions. My time is up.  
3 I'll stop there.

4 COMMISSIONER MERRIFIELD: May I just for a second. I would make one  
5 brief comment to credit them. When I first started visiting plants back in '98/'99, it was not  
6 infrequent that I would get complaints about resident inspectors. We have folks who were  
7 arbitrary. They weren't risk informed. Imperial in their bearing in various points.

8 I give the staff, Bill Travers and Sam and Luis and Jim, a lot of credit with Regional  
9 Administrators at the point of hiring a consistently great group of resident inspectors. We've  
10 always had great resident inspectors, but now we consistently have great resident  
11 inspectors. And for me, and I don't know about the visits others have had recently, but I  
12 don't get any complaints about resident inspectors anymore. What I get are utility folks  
13 saying they're tough but they're fair and they're open in telling me what my problems are.

14 I think the relationship - arm's length relationship that we have between our resident  
15 inspectors and the utilities is where it ought to be. They're doing a great job and frankly,  
16 overall, I think we've got a better core than we had before. We had great people before, but  
17 not consistently. Now I think we've got great people consistently. That's a great measure  
18 success for these guys.

19 COMMISSIONER McGAFFIGAN: Mr. Chairman, I think that has a lot to do  
20 with the ROP, the discipline of the ROP which came on in 2000. It was being tested in '99,  
21 but I think we used to get complaints about Regional Administrators, too, if you read the  
22 Towers Perrin Report. If you have processes and you have different people inspecting

1 different things and different Regional Administrators behaving differently, that's the NRC  
2 that I came to and Jeff experienced a bit of. It's not the NRC of today.

3 CHAIRMAN KLEIN: I think the importance probably is that the ROP, the  
4 resident inspectors and all that just shows that we have a variety of tools to do our job and  
5 they all complement each other. We talk about levels of defense in the industry. This is  
6 probably the level of defense of inspection so we have a variety of tools and a variety of  
7 things.

8 I must say that when talking with my international colleagues, I don't think any  
9 country has the kind of resident inspectors that we have. When you look at various  
10 international programs, this is a strength that we have that I would like to see other  
11 countries follow because it would give that extra set of eyes out there and watch things in a  
12 different way.

13 To follow up on Pete's comment about the resident inspectors, clearly, you've heard  
14 from all of us the importance of the resident inspectors. As we look at the demographics  
15 and the change within the agency and looking at '09 of having 1,200 employees in less than  
16 three years, it tells us that we've got a demographic shift going. How long does it typically  
17 take to train a resident inspector, to get him up to be a resident inspector?

18 MR. REYES: It depends on the background. We have a very specific manual  
19 chapter that gives you the qualification. It could be 18 months to two years. There's clear  
20 exceptions to that on both ends. That would be a general term.

21 CHAIRMAN KLEIN: So at this point you don't see a pipeline problem on  
22 resident inspectors?

1 MR. REYES: Our concern is you as a resident inspector; you really become  
2 effective when you get on site. It's not that you're not qualified, but when you get on site  
3 and you learn as you know each one of our 104 units is different. Each organization that  
4 runs them is different. See you get on site and you have what I call startup costs and  
5 learning points of contacts, equipment, how they measure this, et cetera, et cetera. So you  
6 become efficient after X amount of time.

7 So the time on site could be shrunk because of the promotion opportunities that we  
8 just have in a dynamic. So we might not get as much bang for the buck. Not necessarily  
9 that they're not qualified, but you really become after experience on site, you become very  
10 effective. You know where to go, where to look, where the good information is, where the  
11 not so good information is. You just become very effective. That will be the concern we  
12 have, the promotion opportunities don't let that individual maximize the capability.

13 MR. KANE: I would just add that we've talked about the resident inspector  
14 program and I appreciate how important that is, but our program also includes the specialist  
15 inspectors in the regions. I would have the same sort of concerns and comments about that  
16 group as we do about the residents. Again, I think we're hiring some very good people and  
17 they're doing some very good work. That is teamwork that comes together with the  
18 residents and the specialist's inspector.

19 CHAIRMAN KLEIN: I think while there are some startup learning curves, it's  
20 also important that you have a rotational system so they don't go native.

21 MR. REYES: We have no problem in that department.

22 CHAIRMAN KLEIN: It really is a strength that hopefully other countries would

1 take. Elmo had talked about precursors in some of the activities. Have you all looked at  
2 precursors for a plant that's in Column Two, what actions they need to take to keep from  
3 getting to Column Three and the same thing if they get in Column Three, have you looked at  
4 actions they take that would keep them from going that next step?

5 MR. DYER: Chairman, I think we did discuss going from Column Three to  
6 Column Four. Going from the licensee response to the regulatory response, that happens -  
7 I forget – thirty some-odd times. That happens and it goes back when you get the repeat  
8 white findings and then they start looking at moving to the Column Three.

9 I think one of the things we reviewed in discussions and sidebars during the agency  
10 action review meeting was a key candidate for the precursor to a plant landing in Column  
11 Four has been a failed 95002 inspection where either multiple white findings or a yellow  
12 finding has remained open for prolonged period of time and I think that's the key. It gets to  
13 the ability of a licensee to identify the root causes and correct the problems.

14 In the case where 95001, the nature of the inspection is go look at the specific  
15 problem and did they fix it. In the 95002 it has an extent of condition clause of additional  
16 inspection. So you look at the root cause of the problem, but the inspectors also say where  
17 else could this occur and has the licensee, if it's a significant problem, and they fixed the  
18 specific problem, where else would this also apply?

19 As Bruce described in the case of Palo Verde and Jim had described earlier in the  
20 case of Perry, these plants that migrate through the cornerstones, it's the inability to  
21 successfully implement a wide scope of corrective actions that usually lands them in  
22 Column Four.

1 MR. REYES: If I could add the other side of story. Yesterday we met with a  
2 utility who has a site in Column Two. There are some potential issues that could make them  
3 move from the left to the right of the action matrix. They have actually sat down, understand  
4 which indicators are going the wrong way and if they cross the threshold, et cetera, et  
5 cetera, will move them, and they have put a comprehensive plan like they were in Column  
6 Four.

7 Basically they're saying clearly these indicators, these findings, are showing us we  
8 have some work to do and we don't want to undermine it. We clearly don't want to be in  
9 Column Four. Here's all the things we're going to put in place as an organization to get to  
10 the scope that Jim was talking about. That difference, in my view, that difference is  
11 important on how the organizational licensee reacts to these findings. If they don't look at it  
12 on a broader point of view and broader program implications, they could get into a situation  
13 where you do find yourself in the fourth column.

14 MR. MALLETT: I'd like to add something. A key part of the Reactor Oversight  
15 Program is this problem identification and resolution inspection we do not only once every  
16 couple of years but throughout our inspection process. I think you can look at all the plants  
17 that have traversed the action matrix or as you said Chairman, Column One over to Column  
18 Four, they have similar characteristics. One of those is they don't resolve issues. In some  
19 cases they don't identify the issues or the extent of them. So I think that is a key part of the  
20 program that I think has been quite successful in picking up on those issues very early.

21 MR. CALDWELL: Just to add to that. If you look at the Column Four plants  
22 that walk through the matrix and even possibly the ones that get there through a red finding,

1 you'll see that they have crosscutting issues in both human performance and PI&R or  
2 corrective action program. So those usually come before they get to the action matrix.

3 It is somewhat predictive in that way and for the licensees like the one Luis just talked  
4 about, they also fail or are unsuccessful on a 95002 and they do have both crosscutting  
5 issues and we've had lots of discussions with them about what they need to do to recognize  
6 how to turn that around so that they don't transition into Column Four. So there are  
7 indicators, it's just how well a licensee can recognize it and take advantage of those  
8 crosscutting areas to improve their performance.

9 CHAIRMAN KLEIN: Thanks. Commissioner McGaffigan?

10 COMMISSIONER McGAFFIGAN: Thank you, Mr. Chairman. I'm going to  
11 come back to resident inspectors, but I'm going to start with - we haven't mentioned today  
12 the fact that we do annual public meetings at various thresholds. Palo Verde gets Bruce  
13 and Bill. In some cases the public meeting is handled by senior residents, I believe, or at  
14 most the Branch Chief.

15 We got one complaint recently at Palisades as to whether we did an adequate job of  
16 getting the people who wanted to be there there and I would be interested in your reaction.  
17 I know in some places we don't get a lot of people and I have some thoughts about that too.  
18 But right now the Palisades case, was that fairly unique or did something fail in our  
19 notification system that the meeting was coming up?

20 MR. CALDWELL: You're talking about the annual end of cycle meeting?

21 There were some individuals who had been in communications with headquarters over the  
22 license renewal meetings and they had been getting contacted directly through that process.

1 The end of cycle process didn't have that aspect nor did we know that these individuals  
2 would be contacted directly.

3 So we had put out -- there was press release and meeting notices and it was on our  
4 website, but I believe these individuals were waiting for a personal phone call. We're trying  
5 -- we don't want to get into that kind of necessarily --

6 COMMISSIONER McGAFFIGAN: But you could expand for sites that have  
7 ongoing significant interest. You could find out from the headquarters staff who else should  
8 we be inviting and that's for all the regions, probably more Sam than anybody.

9 MR. CALDWELL: We were looking at the service list and I believe we are  
10 going to talk to them about whether they want to be on the service list for notification. The  
11 end of cycle meeting was well publicized. It's just they weren't looking for it.

12 COMMISSIONER McGAFFIGAN: I know the end of cycle meetings are not  
13 widely attended in some parts of the country, to say the least. Is there anything more that  
14 we could do? We have meetings, it's a public meeting, but in cases where there isn't a lot of  
15 attention, should we be trying to go to the local media and meet with them? Or the editorial  
16 board and meet with them and say you can come to the meeting, but here I do want you to  
17 be aware that this plant is running pretty well or this plant is not.

18 MR. REYES: Bill Travers can back me up, but there's a particular part of the  
19 country where we don't seem to get a lot of traffic. It's just interesting; in the Southeast  
20 specifically. It's very hard to get either media or the public to attend some of the  
21 assessment meetings when the plant is doing well and it's in Column One.

22 COMMISSIONER McGAFFIGAN: Part of it, I fear, is the language of the

1 meetings tend to be like the language of this meeting. We all can understand it.

2 MR. REYES: I can tell you we will call directly the press and they say, "What  
3 you going to say? Send me a letter, I can write the story from here." Some of them are  
4 very remote locations it takes a lot of time, et cetera, et cetera. The most effective  
5 technique that I found out is not us. It's a licensee.

6 Around the meeting they invite local government officials for something else and  
7 invite them to the meeting and then typically local government officials, the county seat or  
8 the town mayor or whatever you have, and some people are interested more to talk to the  
9 mayor or the local government then to us, but they end up sitting in our meeting. There are  
10 techniques like that, but it's very difficult for us to get people to go. They have to drive a  
11 long period of time because the plant is remote and to hear good news. A successful  
12 electronic process is that they electronically a letter and all that.

13 COMMISSIONER McGAFFIGAN: It's one of the great strengths of NRC as  
14 the Chairman said that we have residents and other nations don't. Their families and their  
15 lives are on the line, which we get no credit for. The notion that we're complacent and we  
16 don't identify things is obviously absolutely false. Nobody would risk their family by missing  
17 something. I just want to try to find ways to get the residents at the annual meeting or some  
18 other way, more visible.

19 MR. REYES: I can tell you that that happens, having been one, on a  
20 day-to-day, whether it's in the grocery store, or in the gas station, or at church, people end  
21 up knowing who you are in the community, especially smaller towns. They know who you  
22 are. They talk to you.

1 MR. RICHARDS: Stu Richards, NRR. Just briefly, Commissioner, you asked if  
2 there's anything we can do to improve these meetings. We do have a working group that  
3 has been formed with Beth Hayden of OPA and Undine Shoop in the EDO's office and the  
4 Public Affairs Officers in the four regions. The purpose of that working group is to examine  
5 exactly that question. Is there a way we can draw more people to these meetings?

6 COMMISSIONER McGAFFIGAN: I didn't intend to use all my time – I want to  
7 go back to resident inspectors.

8 MR. CALDWELL: Could I just add one addition. I'm sorry. We are going out  
9 to do local outreach with local counties and those have been successful as we talk to them  
10 and introduce them to the residents. We've noticed that the end of cycle meetings more  
11 folks are coming as a result. So, we are doing more.

12 COMMISSIONER McGAFFIGAN: I think it's an area that's a strength of our  
13 program and I'm glad to hear from Stu that we're trying to make it stronger. On resident  
14 inspectors, I'm going to recycle, as Jeff will recognize, some old ideas. The Chairman said  
15 something yesterday about having different paths for different people. I think it was in the  
16 context of the universities. I have never gotten anywhere. It's really Joe Callen's idea, but it  
17 was attributed to me, but there are a few folks who really should stay residents and  
18 shouldn't have to get into the rat race of the regions and headquarters in order to get their  
19 GG-15.

20 So I've talked over the years about super senior residents who would be assigned to  
21 one place and maybe go around and help train others and could get a 15. I don't know that  
22 the only pathway to a 15 has to be headquarters or the regions. I think having a pathway

1 where people who are really good residents and really want to stay residents can stay  
2 residents. It is not something that should be dismissed, but I will mention it was Joe  
3 Callen's idea in a conversation I had probably around 1997 or '98 with him.

4 The other thing with regard to residents, I did go and get the memo from Elmo to the  
5 four Deputy Regional Administrators that was mentioned in the thing. Greta Dicus and I  
6 started the effort to try and get really good information about resident demographics. I'm a  
7 little disappointed we don't have region by region demographic data. The paper, pages 65  
8 and what not, my colleagues probably should have their staffs get a copy of this and give it  
9 to them.

10 The trends look okay, sort of on a global basis; I would agree with that. I have seen  
11 previous years where we had region by region trends in here. While things were great in  
12 one region they weren't necessarily great in the others.

13 So I'd urge you to go back to having region by region data and I almost would urge  
14 you to go back to putting it in the paper rather than saying here's the ADAMS number to get  
15 it. If any of the Regional Administrators has a particular problem at this time, maybe now is  
16 the time for us to hear it and how you are planning to cope with it.

17 MR. REYES: We have the information region by region and the Regional  
18 Administrators can speak for themselves. There are some sites that we have people who  
19 then get great credentials and leave. Commissioner Jaczko just hired one of our resident  
20 inspectors from Indian Point. So there are a few things we can do if you don't hire them.  
21 We do have some because there are some very good individuals and great taste. It's  
22 relatively close. I'll let the Regional Administrators speak on their examples, but we do have

1 the data and we look at it and can tell.

2 MR. MALLETT: I'll start since I've been the recipient of your criticism in the  
3 past, Commissioner McGaffigan.

4 COMMISSIONER McGAFFIGAN: It wasn't criticism it's just what the data  
5 said.

6 MR. MALLETT: It is always a challenge and it will continue to be a challenge  
7 and I think Chairman Klein said it, while you have to keep a pipeline behind because these  
8 people as Elmo indicated, we give them great value added work to do. They also interface  
9 with senior leaders and that's a real high for them, but they're also recognized early as  
10 people that can move on. You constantly have to work on that challenge. We try to  
11 manage that.

12 In Region IV for example this year, we will turn over six of the 14 senior residents.  
13 Those aren't all leaving the program, so let me comment to that. Some are going to other  
14 sites. We've changed now and are giving them a choice and not having to always come  
15 back to – what did you call it - the rat race in the regional office.

16 COMMISSIONER McGAFFIGAN: It's not a rat race. Regions have a mission.  
17 We have a mission here at headquarters. Residents have a mission and forcing residents  
18 out of being residents if they really love to do it is not the way.

19 MR. MALLETT: We've changed. It's been a very good comment in the past  
20 from you and we changed. I think all the regions are doing that. I would add something  
21 though as some of the senior residents we've had come back to the regional office have  
22 also contributed significantly. These are great mentors for other people.

1           COMMISSIONER McGAFFIGAN: I see all the senior residents in the room  
2 close to me. It's good that people move on.

3           MR. KANE: In fact, some have stayed since the beginning of the program.

4           MR. CALDWELL: I guess I'm in a good part of the curve right now. I don't  
5 have a lot of – we have a couple in '07 resident inspectors that are going to retire and one  
6 resident inspector that's going to Region II. I have two seniors; one's looking outside and  
7 deciding what he wants to do and another one is in the process of looking in Region ii for  
8 another site. That senior is coming up on her end in 2008. So in 2008, I'm only looking at  
9 one and that's the person that's looking for other places right now. I'm in pretty good shape,  
10 plus we have a pipeline of about 16 RERIs that are preparing to step in as we get the  
11 unknowns.

12           COMMISSIONER McGAFFIGAN: I don't know whether Bill - I'm sorry to take  
13 so long. That is my last question.

14           MR. SAM COLLINS: Thank you for the question. Sam Collins in Region I. I  
15 wouldn't characterize the issue as a problem as much as a continuum of the management  
16 challenge to be sure we have the right people in the right place.

17           It does go in cycles and it's influenced by the five-year mark. Five out of seven years  
18 is when the site team usually starts looking towards opportunities in order to preplan their  
19 career and their personal life. We've had turnover in Region I. This is our time. It's  
20 combined partly because of the location of Region I and the proximity to headquarters,  
21 which is fairly unique, the opportunities in new reactors and the timing of the five years. We  
22 have 37 individuals in the program. We had seven individuals who left the program in '06.

1 This year to date we've had seven people who have left the program in '07.

2 COMMISSIONER McGAFFIGAN: So you're the most challenged region?

3 MR. COLLINS: Of those, just to give you an example, four of those went to  
4 headquarters, one went to Region II, and two of them are internal to Region I. That's the  
5 type of demographics we have. We've been getting good support and covering those  
6 vacancies and it's a combination of people from the region. Region III has provided us with  
7 some expertise and then we're filling competitively, of course.

8 COMMISSIONER McGAFFIGAN: We used to have data as to how long we  
9 were at N - 1 at sites where there were fills.

10 MR. REYES: We solved that problem with a policy change. Every time one of  
11 these issues come up and we can now overlap and start -- if we know somebody's leaving,  
12 we have a double incumbent overlap to turn over knowledge transfer. We have put some  
13 things in place.

14 MR. TRAVERS: Bill Travers, Region II. Just very quickly, we've lost -- we've  
15 had a relatively high turnover rate in the last year. We lost 16 people from the program.  
16 The good news is only three of those folks are out of the agency; two by virtue of retirement,  
17 one going to DOE. We have a unique challenge in Region II that assumes with the  
18 construction projects that are in the offing that we need to prepare and be ready for an  
19 additional set of resident inspector focused folks.

20 We're in the initial stages of developing a plan and bring those people on board and  
21 developing them in an area where we haven't had a great deal of recent experience.

22 Brown's Ferry efforts have helped in some respects and maybe at Watts Bar we'll also face

1 an additional challenge. We're looking at all of those challenges as an integral part of what  
2 we look at week to week in Region II as we sit down as a management team and try to  
3 prepare and develop the budget models that will support our being able to bring people on  
4 board at the right time to get ready for these projects.

5 COMMISSIONER McGAFFIGAN: Given how much discussion there was  
6 today of residents, I suggest you buttress the paper a little bit back to where it used to be.

7 MR. REYES: We'll take it back.

8 CHAIRMAN KLEIN: Probably the other regions get nervous when they see  
9 Bill, realizing that he may take some of their inspectors.

10 MR. REYES: I hope you got all the examples and that's where you have to  
11 step back. Resident inspectors we rotate and we do have a rotation policy. They do go to  
12 other sites. They do go to other sites in other regions and I think we have to make sure that  
13 we don't view that as completely as a negative. There's a lot of plusses there.

14 CHAIRMAN KLEIN: Commissioner Merrifield?

15 COMMISSIONER MERRIFIELD: Mr. Chairman, first I'd like to make note, we  
16 do have two plants that have gone out of Column Four, Point Beach and Perry. Those are  
17 sites that we've been tracking those for a long time. I think it's a positive thing. It's  
18 unfortunate that in some cases it took as long as it did for them to get out of Column Four,  
19 but nonetheless, success is success.

20 I think it's a positive thing for our licensees. I think it's a positive thing for our agency.  
21 It's a positive thing for Jim Caldwell and his staff to have them out of Column Four. I wish  
22 them both success in maintaining and enhancing the improved performance they have

1 because obviously we want our licensees to do well. Obviously, we also had some  
2 discussion about Palo Verde.

3 Bruce, you went into the discussion about some of the things the licensees is doing,  
4 some of the actions they've taken. They've had some major changes in management at the  
5 utility in order to address what they thought were some concerns. They put in a number of  
6 new programs in place. Randy Edington obviously has had a good part to deal with those,  
7 given his role as the Chief Nuclear Officer.

8 Can you talk a little bit – well, let me approach this by saying the Commission, not  
9 including me, will be meeting directly with the utility I believe sometime in July. I won't be  
10 part of that meeting, so I'll take this opportunity to sort of ask a question now perhaps in  
11 anticipation of further discussion you'll have at that time. You talked about some of the  
12 things that they are going through. Can you give me a little bit more sense of are things  
13 going on the right track? Are they making progress? Do you discern improvement? Can  
14 you give me a little bit more qualitative understanding about where things are versus where  
15 they been?

16 MR. MALLETT: I'll give you a high level review. I indicated some of the  
17 causes, contributing causes for the problems. I also indicated in 2005 in the fall they had an  
18 integrated improvement plan. I think Randy Edington, the Chief Nuclear Officer and Vice  
19 President there would agree with me that they've got a pretty good plan in place. It's  
20 implementing those actions that they set out in that plan to achieve the change that they  
21 need to change.

22 If you ever look at an organization for change, there's usually a period - I use this U-

1 shaped curve that I was trained on. There's a period over here on this side where people  
2 are in denial. They don't believe they have a problem. Then there's a period that they're  
3 not sure what direction they're going in and then there's this period where they start getting  
4 that direction and they improve the performance. I believe they now recognize it took some  
5 time over the last year to recognize that they have a problem they have to change in their  
6 performance.

7 It's now making the organization change to get those results is where I think they are.  
8 So I think if you took the U-shaped curve, you're probably on the bottom trying to turn up to  
9 how we can we affect that change. Does that help?

10 COMMISSIONER MERRIFIELD: That helps. We have a little bit of a  
11 difference here. I think with Perry and with Point Beach, we have a couple of units which  
12 have had some repetitive issues in the past. The issues that we saw there - we saw issues  
13 there at times fast. Palo Verde was a unit where for a very long period of time everything  
14 was going very well. They received I think 10 INPO awards in a row and had always during  
15 the time I've been on the Commission been considered a solid plant. Obviously, things  
16 weren't quite what we thought.

17 I think it's worthy of us looking back perhaps at some of this and saying are there  
18 beyond the performance indicators, beyond the inspection which I think worked. You were  
19 giving me a lot of good information about your views of where you thought things were  
20 going. But are there some things that we and our licensees can learn about that trend in  
21 performance having been so good for so long and then sort of hitting a cliff and falling?

22 Is there something we can take from that? I don't expect an answer to that right off

1 the bat, but I think it is worthy of thinking about. Are there some greater lessons we can  
2 take in this particular example in terms of what we do?

3 MR. MALLET: I think there are clearly some lessons and we talked about  
4 some of those before. I think when you look at plants that make this transition, they all  
5 seem to have these same characteristics of root causes of the problems. So as I said, a  
6 key lesson is to listen to our resident inspectors and when they tell you there's a problem to  
7 see what else we need to do to turn that around.

8 COMMISSIONER MERRIFIELD: I think that's exactly right. Mr. Chairman, this  
9 is the next to last public meeting I'm going to have as a Commissioner. We've had great  
10 achievements as an agency and no greater achievement it seems to me is improving  
11 performance of the plants that we oversee. We talk about license renewal. We talk about  
12 new plant orders. A litany of issues we do on decommissioning. All kinds of things. But at  
13 the end of the day, the most important thing that we do is oversee the ongoing safety of  
14 these plants, of the operating plants. That is the most important thing that we do.

15 And clearly, looking historically of where we were and where we are today, I think is a  
16 notable sense of accomplishment by the team that this Commission has been pleased to  
17 have over the years and the team we have here today. As I said before, I think we've got as  
18 good a resident inspector team as we've ever had. And I agree with Nils Diaz, I think we  
19 have a reactor oversight program which is a model for the world.

20 I think the performance indicators as a tool have worked very, very well. I think our  
21 ability to anticipate issues, the use of targeted inspections is where it ought to be. We can  
22 always do better. We should always strive to do the best we can, but I think we've done

1 great work and I certainly want to leave that with our staff.

2 CHAIRMAN KLEIN: Thanks. Commissioner Jaczko?

3 COMMISSIONER JACZKO: I wanted to start with a question just about  
4 inspection resources. I think, Elmo, you didn't touch on this too much in your presentation.  
5 You mentioned briefly that relative to last year inspection hours were relatively consistent,  
6 which seems to represent somewhat of a stabilization in the program.

7 Going through in a little bit more detail, I was wondering if you could perhaps walk me  
8 through some of the breakdowns where there were increases and decreases among the  
9 different kinds of inspection activities. I think this was one of the backup slides. Baseline  
10 inspections were down about 3%, which I assume is probably consistent with just normal  
11 fluctuations. There was an increase in plant specific inspections and a significant increase  
12 seems to be an increasing trend in other activities by about 11%. Maybe you could just  
13 comment if you're familiar with this chart of what those particular activities are.

14 MR. COLLINS: The plant specific inspections, I think, are those that are  
15 associated with our supplemental inspections and so that's where we find issues and we  
16 actually are sending resources so that's above the baseline. That's that breakout. Other  
17 activities, I think, it's difficult to tell from the data because it depends on the charge times  
18 and the definitions when you look at it at the macro level like this.

19 I believe that what we're seeing here is an emphasis on the part of the inspectors.  
20 It's really for communications and how we characterize that time when we communicate  
21 with people, with the regions and with licensee management. Its part of a definition change  
22 and how people are viewing those activities which are very vital and depending on where

1 you draw the line for definition can make a definite change on where the hours appear in the  
2 time charges at a macro level. So that's my best assessment of that.

3 MR. DYER: Commissioner, if I could add, the baseline inspection fluctuation  
4 as we said has a lot to do with just a routine baseline. A lot of them are tri-annual  
5 inspections and just how things line up in that. Additionally some of the plant specific  
6 inspections, there's a lot of the close out of the two plants that exited Column Four. There  
7 was an increased number of white findings, some of them in the security area of plant  
8 protection and so we did do some additional 95001 inspections.

9 MR. MALLETT: I would add that it's important that something Jim Dyer said  
10 earlier. We are looking to make sure that we add value when we do our inspections. We  
11 did these component design basis inspections. There's a lot of resource intensive effort in  
12 that but we're gaining a lot of findings from that that I think are proving performance.  
13 Another one we're looking at is in-service inspections right now to look at that area with all  
14 the material issues we have. I wouldn't want you to leave with just the numbers issue  
15 because I think it's important that we look beyond that as where we are putting those  
16 resources.

17 COMMISSIONER JACZKO: I appreciate that and Elmo I think that's certainly  
18 helpful to understand what some of the other activities are because as you said a lot of  
19 these are communication activities. As Commissioner McGaffigan mentioned, I think those  
20 are important activities and it's good to see that residents or inspectors are dealing with  
21 some of those issues.

22 The next question, ironically, was on the component design basis inspections. The

1 question is relatively simple. Maybe you could just comment. I think we've been doing that  
2 for about a year now. Perhaps anyone who wants to could comment on what they think the  
3 strengths are right now with those inspections. Any areas for improvement in what the  
4 general sense is of how those are proceeding.

5 MR. COLLINS: I'll start and then I'll let others comment. Just for the quick  
6 status, we have 47 completed and 19 remain. They'll be done by the end of the year. I  
7 think one of the strengths of this; I see two things I'll communicate to you what are positive  
8 about these inspections.

9 One, it is a design and engineering inspection so I think value is brought by – it's a  
10 different way of looking at things as opposed to maybe some of the habitual ways we've  
11 done in the past with vertical slices. This is actually taking the components and actually  
12 coming around and looking at it differently, trying to identify those risks, low-margin,  
13 important operator, or human actions that are associated with those components.  
14 Whenever you look at something differently, you're not habitual anymore and I think value is  
15 brought.

16 The second one I think has brought much value for safety are the actions that have  
17 resulted on the part of the licensees. They know we are going to come and they're looking  
18 as well and so that gets another whole cadre of eyes on the issues to help identify  
19 problems. There have been a number of findings. There are 105 non-minor findings have  
20 been raised, so these are issues that need to be addressed.

21 COMMISSIONER JACZKO: With some of those findings are those issues that  
22 have been identified through other baseline inspection activities in a different way?

1 MR. DYER: Commissioner, they could have been. I think the importance  
2 when we develop the CDBI inspection is that it is focusing on the most risk significant  
3 components. We used to look at a system and this is a much more effective focused  
4 inspection at the key components in the plant and I think the point Elmo made is I've seen a  
5 number of reports that have come in where a licensee has identified in a licensee event  
6 report where they discovered design and then you find out that the feedback comes back is  
7 the two weeks before and two weeks after this report is when the region is going to show up  
8 with their CDBI inspection. I think a lot of the leveraging going into that is good.

9 The one thing about the CDBI because of the nature of the risk significance of it is  
10 that we're going to hit diminishing returns after the second or third iteration because as you  
11 walk down the risk significant components, you're focusing on things. I think the new ROP  
12 alignment process where we're looking at the value added by inspections is critical as we  
13 move toward a more dynamic baseline inspection program. I think that's what we're trying  
14 to get to leverage this move and to get people in the NRC and the industry focused on  
15 looking at safety issues throughout the plant.

16 COMMISSIONER JACZKO: So right now sites will get a second round. That's  
17 the plan at this point?

18 MR. DYER: Yes, sir. If we have a better idea, we may supersede it. But I  
19 think we're going to do the first round, look at what we've got, and make a decision on what  
20 the frequency should be possibly of an inspection, what other work we have on our plate,  
21 and the focus that we need.

22 MR. CALDWELL: Also to add to your question I believe that a number of the

1 findings would be difficult to come up with in the baseline program other than an event  
2 because they're looking - this group is looking very deep into the design of the components  
3 and looking at calculations. In particular, we just did the second; the first one was a pilot at  
4 Oconee and we did the second one, so we have an example where there was two.

5 The second one they focused more on the electrical calculations and found a number  
6 of issues. A good part of this is that other licensees follow what are being found at each of  
7 these CDBIs. So when they get prepared they look in certain areas too and are finding  
8 more things. So it's driving them to think about things.

9 One of the sites that we are getting ready to do a CDBI and recognize their counts  
10 were old and they needed their electrical counts so they went and started looking at them in  
11 advance of the CDBI and started finding problems. At least it has a very therapeutic effect  
12 besides being a very thorough inspection and you can find additional things by doing it more  
13 than once.

14 Plus, as licensees modify the plant, if the frequency changes you would then look at  
15 the modifications to see if they were in compliance with the design or if they changed the  
16 design.

17 MR. KANE: That doesn't offend us. We'd rather have them identify the  
18 problems and solve them before we get there. If they're communicating well with each other  
19 on these inspection results across regions then that's to our advantage. It improves safety  
20 and that's what we're trying to do.

21 COMMISSIONER JACZKO: I think that's good to hear. Sam, I don't know if  
22 you wanted to add anything?

1 MR. SAM COLLINS: Sam Collins, Region I. Commissioner, I'm agreeing with  
2 everything that's been said responding to your question on the benefits. Licensees do a  
3 significant pre-CDBI review. Sometimes they pick the same components based on their  
4 independent review, sometimes not, but there's generally overlap. We get an opportunity to  
5 look not only independently but also look at what they have found and the extent and  
6 breadth of their review. It's a good benchmark on their engineering. The independence of  
7 the inspection is important.

8 I was at the Oyster Creek CDBI exit last week. Two contractors, broad  
9 representation of the region and in some cases other regions. So it's a good independent  
10 review beyond the normal program so you get a lot of that type of feedback. You also get  
11 integration of the PRA, human factors, human response to events and in some cases that's  
12 compensatory measures for design issues and the fundamental operation of the plant. It  
13 gives you a good cross connect they wouldn't normally see within one type of inspection.

14 The states also have the opportunity in many cases to observe these inspections,  
15 either be an integral part as an observer or come in and out of it as its demands. It does  
16 provide for an educational aspect of what our program is, what its finding and our  
17 capabilities.

18 MR. MALLETT: If I could add one more thing. There's another benefit we're  
19 gaining from this and that is knowledge transfer from the experts we bring on these teams  
20 we're learning in the area of design which is one area we need to learn in.

21 COMMISSIONER JACZKO: I appreciate that and my perception has been that  
22 this has been a good program and it's good to hear that staff uses it that way as well. I have

1 some other questions, but I think I'll wait.

2 CHAIRMAN KLEIN: Go ahead. I think we've already gotten too far.

3 COMMISSIONER McGAFFIGAN: Can I make one comment on that question?

4 The father of this program is Nils Diaz, Chairman Diaz. I enthusiastically supported him as  
5 did Jeff when I think we might have been a three Commission then, maybe back to a five  
6 Commission. Nils knew -- everything you just said, he predicted back in whatever year it  
7 was would be the result. I'm sure he'd be very proud of the discussion that just occurred  
8 because it's exactly what he predicted would happen.

9 COMMISSIONER MERRIFIELD: I wholeheartedly agree.

10 COMMISSIONER JACZKO: Just one brief question. Elmo, this goes back to  
11 something you mentioned early on. That's the change or the plan change in the unplanned  
12 scram performance indicator. Maybe you could talk about that a little bit more; what the  
13 new indicator is that will be used to replace that and how that will work a little bit.

14 MR. COLLINS: The new initiating event indicator is unplanned scrams with  
15 complications. It's trying to help us. With the previous indicator the unplanned scram with  
16 the loss of heat sync, we ran into definition difficulties in FAQ's and some consistency on  
17 what that was. We think this new indicator we're able to eliminate some of those problems  
18 and they become the more interesting scrams. The have a more risk relevance to them as  
19 opposed to just a scram where nothing happens. But a scram, maybe the operator makes  
20 an error, maybe a piece of equipment doesn't function the way it needs to. These  
21 particularly have our attention and so we're going to implement that.

22 COMMISSIONER JACZKO: It's not a change in the sense of when we when

1 to the safety system availability indicator to the mitigating systems?

2 MR. COLLINS: It's not that type of change.

3 MR. DYER: In fact, Commissioner, the briefings I've had it uncomplicates.

4 Scram with loss of normal heat removal, we originally selected that because that was a  
5 category that we were analyzing and looking at. Different plants with different design basis  
6 have different consequences and it really wasn't getting at all the issues and we think a  
7 leading indicator of plant performance is when a plant has a normal transit that causes a  
8 scram and then there's complications.

9 We think that is a leading indicator, but we weren't really getting at the heart of that  
10 issue. Hopefully, this is more simplified. It's clear cut. Fewer questions, less discussion  
11 and really get at what we're trying to measure.

12 MR. REYES: I just want to use one word. It will give us more insights which is  
13 what we wanted with this indicator all along. We just have learned exactly how we thought it  
14 out, it didn't work and this is a better insight into the plant condition, the plant performance.

15 COMMISSIONER JACZKO: I appreciate that and, Jim, I won't hold you to this  
16 being the Holy Grail of leading indicators. We'll see, perhaps next year we will have found  
17 it. Thank you. That was the only other question I had.

18 CHAIRMAN KLEIN: Just a following clarification. I know for you, Jim, and for  
19 us at headquarters, the exponent report has been a big distraction. Has that been a  
20 distraction at the plant?

21 MR. CALDWELL: Based on our discussions with the residents at both  
22 Davis-Besse and Perry, that has not had a negative effect on the performance as well as I

1 understand the licensee has been talking to the sites to try to make sure that doesn't  
2 happen based on the newspaper articles, etc. We have not seen an impact as the result of  
3 the exponent report, but we are aware of its potential so the residents are watching to see.

4 CHAIRMAN KLEIN: Good. I'd like for you to just watch that and make sure  
5 there's no negative impact on that. Any more questions?

6 Well, thank you for a very good report. I think you can tell there's a lot of interest in it.  
7 I do think the layered approach has been quite effective; the fact that there's no single tool.  
8 The resident inspectors, the ROPs and all of those indicators are really good. Obviously, as  
9 we've said before, and Jeff indicated again, that the existing fleet continuing to operate  
10 safely will have a very significant impact on whether there really is a nuclear renaissance.  
11 And so, we need to keep our antennas up, remain vigilant and keep doing the good job  
12 you've been doing. Thank you. Meeting is adjourned.

13