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UNITED STATES NUCLEAR REGULATORY COMMISSION  
BRIEFING ON STATE OF NRC TECHNICAL PROGRAMS

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Monday

March 17, 2008

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The Commission convened at 1:00 p.m., the Honorable Dale E. Klein,  
Chairman presiding.

NUCLEAR REGULATORY COMMISSION

DALE E. KLEIN, CHAIRMAN

GREGORY B. JACZKO, COMMISSIONER

PETER B. LYONS, COMMISSIONER

1 PANEL 1: NRC STAFF

2 LUIS REYES, Executive Director for Operations

3 BRUCE MALLETT, Deputy Executive Director for Reactor

4 and Preparedness Program

5 MARTIN VIRGILIO, Deputy Executive Director for Materials,

6 Waste, Research, State, Tribal and Compliance Programs

7

8 OFFICIAL ATTENDEES:

9 CHARLIE MILLER, Director, Office of Federal and State

10 Materials and Environmental Management Programs (FSME)

11 ROY ZIMMERMAN, Director, Office of Nuclear Security and

12 Incident Response (NSIR)

13 KAREN CYR, Office of General Counsel

14 FAROUK ELTAWILA, Director, Division of Systems Analysis

15 JIM WIGGINS, Director (Acting), Office of Nuclear Reactor

16 Regulation

17 MARK CUNNINGHAM, Director, Division of Risk

18 Assessment

19 WILLIAM BORCHARDT, Director, Office of New Reactors

20 JIM DYER, Director, Office of Nuclear Reactor Regulation

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

CHAIRMAN KLEIN: We will now proceed with our afternoon activities. Before we commence, it is good to note that we have, I guess, one and a half new Commissioners. We have a new Commissioner, Kristine Svinicki, and Greg has been reappointed for another term. So, we will soon have four of the five chairs filled. So, congratulations, Greg, on the next term and we'll welcome Kristine aboard when she gets through all the paperwork that's duly required.

Today, we're going to take a strategic look at the programs. We typically have looked at programs sort of piecemeal, but this is one of the first times we'll get to look at an integrated strategic approach. Always, when I look at Marty's title, I think you win the award for having the longest title: Materials, Waste, Research, State, Tribal and Compliance Programs. These others are fairly short. So, that one is a long one. So, we're looking forward to hearing the comments.

I also would like to compliment the staff on assembling all the briefing materials. Obviously, there was not a lot of time getting ready for this and it also occurred at the same time the Regulatory Information Conference was going on. And so I give my hats off to the staff for doing great work at getting all that background information at the time of a very

1 busy conference. And by the way, I think the conference really  
2 went well. So, that was another success story last week.

3 Any comments before we start?

4 COMMISSIONER JACZKO: I would just say I guess I was  
5 not particularly in favor of doing this particular meeting in this way. And for  
6 the very simple reason that we've got a tremendous amount of material  
7 here that we're going to have to try and go through in some amount of  
8 detail, I think, for this to be meaningful.

9 I went through and skimmed through most of the material. I got to  
10 27 questions that I had just on these issues and then my staff, I have to  
11 admit, did an excellent job putting together about another 10 questions to  
12 go through. And I think it's somewhat unfortunate that we're not going to  
13 do these meetings the way we have in the past.

14 We have had in the past separate meetings on the different  
15 programs that have been a good opportunity, I think, for the agency to talk  
16 about accomplishments, to talk about successes. At those meetings the  
17 people sitting at the table are office directors and division directors, which  
18 again gave us an opportunity to interface with individuals that the  
19 Commission doesn't routinely interface with. I think that has been lost as  
20 a part of this.

21 And I would knowledge I think this book is excellent. There's a

1 tremendous amount of material here, but it really is at the  
2 surface level. And I think realistically in the amount of time we've allotted,  
3 we're not going to have, I think, the opportunity to go through this in the  
4 kind of detail we would have in the past with separate program briefings.

5 So, I hope in the future we'll go back to that and I think it will be a  
6 better opportunity, I think, for us to really get into these issues in some  
7 more detail.

8 CHAIRMAN KLEIN: Commissioner Lyons?

9 COMMISSIONER LYONS: Well, I very much appreciate  
10 both the Chairman's and Greg's points of view. I'm much closer to the  
11 Chairman's point of view on this. I view the briefing today, honestly, as an  
12 experiment. I think it should be very useful to the Commission to get the  
13 strategic overview and that's certainly what I'm looking towards. For that  
14 same reason, I guess I would hope that I keep my questions at least on a  
15 reasonably strategic level.

16 I'm guessing that out of this strategic overview there's going to be  
17 any number of tactical questions and any number of areas that it will be  
18 clear that more tactical focused briefings are going to be necessary, but  
19 I'm hoping that today's program will help us perhaps optimize the selection  
20 of subsequent briefings and specific areas where we can hear from  
21 certainly, the office -- well, the experts in whatever the area may be. But I

1 view this as an experiment.

2 I think the strategic view can potentially be extremely useful and I  
3 hope that's what we find today and that we can look towards a series of  
4 the more detailed briefings on subjects that are of interest to any numbers  
5 of us.

6 CHAIRMAN KLEIN: Thanks. Well, as you probably know,  
7 that if we do have additional information that comes out of this meeting,  
8 we're not shy to ask. I think it will be good to look at the strategic activities  
9 and then follow up with tactical ones at a later date. Luis?

10 MR. REYES: Good afternoon, Chairman and  
11 Commissioners. As you stated, today is the first brief that includes the  
12 state of all the technical programs that we go through. In keeping with our  
13 approach of not relying in ever-increasing budgets and looking into how to  
14 improve our processes using tools such as Lean Six Sigma, we felt that it  
15 was good -- Commissioner Lyons' mentioned it as an experiment -- to try  
16 to give you an integrated view of our technical programs.

17 I would like to highlight that part of our overarching issues are in the  
18 human capital space and EEO programs. We have a briefing on April 30<sup>th</sup>  
19 to cover those, so today we're not going to touch on those topics. I'm  
20 going to concentrate on the technical programs. And then I just want to  
21 highlight behind us are the program office directors, the deputy office

1 directors and some regional administrative representatives.

2 And Commissioner Jaczko, they're all ready for your 27 questions.

3 So, you've got plenty of time to talk to them.

4 COMMISSIONER JACZKO: I would note that there are no  
5 division directors behind us, though.

6 MR. REYES: They're outside. They're outside.

7 COMMISSIONER JACZKO: But again, they're not in the  
8 well. And as I said, I think that's an area, unfortunately, that we will lose  
9 that opportunity to interface with them directly and I think that's unfortunate  
10 as this meeting goes forward.

11 MR. REYES: We'll have some of them answer your  
12 questions so you don't miss that opportunity. And with that, Bruce?

13 MR. MALLETT: Thank you, Luis. Good afternoon, Chairman  
14 Klein, Commissioner Jaczko and congratulations on your reappointment.  
15 I'm hoping with that you'll go easy on me in the questions.

16 COMMISSIONER JACZKO: I think I now have the flexibility  
17 to not have to worry about that.

18 CHAIRMAN KLEIN: You only get 26 of the 27.

19 MR. MALLETT: It is truly a privilege to provide you with a  
20 summary of what we term a look forward to the programs for the  
21 2009/2010 time frame and I would summarize that we have brought, I

1 think, the office directors and deputies here to help us with more  
2 detailed questions.

3 I want to personally thank them and especially thank Jim Caldwell,  
4 Regional Administrator from Region III, who has come to participate and  
5 Marc Dapas, the Deputy Regional Administrator from Region I who has  
6 come to represent those factions.

7 I will not be discussing the new reactor program in this discussion  
8 because we just had a meeting February 20th with you and we plan on  
9 subsequent meetings in that area. So, I'm focusing on the other parts of  
10 the programs that are under my jurisdiction. Both Marty and I when we go  
11 through our summaries as a look forward, we're going to cover them in  
12 three areas and our slides are broken up into that.

13 One is looking at special program considerations. These are what  
14 we would term what we plan on accomplishing in the 2009/2010 time  
15 frame. And we did not mention a lot of the routine programs. We selected  
16 areas that we wanted to highlight in this briefing. We also talk about  
17 potential challenges we see in each program area and we'll talk about  
18 potential policy issues or matters that we believe will be coming before  
19 you as a body to give us decisions on in the policy area.

20 As you mentioned before, for all the areas we attempted to give you  
21 a background sheet in the books to explain that. If I could have slide four,



1 please.

2 In the reactor oversight area, we selected four program  
3 considerations to discuss as a look forward again. One is the operational  
4 experience program. As you know, it's been in place since 2005 and that  
5 program has matured to where we believe it's very thorough and it is very  
6 easy to use and very robust as a tool. I've heard compliments in the  
7 agency all the way from inspectors to office directors on its ease of use.

8 And as per your guidance in March 2007 time frame, we've also  
9 started incorporating a review of international events into that program and  
10 actually posting some of them on our website. This has been very  
11 successful in providing insights to us and we expect that will continue.

12 I think probably the greatest testimony to it is we have used these  
13 insights to look for similar problems at other facilities from this experience  
14 and it has, I believe, actually prevented some of those items from  
15 occurring at the other facilities.

16 Second program consideration I would highlight is license renewal.  
17 I'm going to speak about that in two mannerisms. In this manner and in  
18 2009/2010 time frame, we expect we'll receive the first of our licensees  
19 that we have renewed come up to their 40-year time period and so we'll  
20 need to start looking at it and we are preparing for that with the regions  
21 and the Office of Nuclear Reactor Regulation on how we're going to

1 inspect those.

2           If you remember when we did renew the licenses, we had licensees  
3 put certain commitments for aging programs and inspections along with  
4 those. So, we want to look at those before that 40-year time period starts.  
5 In fact, we've already got an inspection procedure. We just revised it in  
6 February of this year to look at that area.

7           The third program consideration I would highlight is fire protection.  
8 I know that's been on your minds from several periodics and discussions  
9 we've had. I would highlight three areas that we believe we will continue  
10 to work on.

11           With regard to barrier issues, we know we just had the recent Office  
12 of Investigations report and Chairman you directed us to look at how we  
13 can address some of those issues. With regard to Hemyc, we have  
14 completed all licensees' responses to our generic letter in that area and  
15 we have a process in place to inspect those commitments licensees put in  
16 place with response to those as part of our triannual fire protection  
17 inspections.

18           The second area I'll mention in inspection and fire protection is  
19 transitioning to the National Fire Protection Standard 805. That will be a  
20 major workload, not only for our licensees, but the NRC as well. We have  
21 two pilot plants, Oconee and Harris that are ongoing now. The lessons

1 learned from those pilots will be used, we believe, to aid future  
2 licensees in coming in for license amendments and aid our inspection  
3 program in that area.

4 An issue I'm going to talk about when we get to policy issues is we  
5 have had a request from the Nuclear Energy Institute to extend the  
6 enforcement discretion in this area that we have currently with licensees,  
7 which is a three-year period. And that would be to allow more time based  
8 on our experience with the pilot plants for accessing probabilistic risk  
9 assessments and for factoring lessons learned into the amendments from  
10 those plants.

11 The last area, I hesitate to mention it, but it will come up during this  
12 period of 2009/2010 is how we're going to resolve what I call multiple  
13 spurious actuations in electrical circuitry. And we do have a plan that I  
14 think we're coming to you to propose how we're going to resolve that in  
15 June of this year.

16 The last area on this side for program considerations I would  
17 highlight is lessons learned. I call it follow up and implementation.

18 COMMISSIONER JACZKO: I'm sorry. Are you going to get  
19 to what the plan is in the later discussion?

20 MR. MALLET: No, but we can discuss that and provide --  
21 I've got people here that --.

1 COMMISSIONER JACZKO: That will be 28.

2 MR. MALLETT: Okay. I'll stop right there. The last area I  
3 was going to talk about is lessons learned. I do believe it's very important  
4 for us to continue to self assess and to incorporate those lessons learned  
5 in our program. I would highlight a few that we're going to be working on  
6 during this period.

7 Obviously, the inattentiveness that we've experienced at the Peach  
8 Bottom facility. We are working on that. We're also – our force on force  
9 inspections, have completed our three years with those inspections; the  
10 first cycle. And looking at our next round, we're going to be looking at  
11 what scope of tests for the next round and putting those lessons learned  
12 into our program. If I could have slide five.

13 Potential challenges we see in this area. I listed three. There are  
14 several, but these are three that I wanted to highlight and bring to your  
15 attention. The first one is we are looking for better methods to early detect  
16 performance trends. I know you've asked me and my colleagues this  
17 question many times and what we did after the last year's agency action  
18 review meeting is we put together for the senior managers a list of  
19 characteristics that we've seen amongst plants in the nuclear power plants  
20 that have declined in performance similar characteristics among those  
21 plans.

1           We put those lists together and then we compared it to  
2           what's in our inspection program in this area for assessing crosscutting  
3           issues like problem identification and resolution, safety conscious work  
4           environment and safety culture.

5           And out of that, I think what would be the next steps is to try and  
6           see if our inspection program has smart samples in this area to make sure  
7           that as we're inspecting we sample those. We have shared those not only  
8           with the Regional Administrators, but we also have at the recent meeting  
9           of the Nuclear Energy Institute with all the Chief Nuclear Officers, we  
10          shared those with them as to what those early indicators are.

11          Victor McCree had a session at the Regulatory Information  
12          Conference where he shared those with industry in that session as well of  
13          what we think might be some of the early indicators.

14          The second area I'll highlight is a challenge for us. Its vendor  
15          inspections, not only for new reactors, but existing reactors. As we look at  
16          the program, we're seeing more and more vendors that are new to this  
17          industry come on board. We're seeing more and more vendors that are  
18          overseas and I think this will be a challenge for us as to how we inspect  
19          them in this timeframe.

20          The Office of New Reactors has been working in this area and I  
21          think in this fiscal year have about eight vendor inspections. We hope to

1 incorporate those into our existing reactor program as well.

2 The last area on challenges I would highlight, the integrated  
3 regulatory review service. I would highlight two things about this that will  
4 come up during this period in 2009/2010. One is we have opportunities to  
5 participate in these for other countries. These have been quite a valuable  
6 experience. I've been on at least two of them and they've been invaluable  
7 to me as a lesson learned of how you regulate this industry.

8 I think they're invaluable to share those insights with other  
9 countries. They're also an important part of our development of our senior  
10 managers. So, the challenge for us, I believe, will be making sure we  
11 have the right people on those reviews for the countries during this period.

12 Another challenge, as you know in 2010 we have agreed to have  
13 our Reactor Oversight Program reviewed as a part of this Integrated  
14 Regulatory Review Process. I think the key challenge there will be making  
15 sure that the leader of that team that reviews us has a broad enough  
16 experience in the review and broad enough experience in the regulation of  
17 nuclear reactors. If I could have slide six, please.

18 There's three potential policy issues in this area that I would  
19 highlight. The first one is in safety culture. We have received your  
20 February 25 guidance in your Staff Requirements Memo to us. We are  
21 working on a paper as well to come to you shortly that will address our

1 experience within the last 18 months of implementing the items  
2 that we've put into the inspection program to date to address safety culture  
3 in our crosscutting areas.

4 As a note, I would add there's a pilot underway at fuel facilities. I  
5 know this is Marty's area, but he's permitted me to say this during my  
6 presentation. We have a pilot in fuel facilities also to incorporate that into  
7 that program.

8 Second policy issue, I think, coming to the Commission; as I  
9 mentioned the fire protection challenges we have in looking forward. I  
10 believe there will be some policy issues coming before you. I would  
11 reiterate the enforcement discretion extension for National Fire Protection;  
12 those plants transitioning to National Fire Protection Standard 805. I think  
13 is a clear policy issue. I think our plan that Commissioner Jaczko was  
14 interested in, there will be some policy issues in there for going ahead on  
15 multiple spurious actuations.

16 We also, in addition to the Office of Inspector General's report,  
17 there is a Government Accountability Office report. We understand that's  
18 going to come out shortly in the fire protection area and there may or may  
19 not be some policy issues on that.

20 The last policy issue I would reiterate on this slide is the revision to  
21 the enforcement policy. We are working on drafting changes to streamline

1 the policy to make it more of a policy document and taking the  
2 "how to" procedures out of that document. We also are changing the  
3 supplements in that policy and we expect to provide that to the  
4 Commission by the end of the year.

5 One additional area I would highlight is there are some material  
6 security issues that have not been incorporated into the policy and we're  
7 putting those in there as well.

8 I would say we're also working on how to, during this period of  
9 2009/2010, how to document traditional enforcement formally and  
10 incorporate it into the Reactor Oversight Process. There is a current  
11 Office of Inspector General review in that area, but I've not seen the report  
12 on that as of yet. So, we anticipate that that will come up as a policy issue  
13 before the Commission as well as to how we're going to do that. If I could  
14 move incident response in slide seven.

15 I've selected five program considerations in this area based on  
16 input from office directors and division directors. The first one I would put  
17 is the implementation of the National Framework and Communication  
18 Plans. There's a couple areas I would highlight in here as we look forward  
19 that we're going to be working on this year and next year. One is the  
20 National Response Framework. As you recall, it was issued in January of  
21 this year and this framework essentially changes a few things.



1           It changes us to have a command center concept with  
2           the local, state and federal authorities in responding to any event. It also  
3           changes the assessment of our participation to be more of a compendium  
4           instead of just a threshold only entering into response when there's an  
5           incident of national significance.

6           And last, it has some scenarios they call national planning  
7           scenarios for how we should go about doing our exercises. So, the  
8           reason I mention this is I think that will be a consideration for us to train  
9           our response members and to also incorporate it into our plans on how  
10          we're going to be in tune with that framework.

11          The second area I mentioned on that is the National Continuity  
12          Policy Communication Plan. Starting in May of last year, there was  
13          guidance provided to us to work on our mission essential functions, which  
14          we believe in the continuity program are well established, but in February  
15          of this year the Department of Homeland Security sent out what they call  
16          Federal Continuity Directives asking us to provide our continuity plans to  
17          them and to also re-review our mission essential functions and determine  
18          if they're adequate in accordance with criteria that they give us.

19          In July of last year, they also, as part of the National  
20          Communications System Directive, often referred as "three days ten". It  
21          establishes minimum system requirements for the communication

1 capabilities for continuity organizations. So, I mention these  
2 because they will take major efforts on our part during this year and 2009  
3 to get them implemented.

4 The second area of program consideration is intergovernmental  
5 coordination. I only mention this one because I think we are in the  
6 process of continuing to implement ways in which our incident response  
7 program can interface with other entities, both local, state and federal.

8 Our Office of Nuclear Security and Incident Response has been  
9 quite active with these other facilities, like Department of Homeland  
10 Security and Homeland Security Council and Department of Energy to  
11 make sure that we have an alignment on how we're incorporating changes  
12 into the program and how we need to coordinate. The most important to  
13 me is before you have an event, not during an event.

14 I mentioned outreach with stakeholders. I believe that again falls in  
15 the area that we need to continue to emphasize and be proactive and not  
16 just outreach when there's an event, but prior to an event. I think it's of  
17 vital importance to the success of our programs.

18 Modernization is really -- I should have changed it to equipment  
19 and facilities modernization. We've been working for quite some time now  
20 to improve our facilities and equipment in our Incident Response Center.  
21 We're in the process of upgrading our energy -- I mean our Emergency

1 Response Data System, the ERDS system. We initiated that  
2 and we expect to complete that in the 2010 time frame. This will also  
3 upgrade part of the hardware and equipment for licensees.

4 COMMISSIONER JACZKO: I'm sorry. We have finished  
5 Phase One of ERDS upgrade?

6 MR. MALLETT: We have.

7 COMMISSIONER JACZKO: It's Phase Two that you're  
8 referring to?

9 MR. MALLETT: Phase Two is with licensees. That's correct.  
10 Phase One is our upgrade here. We do have some work to do,  
11 Commissioner, with the Agreement States as well in that area and any  
12 State, actually, that wants to participate.

13 We also during this period 2009/2010 will have two regional offices,  
14 certainly Region II and Region IV, will have new incident response  
15 facilities and that's a modernization. We possibly may have a third if  
16 Region I during this time period also look at their possibly moving.

17 In the area of emergency preparedness exercises, we are  
18 conducting hostile action based drills now as a third phase of a four-phase  
19 plan to incorporate security scenarios into our Emergency Preparedness  
20 exercises. We anticipate that during the 2009/2010 time frame these will  
21 be fully incorporated and we have an inter working group between the

1 NRC and the Federal Emergency Management Agency that  
2 has come up with a plan to enact and develop what criteria that Federal  
3 Emergency Management Agency would use to evaluate local authorities,  
4 state authorities and licensees in responding to various exercise  
5 scenarios.

6 I'm encouraged because recent correspondence we have within the  
7 Department of Homeland Security and between them and Federal  
8 Emergency Management Agency is, as late as last week, indicates they're  
9 fully supportive of this change and changing the criteria for this evaluation  
10 and desire to move ahead. So, that's a credit to the staff in our Office of  
11 Nuclear Security and Incident Response. If we can have slide eight.

12 If I don't hurry up, I'll take all Marty's time here. He'll be happy with  
13 that. Slide eight are the potential challenges in this area of incident  
14 response. I highlighted three of them. I'm going to add a fourth.

15 The first one I talked a little bit about is the new national response  
16 framework. We have this concept of Incident Command Center. I think  
17 it's important for us as a challenge to make sure we communicate with the  
18 local and state organizations that we make sure that we maintain a role in  
19 the Command Center concept. And also interface with Federal  
20 Emergency Management Agency to make sure that we maintain a role in  
21 what they call their Unified Coordination Group; part of that command

1 concept.

2 Last part of this challenge I see is training our staff on the Incident  
3 Command Center concept and the National Incident Mitigation System  
4 concepts. And I think we'll be doing this training throughout this year and  
5 certainly next year in 2009.

6 The second one I mentioned is communication during threat  
7 response. Commissioner Jaczko, you and I participated in the Byron  
8 exercise recently and we had some similar lessons learned to previous  
9 exercises in this area. One of them is it is quite a challenge when you  
10 have a threat that's eminent to a facility as the type of information you  
11 need and how soon do you need it. When you have a short period of time  
12 to respond, that information needs to be prioritized.

13 So, I think that we have a challenge to work on a shared  
14 understanding of that with industry; what information is needed and when  
15 it is needed. I believe we have a workshop meeting with industry set up at  
16 the end of March, a timeframe to discuss that.

17 I mentioned comprehensive reviews as a challenge area because  
18 as you know we have completed or the Department of Homeland Security  
19 has completed these comprehensive reviews for each of our nuclear  
20 power reactor sites. I think the challenge for us will now be coordination of  
21 assets. Last time I met with you on this subject it was how do we

1 coordinate these assets in responding to this and is there a way  
2 to do that.

3 The fourth area I would mention that Roy hasn't heard of from me  
4 yet, so we can watch him to see if -- is the maintenance of the pool of  
5 operations officers. As Luis said, we're not going to talk about human  
6 capital, but I have learned through the Byron exercise, again, relearned  
7 that they are a vital part of our agency and we need to make sure that we  
8 maintain our pool of expertise in that area and people ready to step in and  
9 do that job. So, if I could have slide nine.

10 Two policy issues we believe that will come before the  
11 Commission. I mentioned the first one in the continuity plans from these  
12 federal directives. I think the mission essential functions -- we do need  
13 direction from the Commission on that and I believe we have to respond to  
14 that by May of this year. And then any changes to the proposed continuity  
15 plans on a national level that would impact us, we will need to bring a  
16 paper to you and get your decision and direction on that.

17 The second one I'll mention is emergency plan changes. We have  
18 a paper before you now that requests your consideration of allowing us to  
19 review decreases in the effectiveness of those plans. I just want to  
20 emphasize that it is a policy issue, but I want to clarify we aren't asking for  
21 exemption from the regulations in that review. If I can have slide 10.

1 I'll go to the licensing area. I would highlight four  
2 program considerations here. First one is in license renewal. Before I  
3 spoke about license renewal on the inspection piece, I now want to talk  
4 about it from a licensing aspect that we believe will occur in 2009/2010.

5 Just to refresh our memories, we have completed 25 license  
6 renewals to date. We have 11 of them under review at this point in time.  
7 We expect to receive about five new ones in each of the year's -- fiscal  
8 year '09 and fiscal year '10. I believe we sent you a table or chart that  
9 shows that and it's a pretty good chart to go by as to who they are.

10 We do believe that the process is technically sound and we are  
11 working on responding to the Office of Inspector General report which  
12 really talks about how we're documenting our findings in my view.

13 There is one other aspect of license renewal that we are working on  
14 during this period I would highlight and that is the generic environmental  
15 impact statement and the technical basis for that. We will be working on  
16 the technical basis and where we believe it would be modified. We'll have  
17 to come to the Commission for that. I think the current plan on that is to  
18 provide a proposed rule to you by January 2009.

19 Second area I would highlight is the Watts Bar Unit 2; inspection  
20 and licensing of that facility. Tennessee Valley Authority provided us at  
21 the end of January their regulatory framework proposal and we are in the

1 process of reviewing that. I think that will be a major effort for  
2 us in the years 2009 and 2010. We our following your direction to us for  
3 how to conduct those reviews that you gave to us back in July of last year.

4 Power uprates. We have completed 118 power uprates for around  
5 5,000 or greater megawatts of electric increase in this country. That is a  
6 significant workload. We expect to receive about 21 applications in the  
7 period of 2008 to 2010. This could be around 1,400 megawatts electric  
8 more. I think there are some key challenges associated with that and that  
9 will be a major effort.

10 I put down non-power reactor applications because there are a  
11 couple areas I would highlight that would be work effort for us. One is  
12 completing license renewal reviews. Several of them that we haven't  
13 processed. And second, we do expect to receive at least an application  
14 for one new non-power reactor facility during this timeframe. If I could  
15 have slide 11, please.

16 The potential challenges in this area I'll just briefly mention in the  
17 interest of time is operator licensing. We always are concerned about  
18 having the right prediction on the number of exams we need to conduct for  
19 existing reactors. But during this period in the 2010 time frame, we also  
20 believe we will have the additional effort request from licensees that are  
21 building new plants to start their classes of individuals in the operator



1 licensing area. And the reason for that is you have to back up  
2 about two to three years before you go operational in those plants to start  
3 training your staff and getting the teams together. So, it may not be 2010.  
4 It could be 2012, but we want to be prepared for that. We anticipate this  
5 will be an effort for us in the 2010 time frame.

6 Potential policy issue. I mentioned the New Generation Nuclear  
7 Plants and advanced reactor priorities, but Marty is going to discuss this  
8 further with you. So, I'll leave that to him to discuss so we can have a  
9 combined effort. If we can go to slide 12.

10 The last one I'm going to discuss. Rulemaking affects both the  
11 areas Marty is over and the areas I'm over. What we decided was to pick  
12 what we think are the top three priority rulemakings that will come up  
13 during this period and discuss those. I've listed three of them here.

14 One is the emergency core cooling system 50.46a. Really, the  
15 redefinition of the parameters in 50.46b criteria for emergency core  
16 cooling systems. We currently plan to give you a final rule on that by  
17 September 2009. We would send a new schedule. I think our plan is by  
18 the end of this month to provide you a new schedule and our  
19 considerations for that.

20 Part 73 I mention not because of the current ongoing efforts in Part  
21 73 to incorporate things into the current regulations, but we sent a paper

1 to you and we appreciate your direction back to us on access  
2 authorization for constructing plants and we believe that will come up  
3 during this period in 2009/2010.

4 I would also highlight the emergency preparedness Part 50, section  
5 50.47. The proposed changes that we would like to put into those  
6 regulations. Some of the ones I would highlight we are considering at this  
7 point are back up power for alert notification systems, emergency action  
8 levels for security events and really incorporating the security aspects in  
9 the emergency exercises.

10 We did start initial discussions of this rulemaking at the Regulatory  
11 Information Conference and I know Roy and his staff plan on several other  
12 discussions with the industry and public and interested groups to find out  
13 what their input is to this and what the scope ought to be to this  
14 rulemaking.

15 This concludes my remarks. I will now turn it over --

16 COMMISSIONER JACZKO: Can I just ask on this  
17 rulemakings slide, there's no mention of waste confidence here. Marty,  
18 are you going to discuss that?

19 MR. MALLETT: Marty is on to continue on with rulemaking  
20 and I don't know if he's going to talk about waste confidence, but --

21 MR. VIRGILIO: I'm picking it up under the section entitled

1 high level waste.

2 COMMISSIONER JACZKO: Okay, thanks.

3 MR. MALLET: Thank you. With that, that concludes my  
4 remarks and I'll turn it over to Marty.

5 MR. VIRGILIO: Thank you, Bruce. Good afternoon. I'll just  
6 continue right on. As Bruce said, what we did is we picked three of what  
7 we consider the higher priority rulemaking areas to talk about and starting  
8 with the materials area. Looking ahead to the next several years, I know  
9 we're going to have a number of rulemakings over enhancing the security  
10 of radioactive materials.

11 A number of these rulemakings will simply codify what we've  
12 currently put in place today as increased controls over access to and  
13 transportation of radioactive materials.

14 But as I proceed today, you'll hear more about where I think we're  
15 going to be expanding the program and where there will be new controls  
16 proposed and new policy issues for you to address. These new controls  
17 are in various stages of development right now and some of them are in  
18 response to the action plan that we've developed as a result of the GAO  
19 Sting and others come from other initiatives that we have working as a  
20 staff or in conjunction with other federal agencies to strengthen the  
21 controls on radioactive materials.

1           As I said, these new controls will in fact provide policy  
2 issues for the Commission's consideration. One example that I would say  
3 is before the Commission today and that's expanding the scope of  
4 National Source Tracking System. Just this morning I had an opportunity  
5 to review Commissioner Jaczko's vote. Thank you for voting on that for  
6 us.

7           COMMISSIONER JACZKO: If we can figure how we can  
8 change it back at 3.5 rather than one-tenth of Part 3, I would appreciate  
9 that. That's probably not the most important issue in front of us.

10           MR. VIRGILIO: It's the right sources and I think your vote  
11 endorsed the staff's approach. Our challenges are going to be significant  
12 in the security area. In addition to recruiting, training and developing the  
13 staff in order to complete this rulemaking effort and the implementation  
14 what we have to do is thoughtfully integrate the recommendations that are  
15 coming at us from multiple sources with multiple interests. This is a real  
16 challenge.

17           Later this week you're going to hear from the Independent External  
18 Review Panel. This was a group that was chartered by the Commission  
19 following -- or as part of our actions to follow up on the GAO Sting.

20           We also have as part of that program the materials program  
21 working group. They've got their own set of recommendations. Again,

1 they'll bring forward policy issues that the Commission is going  
2 to have to address. We've recently received the National Academy of  
3 Sciences report on alternate sources. They bring forth a number of policy  
4 issues.

5 We continue to work -- and I would say very cooperatively - with the  
6 Department of Homeland Security and Department of Energy's NNSA  
7 Department for increased controls over other radioactive materials.

8 There's a little bit of an overlap there with the National Academy of  
9 Sciences because we're all really looking today do we have the right  
10 increased controls over cesium chloride sources and devices. And we  
11 expect other work products come out.

12 If you recall the Energy Policy Act of 2005 required us to charter a  
13 task force. We've nicknamed it the Chairman's Task Force, but that work  
14 effort continues to identify new areas for us to explore and potential new  
15 policy issues. So, I think the success in this area in part depends on our  
16 ability to work with all these various interests, all these various  
17 stakeholders and develop cohesive policy recommendations for the  
18 Commission.

19 The second bullet on that page has another set of rulemakings that  
20 are currently in process to increase the accountability over sealed  
21 sources. By looking at and maybe adjusting the thresholds for what we

1 have today as specific licenses and what we have today as  
2 general licenses and where we require general licensees to report to us.

3 The Agreement States started this with a petition for rulemaking a  
4 couple of years ago, but we've looked at that and we've expanded on their  
5 initial interests and we expect to be providing some recommendations on  
6 policy around the thresholds and the degree of compatibility required for  
7 meeting these rules.

8 In this area, our challenges are much the same as the material  
9 security area with making sure we've got the right resources and then  
10 integrating multiple interests now, which started out as just, I think, fairly  
11 simple petition for rulemaking now has got multiple areas and issues that  
12 we're going to try to cover.

13 The third area I want to touch on is our efforts around in-situ leach  
14 rulemaking. These are focused on eliminating overlapping jurisdictional  
15 questions and requirements between us and EPA when we look at ground  
16 water protection programs. We will be making policy recommendations to  
17 the Commission in this area.

18 I would note that we've extended the timeline on this, but feedback  
19 from the staff has been it's been well worth taking the additional time  
20 because we are working, I think, today very cooperatively with EPA. I  
21 think we have a sense of agreement about the direction and the roles and

1 responsibilities. Again, I think the time was well spent.

2 Our challenges in this area are going to be mostly working, once  
3 we get beyond our agreements with EPA. working with the other  
4 stakeholders who include Native American Tribes and the industries that  
5 are regulated under this rule. Bruce and I have both spoke about policy  
6 issues and challenges associated with these rules and in a few other  
7 areas.

8 We'll discuss more today, but I would say if you step back, what we  
9 have right now is a situation where we've got multiple, sometimes  
10 interrelated rules and it's going to require close coordination not only  
11 between the offices that report to Bruce and my offices, but the  
12 Commission and our external stakeholders as well to make sure that we  
13 do this right. And of course we've got this resource issue that sort of  
14 overarches this that we're going to have to address.

15 So, we have to carefully pick our priorities and we need to pick our  
16 priorities in a way that we're working on the rules that are interrelated with  
17 one another.

18 We continue to examine the rulemaking processes and look for  
19 opportunities for improvements and efficiencies. And as Luis said, we  
20 believe that Lean Six Sigma is going to play a role in finding us additional  
21 efficiencies in this area.

1           If we can turn to slide 15 and what I'm going to do is pick  
2   up slides 15, 16 and 17 together because I think they flow better for you. I  
3   want to talk about advanced reactors and as Bruce mentioned I'm going to  
4   pick up the Next Generation Nuclear Plant, the NGNP discussions. I'll talk  
5   about State of the Art Reactor Consequences and I might slip and it  
6   SOARCA. So, I just wanted to get that out of the way.

7           We're going to talk about extending reactor licenses and I like to  
8   call that "Life Beyond 60" because I'm right just about there now. I also  
9   want to talk about the technology neutral framework which I'll call "The  
10  Framework".

11          So, starting out I just want to say that we recently provided a  
12  Commission paper on the advanced reactors. We had a Commission  
13  meeting. We provided you some advanced information with respect to the  
14  licensing strategy efforts and work that we're doing with the Department of  
15  Energy and we're looking for -- we really are looking for feedback from the  
16  Commission and direction on the advanced reactor program.

17          It's sort of essential that we receive this feedback as soon as you  
18  can possibly provide it because we're now in the process of developing  
19  the 2010 budget. And as Bruce and I and the staff sat down this morning,  
20  we recognize that there's only so far we can go without a clear  
21  understanding of where the Commission wants us to put our focus and



1 emphasis as we look forward to 2010.

2 In earlier correspondence with the Commission, I believe we  
3 highlighted some potential technical policy and program issues associated  
4 with the new reactor design features and technologies. Some of these  
5 include how we're going to approach defense in depth; how we're going to  
6 approach containment and confinement.

7 What are we going to do about the source term? There are a  
8 number of, I think, very significant issues including how we're going to use  
9 risk and probabilistic risk assessment tools as we look at the advanced  
10 reactor design.

11 Just last week, we received a letter from a group called The  
12 Alliance. It's a consortium that's being formed today and it includes at  
13 least half a dozen of the significant players in the advanced reactor area.  
14 They've identified in an attachment to that letter - and I believe we've  
15 given you a copy of the letter -- the additional policy issues. I thought the  
16 attachment was very informative.

17 The letter -- the bottom line of the letter to me is they want to start  
18 interacting with us. They want to start prelicensing interaction work. They  
19 want to establish a forum for us to start discussing these policy issues in  
20 some detail.

21 So again, that brings us back to guidance from the Commission in

1 response to the paper we sent up and the Commission  
2 meeting, it would be very beneficial to us.

3 So, in addition to helping us define a scope of our programs and  
4 our resource needs, we face a number of challenges associated with  
5 making sure we have the right staff skills, that we have the right analytical  
6 tools and data.

7 One of the things that I've realized through our work with  
8 Department of Energy in developing the licensing strategy for NGNP, it  
9 has also helped us identify what are the tools and what are the areas that  
10 we're going to need to work on so that as we provide additional  
11 information to you, you'll see that that effort has not only helped us  
12 understand are we going to use Part 50 or are we going to us Part 52, but  
13 it has also helped us understand where the gaps are in our analytical tools  
14 and our knowledge. I think this is going to be very beneficial. This  
15 program has already provided, I think, much benefit to us.

16 It helps us identify where, I believe, we're going to need to do  
17 additional research and development work in order to be able to  
18 independently -- it's really important that we have that ability to  
19 independently verify the safety performance of the NGNP.

20 Now, I'll talk a little bit about SOARCA. This is really a program that  
21 responds to the Commission's request. I realize that not all of you were

1 on the Commission at the time that we received that request,  
2 but we are performing an analysis and the heart of the analysis is to  
3 update our tools and our methods for evaluating severe accident  
4 progression and offsite consequences.

5 As part of the program, we have just recently requested  
6 Commission guidance on the methods for projecting and communicating  
7 about long-term health effects. In making our recommendations to the  
8 Commission - and I know this paper just came up to you last week - we  
9 elected an approach that we believe is aligned with the scientific  
10 community and we believe will be most easy to use in communicating with  
11 the stakeholders.

12 I also recognize that each one of you have got some fairly strong  
13 views about this and I really do look forward to the debate as we move  
14 forward; discussions with you about the approaches. I think we included  
15 six different options in that paper that we really did explore. You should  
16 know that there was much debate within the staff and we finally agreed on  
17 an approach, but it was, I would say, hotly debated.

18 I believe that you all are going to have some similar discussions  
19 amongst yourselves. And again, we're willing to support you with  
20 additional information or TA briefings or whatever it takes. Our near term  
21 challenges --

1                   COMMISSIONER JACZKO: I'm sorry; just on that  
2 one briefly and maybe you'll get to this later, but does the staff right now  
3 have a plan to respond to the ACRS comments in SOARCA?

4                   MR. VIRGILIO: Yes. Farouk and I were talking about this  
5 and we can --

6                   COMMISSIONER JACZKO: If you want to get to it later. I  
7 just wondered if there was a plan.

8                   MR. VIRGILIO: Yes, we do. Our near-term challenges in  
9 this area include completion of the three plant -- the pilots that we have  
10 underway. And then seeking additional pilots. Originally, we recognized  
11 that it would take us maybe a suite of eight or so different facility designs  
12 in order to encompass and have a program that we could say envelopes;  
13 all the reactor designs that are out there today.

14                  We had three licensees step up to the plate and support us; Peach  
15 Bottom, Surry and Sequoyah, but we do need more. In the long term our  
16 additional challenges are going to be effectively communicating the results  
17 of these studies.

18                  With respect to Life Beyond 60, we've begun a modest research  
19 program to identify the technical issues that may impact long-term safe  
20 operation of the fleet of plants today in the event that they do elect to  
21 pursue a second or maybe even a third license renewal period. We're

1 currently developing an integrated research plan in this area  
2 and we're working very collaboratively with DOE and now we've started  
3 seeking input from the industry and from other stakeholders as well.

4 Right now, we believe we enjoy maybe a four or five-year period, I  
5 might be wrong on this, but I'm guessing we've got about four or five years  
6 before the industry seriously sits down, makes decisions and starts  
7 submitting applications. But I think we need to use this time to get ahead  
8 of the curve so that we're ready when the applications come in.

9 The framework, the technology neutral framework is the next area I  
10 want to talk about. We've developed a risk informed performance based  
11 structure for future plant licensing and we call it "The Technology Neutral  
12 Framework". In response to Commission direction, we have deferred  
13 rulemaking in this area and that made good sense to us, but we really do  
14 need to complete the NGNP licensing strategy first.

15 And at this time, as we look at this and the level of detail that we  
16 think we're going to need to go to the next step in this program, we may  
17 actually need an application before us before we can flesh out and finalize  
18 that technology neutral framework.

19 I recognize that you're probably hearing for the first time that we're  
20 not aligned with the approach that we're currently operating under in the  
21 SRM direction. We'll come back to you and give you more on that

1 because our thinking is still maturing in this area. But I just  
2 wanted to give you a heads up about where we're headed.

3 There's an overarching issue in the area of research that I need to  
4 address and that's our ability to maintain our independent analytical  
5 modeling skills. I mentioned that earlier in the context of NGNP. I think  
6 it's critically important that we develop the skills in the staff and that we  
7 retain, we train and we practice the application of these tools. That's  
8 being done to some extent today.

9 The staff, in conjunction with a limited set of contractors, are in fact  
10 exercising these tools, strengthening and building our capacity every day  
11 so that we're better ready for the challenges that we'll face when the  
12 advanced reactor applications, if and when they arrive before us. That's  
13 all I wanted to say for research for the moment and now I wanted to switch  
14 our focuses to the nuclear materials safety and security arena.

15 As I just did, what I think is easier for me and hopefully easier for  
16 you is I'm going to just start talking about the issues on slides 19, 20 and  
17 21 and I'll talk about radioactive material security, the Agreement States,  
18 our materials licensing program and the regulatory infrastructure.

19 I'll start with materials security. I started to touch on this in the  
20 rulemaking discussion. I think that safety and security has significantly  
21 improved since September 11<sup>th</sup>. We've done a lot to enhance our

1 programs working with the Agreement States and both the  
2 NRC and the Agreement State licensees. So, what I'm going to talk about  
3 today may seem like a lot, but it needs to be taken in that context of  
4 continuous improvement.

5 We've had several recent interactions with the Commission on  
6 radioactive material security and we've got two additional meetings  
7 scheduled. I mentioned earlier we've got the meeting with the  
8 Independent External Review Panel that's coming up this week and then  
9 later in the month we've got another meeting focused on materials  
10 security.

11 As I said earlier, we're implementing the action plan that we  
12 developed in response to the GAO Sting. The Independent External  
13 Review Panel has provided its report and its recommendations. I've had  
14 an opportunity to read that in advance of the upcoming Commission  
15 meeting and I think they've hit a number of good areas. Some very  
16 significant challenges we're going to have to deal with including changing  
17 the mindset and culture of how we go about reviewing license  
18 applications. That's a tremendous shift and that's going to take a  
19 tremendous amount of energy to address some of their recommendations.

20 We've had prelicensing guidance. That's now in place and we've  
21 got it in place for trial use. As part of the GAO action plan, we've

1 chartered a materials program working group. They have  
2 developed their recommendations and it's another challenge to integrate  
3 those into our program, but we'll be addressing those. We've conducted  
4 our initial inspections; both we and the Agreement States have conducted  
5 our initial inspections of the high risk sources. If time permits, we can get  
6 into some discussion of the results.

7           Fingerprinting and criminal history checks have been imposed on  
8 NRC licensees and the Agreement States are now in the process of  
9 imposing these very same requirements and we have several ongoing  
10 agency initiatives to strengthen the increased controls that surround  
11 cesium chloride sources and devices. These will help us address some of  
12 the recommendations that have come out of the National Academy of  
13 Sciences report.

14           And as a parallel effort, we are working with the Russians to better  
15 understand what they have done at [ --- ] with respect to different forms of  
16 cesium chloride to see if some of that can be adapted to the machines we  
17 have here in the United States. There are going to be a host of policy  
18 issues in this area. I expect that we'll be sending a number of  
19 Commission papers before you just like with the National Source Tracking  
20 System. We're going to need your feedback and direction as we  
21 implement the recommendations that involve policy in these areas.



1           Early in my presentation I highlighted some of the  
2   radioactive materials security rulemakings. I think some of what we're  
3   about to deal with from these various panels and group will also involve  
4   rulemaking before the end of the day.

5           There are some other significant technical policy issues that we're  
6   going to be dealing with, I think, in the near future. Three in this area that  
7   come to mind are: what is an RDD? What is a radiological dispersal  
8   device? That's been debated and the Commission has asked us to  
9   provide a definition. So, there's a policy issue that we're going to be  
10  dealing with.

11          We're looking at in that context whether we've got the right  
12  thresholds for isotopes when we consider what is a dangerous or  
13  significant source. And then the third area - and I know Commissioner  
14  Jaczko you and I have talked about - what's the methodology that we  
15  should be using when we assess the risks around these RDDs and other  
16  security events? So, we're looking forward at whether we can in fact  
17  develop methodologies that take us beyond where we are today with  
18  respect to looking at prompt fatalities.

19          The second area I wanted to touch on is the Agreement State  
20  programs. We continue to see an expansion and improvement in our  
21  Agreement State programs. The Pennsylvania agreement is now before

1 the governor for signature. The Virginia application is expected  
2 in May of this year. The New Jersey application is expected in September  
3 of this year and we've got Michigan, Connecticut and Hawaii, all in various  
4 stages of developing their programs to become Agreement States.

5 On one hand, you see the benefits as we get new Agreement  
6 States, we receive new Agreement States; the number of NRC licensees  
7 go down and it sort of relieves our inspection program of that burden, but  
8 on the other hand as we pick up new Agreement States, we find ourselves  
9 with new issues around coordination and communication, partnering. So,  
10 there's sort of a trade off there, but on balance we like to see new  
11 Agreement States and we believe that it's a benefit to have the local  
12 stakeholders regulating the material licensees.

13 The Commission recently approved additional funding for  
14 Agreement State training and I'm pleased to report the Agreement States  
15 have responded very positively. They're taking advantage of the program.  
16 They really appreciate the program. As a matter fact, they've gone so far  
17 as to host some of the training programs in the states themselves. So  
18 that, I think, was viewed as -- and it is -- a tremendous boost to the  
19 program.

20 The Integrated Materials Performance Evaluation Program; we call  
21 it IMPEP, continues to combine self assessments with external reviews in

1 a matter that I think identifies gaps and leads to strengthening  
2 of the programs. It leads to learning. I sit on and chair the Management  
3 Review Board. Karen is on the Board with me.

4 So often we hear from the participants on the panel from other  
5 states that, "Oh gosh, I've learned so much through this effort and I can't  
6 wait to take it back to my program and apply this." So, not only are the  
7 states that are undergoing the reviews at the time learning from the  
8 experience, but the participants on the team from other states are also  
9 undergoing a tremendous learning.

10 If I step back and look and think strategically about this program  
11 area, I'd have to say the past several years we've enjoyed the best  
12 working relationship we've never had with the Agreement States; the best  
13 partnering, the best cooperation that I've seen in the 10 years that I've  
14 been associated with this program. This reflects on the hard work and  
15 efforts by the Organization of Agreement States leadership and the NRC  
16 staff.

17 Moving on to our regulatory infrastructure, I believe and I don't  
18 know Charlie and the staff may not like what I'm about to say, but I think  
19 we're lagging our program -- our infrastructure is lagging significantly  
20 behind Commission policy. I've talked about all the rulemakings that we  
21 have going on in the future, but there are probably 30 to 40 rulemakings

1 underway in this area that we'll be dealing with in '08, '09, '10  
2 timeframe. I think we're in what we call the impact zone when I wind surf  
3 for the wave of new requirements that are going to be coming at us for  
4 radioactive material and the policy issues I talked about earlier.

5         These policy changes and some of the recommendations coming  
6 out of these panels like the Independent External Review Panel are going  
7 to require a significant re-engineering of our inspection program, a  
8 significant re-engineering of our licensing program. I just see a mountain  
9 of work ahead of us in this area to shift the paradigm to do what we need  
10 to do in order to respond to some of these external audits and panels that  
11 we've had.

12         So, set that aside, I think we also have to consider how best to  
13 respond to the new ICRP publication 103 on radiation safety and in  
14 parallel what we have is IAEA in the process of revising the basic safety  
15 standards. And we have a number of stakeholders who are asking for us  
16 and have expressed an interest in having NRC revise its requirements in  
17 this area. Appendix I to Part 50, how we deal with effluent releases, just  
18 one example of where we've been approached by the industry and said  
19 are you going to adopt the ICRP recommendations?

20         So, I think where we stand today is by the end of the year we'll  
21 have some recommendations to the Commission. Again, another policy

1 issue. I know you've all spoken about the ICRP publication and  
2 the underlying science hasn't changed and so there's no need for radical  
3 changes to our requirements if you think about Part 20, but there may be  
4 some justification and some basis to make some subtle changes to adapt  
5 portions of that document.

6 As with other programs, our outreach and alignment are going to be  
7 needed in order to advance NRC's interests. In this area it's not only  
8 nationally, but it's internationally. We've invested an awful lot in the ICRP  
9 recommendations and today investing in the basic safety standard  
10 development. Don Cool just returned from a trip working on the BSS and  
11 it's really important that we be there for a number of reasons, including the  
12 Commission has spoken about its views on environmental protection and  
13 protecting biota. And having people like Don participate in those meetings  
14 are critically important to ensuring that our interests are preserved.

15 I'd like to now move on to the discussion on slides 22, 23 and 24 to  
16 pick up the uranium recovery, decommissioning and low level waste  
17 program. I will talk about decommissioning, waste incidental to  
18 reprocessing, the low level waste and uranium recovery.

19 Starting out with decommissioning, I know you're all aware of the  
20 new approach being proposed by Exelon for decommissioning of the Zion  
21 facility. This involves a partnership with Energy Solutions and it's going to

1 require, I think, a significant amount of internal and external  
2 coordination as we consider the transfer of the license to a non utility  
3 entity.

4 I put a smiley face next to my notes on this because we really do  
5 think it's a good idea if all the right regulatory requirements can be  
6 satisfied; if they've got the technological capabilities; if they've got the  
7 financial capabilities. We see some promise in such an approach, but I'm  
8 not going to prejudge the application.

9 We're also evaluating decommissioning at military facilities under  
10 the Base Realignment and Closure Program. We've briefed the Technical  
11 Assistants and may have provided you a little bit of information up to this  
12 point about Hunter's Point out in the San Francisco Bay area. In this area,  
13 we have a number of questions to answer around jurisdiction and NRC  
14 involvement. And in my mind, how much involvement does NRC need to  
15 have in order to ensure public health and safety.

16 We're dealing with a number of very interesting issues involving  
17 NARM in the Hunter Point case and we'll be coming to the Commission  
18 with some policy recommendations in this area.

19 We're also assessing proposals. I know you're familiar with both  
20 Shieldalloy and AAR on the use of legal agreements and restrictive  
21 covenants in order to control post decommissioning access and use of the

1 sites and I do know that you've expressed your views in these  
2 areas.

3 We're going to have, I think, more discussions around these sites  
4 as we continue to review the responses to requests for information and  
5 interact with the stakeholders on these programs.

6 On waste incidental to reprocessing, I think we're successfully this  
7 week working with our partners on monitoring and consulting and  
8 interacting with the states. We've got South Carolina and Idaho and other  
9 stakeholders. So, this week things are going very well in that area.

10 Low level waste. I just wanted to recall that we are now in the  
11 process of implementing the low level waste strategic assessment that we  
12 sent to the Commission last year. Some of our higher priority tasks that  
13 we're working on now include revising the storage guidance for material  
14 licensees in particular and updating what we call blending guidance and  
15 developing new guidance on disposal. There are several policy issues  
16 that are going to be coming to the Commission in this area.

17 One involves the need to revise our classification guidance in Part  
18 61 to address depleted uranium that is going to be coming from the  
19 enrichment facilities. Another is the blending of wastes. I think that's  
20 going to be a significant policy issue as we look at different concentrations  
21 and how we approach concentration averaging. Implementing this low

1 level waste strategic assessment program and addressing the  
2 policy issues takes on a greater importance as Barnwell backs down its  
3 operations later this year.

4           The next area I just wanted to talk about was in-situ and uranium  
5 recovery facilities. With the resurgence of interest in nuclear power, we've  
6 seen an increased interest in licensing new and expanding existing  
7 uranium recovery facilities. We're preparing a generic environmental  
8 impact statement in response to Commission direction on uranium  
9 recovery facilities and this is going to support our site specific applications.  
10 And we do believe that the Commission was right. We are going to see  
11 some cost savings by pursuing this generic environmental impact  
12 statement.

13           There are a number of uranium recovery applications and  
14 unfortunately I believe the number of applications are going to outpace the  
15 resources that we have to review these applications. So, what I expect  
16 we're going to see is a backlog in this area. And this is going to require  
17 careful management. We're going to have to establish some rules of  
18 engagement so we decide how we go about prioritizing and conducting  
19 our reviews.

20           In this area, we also face challenges with recruiting, retaining,  
21 developing skilled staff and they always present challenges and will



1 present specific challenges in this program area.

2 Next area is fuel cycle facilities and I'll be talking to slides 25, 26

3 and 27. I really want to focus on our licensing activities and also talk

4 about Hanford and where we are in that review.

5 COMMISSIONER JACZKO: I'm sorry. Can I just ask a

6 clarifying question back on the issue of the uranium recovery applications?

7 You referenced the GEIS. I guess I've gotten different conflicting

8 information from the staff. We've gotten one or two applications that have

9 come in this year. Will we be doing specific EISs for those applications --

10 so the GEIS will apply to applications later?

11 MR. VIRGILIO: Yes, sir. We don't want to hold up the

12 applications that we can start reviewing today.

13 COMMISSIONER JACZKO: Is that a change in where -- it

14 was my understanding that when we originally went down the road of the

15 GEIS, we were going to -- everybody was going to be covered by the

16 GEIS.

17 MR. VIRGILIO: I don't recall it that way. My recollection is

18 that we were going to be doing it as a parallel effort because we did not

19 want to hold up and wait. We have resources available. We want to start

20 on the applications that we can review. I don't know how many we were

21 able to do at this point. We're working on two now?

1                   COMMISSIONER JACZKO: We had like three  
2   and one we sent back and then there --

3                   MR. MILLER: Charlie Miller from FSME. We received three  
4   applications thus far. In dialogue with one of the applicants, the decision  
5   was made by them to withdraw the application and enhance it. So,  
6   currently we have two under active review, Commissioner.

7                   COMMISSIONER JACZKO: And those two will have specific  
8   EISs?

9                   MR. MILLER: Given the nature of the GEIS, the problem  
10   that we have is to complete the activities. We may be able to take  
11   advantage of the GEIS if it's finished in time; however, recognize that  
12   given the fact that there is a GEIS there still needs to be a specific, at  
13   least, environmental assessment for each of those facilities and whether  
14   it's a supplemental EIS or whether its an environmental assessment will  
15   depend upon how quickly we finish those reviews and whether or not  
16   they're contested over time; whether the GEIS is ready for prime time in  
17   enough time to take advantage of that.

18                  COMMISSIONER JACZKO: I don't necessarily want to get  
19   into this here, but since you brought it up. The more I see this the more  
20   I'm wondering if we're going to get any benefit out of the GEIS.

21                  MR. MILLER: Clearly, we will. We anticipate in the teens of

1 applications, perhaps even bigger than that over the next  
2 number of years. The GEIS itself could save us up to seven FTE. An  
3 environmental impact statement is very resource intensive to complete.

4 COMMISSIONER JACZKO: Is that assuming that all we  
5 have to do is a specific EA for each site or does that assume we would  
6 have to do a specific EIS for each subsequent site with a savings of seven  
7 FTE?

8 MR. MILLER: The savings of seven FTE would assume that  
9 the GEIS would be able to capture a lot of the issues that are common.  
10 For example, the design of the facilities. They're above surface facilities,  
11 so there's many aspects of the environmental impact that we take  
12 advantage of with regard to the facility design. Some of the specifics --

13 COMMISSIONER JACZKO: In terms of the seven FTE  
14 savings that is assuming --

15 MR. MILLER: If we do individual GEIS's for every one of  
16 those facilities what we've done is we've tried to take a look at that over  
17 time. We would probably spend at least seven FTE more if we had to do  
18 an individual one for each facility. So, we're trying to capture as much as  
19 we can in the GEIS. The GEIS will be broken into four zones, so that  
20 there's geographical zones that have a lot of the commonalities.

21 COMMISSIONER JACZKO: Right. I'm guess I'm trying to

1 get a specific answer to this. Are you assuming that there will  
2 be supplemental EISs for those facilities that are doing a GEIS?

3 MR. MILLER: Not necessarily, no. We haven't made  
4 determinations because we haven't gotten far enough in the reviews of  
5 these to determine or we haven't even gotten the applications.

6 COMMISSIONER JACZKO: The seven FTE savings -- we  
7 would still have a seven FTE savings if in fact we had to do supplemental  
8 EIS's for each of those sites?

9 MR. MILLER: Perhaps it would be smaller than that if we  
10 had to do complete -- we don't anticipate we're going to have to do  
11 supplemental EIS's for every one of those sites. Many of those sites are  
12 in areas that we don't anticipate we'll have to do that. There may be  
13 some, so I think the best way to say it is we feel that we can get a savings  
14 of up to seven FTE, maybe slightly smaller than that.

15 COMMISSIONER JACZKO: Thanks.

16 MR. VIRGILIO: Thank you, Charlie. In talking about the fuel  
17 cycle facilities now 25, 26, and 27. First of all, I think that we believe that  
18 the revised Part 70 with its ISA requirements have enhanced safety at  
19 both existing and new fuel cycle facilities. The NRC licensed the LES  
20 enrichment facility in 2006, the USEC American Centrifuge Facility in 2007  
21 and these are both currently under construction.

1           In 2006, AREVA submitted an application for possession  
2           and use of the MOX facility. We have that under review. In 2007, GE  
3           submitted the application for the laser based test loop and this is currently  
4           under review as well.

5           And we're periodically meeting with both GE and AREVA as we  
6           look forward to their applications for new facilities. In this program area  
7           we face challenges associated with prioritizing our resources and ensuring  
8           that we have well qualified staff to support our technical program reviews.  
9           There are additional challenges that are somewhat unique to this area  
10          with respect to protection of classified information.

11          As the scope of licensees that possess classified technologies  
12          expand, so expand our programs. We continue to inspect restricted data  
13          programs and interact with Department of Energy and foreign  
14          governments to ensure the technology and information is being protected  
15          in the United States. We will be proposing some policy issues for  
16          Commission consideration and possibly new agreements that will help us  
17          in protecting classified technology. This will be coming to the Commission  
18          in the near future.

19          As far as Hanford is concerned, earlier this year Congress tasked  
20          the NRC with reviewing the regulatory processes that DOE has applied to  
21          the Hanford waste treatment facility. The staff has completed its initial site

1 visits, its interviews and some public interactions in the vicinity  
2 of the site. The staff has met with the Defense Nuclear Facility Safety  
3 Board and the staff is in the process of developing its draft report. We  
4 expect to deliver the final report to the Commission on schedule and to  
5 Congress on schedule, which is this summer.

6 Meeting these expectations involved overcoming a number of  
7 challenges. I mentioned this was an unfunded mandate. We've had to  
8 move resources and this has been a challenge. Fortunately, it's not  
9 resulted in any significant impacts to our programs, but we've had to do  
10 some juggling of resources. We will face some challenges in how we're  
11 going to deal with issues that we find through our review and through our  
12 site visits that are somewhat out of scope with what Congress asked us to  
13 do and we're going to face some challenges in effectively communicating  
14 the results of this assessment.

15 In particular in my mind, there will always be differences between  
16 the way DOE is treating this program and the way NRC treats our  
17 licensees, but in communicating not only the differences, but what are the  
18 risk significant portions of those differences. I think that's going to be our  
19 focus and our challenge.

20 I'd like to now move on to the high level waste program. These are  
21 slides 28, 29 and 30. I'll start off by saying that I will in fact address waste

1 confidence in this section, Commissioner Jaczko, and I will also  
2 pick up the package performance study, which is a full-scale test of our  
3 High Level Waste transportation packages.

4 First, I would say that we are implementing our high-level waste  
5 program, albeit at a very reduced pace. We are expecting to receive the  
6 license application from DOE in June of 2008, this year. Congress has  
7 created a number of challenges for us with respect to the budget. In  
8 FY2008, our request for high level waste funding was reduced by  
9 \$8.2 million providing \$27 million to execute the program. And in  
10 January 2008, OMB reduced the 2009 request by about \$41 million; from  
11 \$78 million down to \$37 million.

12 In response, what we had to do was deploy a number of strategies.  
13 What we had to do was think about how are we going to continue to be  
14 ready to review and make some decisions about whether the license  
15 application is acceptable for docketing, while at the same time scaling  
16 back our efforts in this area. We have, in fact, scaled back both efforts  
17 here at headquarters involving the technical staff, the legal staff and our  
18 information support, as well as staff at the Center for Nuclear Waste  
19 Regulatory Analysis and I'll just call them the "Center" as we proceed  
20 through this.

21 These reductions have impacted our ability to prepare for the

1 application review and interact with our stakeholders. What  
2 we've done is about 20% of the staff and I'll just speak for the High Level  
3 Waste technical staff right now. About 20% of that staff has now been  
4 diverted to other work, either they're on detail, they're supporting -- for  
5 example, we've got some of them supporting the Hanford review and we  
6 have some of them on loan to other programs. Similarly, the Center has  
7 cut back about 20% of their technical experts and have put them on other  
8 program areas as well.

9           So, using the resources that are available this year, we've  
10 concentrated our efforts on our ability to complete the acceptance  
11 interview once we receive the application. The impacts of the reduced  
12 resources will certainly be more severe as we look out into 2009,  
13 especially if NRC makes a favorable docketing decision. If you think  
14 about what happens in 2009 and 2010, there will be significant impacts.

15           It's interesting, these are not necessarily in the technical resources,  
16 but where our big growth comes in 2009 and 2010 is primarily outside of  
17 the technical areas. It's OGC. It's the Hearing Board. Its support to  
18 Digital Data Management System, the DDMS. It's a number of areas  
19 outside of the technical area. We will not able to support the growth in  
20 these areas without the resources. And ultimately what that means is we  
21 will not able to meet the schedules that have been dictated to us by



1 Congress in the Nuclear Waste Policy Act.

2 In addition to these challenges that I just mentioned, another  
3 significant challenge I think is the EPA has yet to finalize its rule for the  
4 new dose standards that will be needed. I believe these are needed  
5 before NRC can make a construction authorization decision, but yet it  
6 represents a significant challenge to us.

7 Safe spent fuel storage. I don't think this has been a problem. Our  
8 analyses and our operating experience continues to show that we have  
9 demonstrated safety in both wet and dry systems; however, the issue of  
10 waste confidence and I say waste confidence as sort of shorthand for our  
11 regulations that are included in Part 51.23. These issues continue to be  
12 raised by our stakeholders in the context of new reactor licensing.

13 DOE is no longer forecasting 2017. It was an interesting session  
14 we had at the RIC this year. Ward Sproat laid out for us that he's no  
15 longer backing 2017 as the opening date or startup date for the repository.  
16 He told us that he's postponed pretty much all of his rail development.  
17 Pretty much everything in DOE today is focused on completing the  
18 engineering necessary to support the license application and tendering the  
19 license application.

20 So, in response to all of this and before the RIC, of course, the  
21 Commission has tasked us with providing some recommendations on

1 waste confidence and we're working very cooperatively with  
2 Karen in OGC and we'll have some recommendation to the Commission  
3 and this area.

4 The next area is the TADs, the Transportation and Aging Disposal  
5 Canisters that are being developed to support the high-level waste  
6 program. We currently expect to receive a number of TAD cask design for  
7 review in 2009 and 2010. What we expect to have is pre-application  
8 interactions starting up in the very near future. Our ability to support even  
9 the pre-licensing interactions is going to be very limited because these are  
10 nuclear waste fund resources. And again, we have to consider and  
11 prioritize our resources in this area very carefully.

12 Delays in this side of the program, on the TAD side, are likely going  
13 to cause increased demands or shift the focus of the licensees and the  
14 vendors to non-TAD transportation and storage cask design reviews.

15 Package performance study. Again, this was an earlier  
16 commission, but we interacted extensively. I know Commissioner Lyons  
17 you were very involved as we looked at full-scale testing of the casks that  
18 are going to be used to transport high-level waste. Several years ago we  
19 basically put a hold on this program as we realized there were going to be  
20 delays associated with receipt of the application for Yucca Mountain, but  
21 what we did is we entered into agreements with our German counterparts

1 to obtain data from semi-scale test facilities that they had and  
2 this has been a very successful program. It's helping to lay the foundation  
3 and prepare us for the eventual large-scale testing of transportation casks.

4 But as I sort of alluded to, we have deferred the large-scale testing,  
5 the package performance study, in response to delays in the program and  
6 reductions in funding.

7 Now, I'd like to shift to the last area that I'll talk about: spent fuel  
8 storage and transportation. These are slides 31 through 33. I would say  
9 that the nuclear power plants continue to increase the spent fuel storage  
10 capacity to support their operations. We now believe that there is some  
11 likelihood, albeit small, that we will receive an application for an away from  
12 reactor ISFSI. This may be outside of our current planning horizon. We're  
13 looking at that very carefully. It's more likely, I think, in this planning  
14 horizon, we're going to see new applications for truck and rail casks.

15 We're currently, for the cask designs and for the amendments that  
16 we're reviewing, seeing increasingly more complex applications for  
17 amendments coming at us. These complex requests involve high burn up  
18 fuel, credit for burn up and moderator exclusion. And create a challenge  
19 for us in that we're still gathering data in this area and there's a limit to  
20 how far we can go with our approvals absent having the tools and the  
21 data.

1           In 2010, however, we intend to resume our efforts to  
2 gather the data and to improve our tools in this area. DOE in 2007  
3 purchased some data from the French and we understand that in 2008  
4 they're going to purchase some additional data and they've also started or  
5 are partnering in a five-year domestic program that will also help increase  
6 the data that we have available in this area.

7           We continue to update our regulatory guidance. We've done a  
8 number of risk assessments in this area and so we can actually gain some  
9 ground in risk informing our programs, our standard review plans, our  
10 guidance documents and make some changes. But the changes that the  
11 industry would like, the changes where you see the most advantage if you  
12 were a licensee or a cask vendor around burn up credit and moderator  
13 exclusion really depend on our ability to get the data, to analyze the data  
14 and advance our knowledge in this area.

15           Stakeholder communications. Transportation of spent fuel is an  
16 issue that has raised public concern beyond state lines and international  
17 boundaries. We have been very successful, I think, in influencing and  
18 adopting international standards for waste and spent fuel transportation --  
19 radioactive materials transportation. I think the industry has demonstrated  
20 an excellent safety record in this area, but nonetheless we've had a  
21 number of challenges in communicating with our stakeholders about spent

1 fuel transportation risks.

2 I would say communications about spent fuel transportation safety  
3 have become more frequent and I expect they will become more frequent  
4 and more important as we conduct the review of the high level waste  
5 application for docketing. And if plans around reprocessing facilities come  
6 to fruition and plans around away from reactor storage facilities come to  
7 fruition, communications in this area will become much more important.

8 That completes my prepared remarks. I'd like to turn this back over  
9 to Luis for conclusion. Thank you.

10 MR. REYES: In keeping with the theme of the day, we are  
11 green on the light and we provided some extra minutes for the 28  
12 questions that Commissioner Jaczko has. So, with that --

13 COMMISSIONER JACZKO: We're up to 39.

14 MR. REYES: Thirty-nine. So, with that, we're looking  
15 forward to your questions.

16 CHAIRMAN KLEIN: Thanks for a good strategic overview of  
17 those programs. I did note, Marty, that you had defined SOARCA in the  
18 briefing. So, that was good. I think what I'll do is -- I have my question is  
19 divided up for Bruce and Marty, and so, I'll start with Bruce since he's had  
20 a rest.

21 MR. MALLETT: I yield my time to Marty. Just let me finish

1 this daiquiri first.

2 CHAIRMAN KLEIN: On page four of your presentation, you  
3 were talking about the license renewal inspections. I noticed in going  
4 through some of the documents that the number of FTEs on your license  
5 renewal inspections went from about 0.9 in '08 up to about 6 in FY10.  
6 Could you explain a little bit about that jump because I thought our license  
7 renewals were somewhat constant and I was curious about the FTE  
8 shifts?

9 MR. MALLET: I'll start out and then I'll ask Jim Wiggins to  
10 help me out if I get this wrong. It's my understanding that was to  
11 anticipate inspections that we're going to be conducting prior to the  
12 40-year time frame; that the resources for routine inspections during the  
13 license renewal process should stay about the same. In fact, they should  
14 be reduced when you look at the number of them we're reviewing versus  
15 in the past. I believe that's the basis for that increase.

16 MR. REYES: There's a difference between the auditory  
17 inspections we do while we're renewing the license and the ones that  
18 you're talking about are 97003? 91003? 71003; there you go. Those are  
19 the inspections that are to confirm that the commitments in the renewed  
20 license our implemented before their 40<sup>th</sup> birthday. And we've started  
21 those inspections now, but it increases pretty quickly in '09 and 2010.

1                   CHAIRMAN KLEIN: Okay. That explains, so  
2    you're going back and looking at some of the others?

3                   MR. REYES: Correct.

4                   MR. MALLETT: In fact, some of those need to be done  
5    during the refueling outage, prior to that 40-year time frame. That's why  
6    you see some of them now and then fiscal year '09.

7                   MR. REYES: In '09, we have the first plant that becomes 40  
8    years old. They start in a ramp after that. That's why you see that  
9    increase.

10                  CHAIRMAN KLEIN: I noticed also on slide four you talked  
11    about the fire protection. In that one, NFPA 805 was mentioned. In  
12    looking at Marv's letter, he talked about the enforcement delay in order to  
13    absorb information from those two pilots. Could you sort of talk about your  
14    thoughts on that at this point?

15                  MR. MALLETT: Again, I'll start out and ask Jim to  
16    supplement me or Jim Dyer. My thoughts are I believe that you will need  
17    some extension on the NFPA 805 for those plants that are transitioning to  
18    that on this three year extension time period.

19                  The reason for that, I believe, is when you look at the pilot  
20    inspections that are being conducted now and reviews for the  
21    amendments, we're learning a lot from those two plants and I believe that

1 needs to be incorporated in the licensees' amendments. It will  
2 make the amendment process more solid and more sound.

3 I believe they need some more time to factor those in. I also think  
4 as we go through those we're learning a lot about our guidance document  
5 out there for doing these reviews and I think that we need to incorporate  
6 those changes. I don't believe there should be an extension beyond that  
7 period. I believe once you establish you've got these pilots the lessons  
8 learned factored in, then the licensees need to get on with it.

9 But I do believe we're going to come up against that three-year  
10 period and if you force them to do it too soon, you won't factor those  
11 lessons learned into their amendments and into their actual analysis.  
12 Does that give you enough?

13 CHAIRMAN KLEIN: That's good. I did go down to the Harris  
14 Plant where they were going through that pilot and it seemed like they  
15 were heavily into a very detailed analysis and making good progress. It  
16 will be interesting to see if we can get those lessons learned in order to  
17 get those implemented in the other 805 issues. And so, it seemed like a  
18 reasonable request, I think again, and I would like to see what comes out  
19 of those pilots.

20 MR. MALLET: I think you hit on something. A key  
21 short-term for us will be to capture those lessons learned and make sure



1 we've got the scope in the entire compendium.

2                   CHAIRMAN KLEIN: Also, on slide five you talked about early  
3 detection of performance trends. That's the one we always look for; that  
4 golden nugget that's out there to tell us exactly when a plant is going to go  
5 down that slippery slope and try to catch it early. I know INPO has had  
6 the same challenges with their inspections, so I think it's one we've all  
7 looked at. But I did notice in your backup material that the number of  
8 plants that have moved into Column 3 has taken a sharp increase.

9                   Could you comment on those trends and I know during the RIC that  
10 Jim Dyer had a slide that was readily posted about his performance  
11 getting better, declining or staying the same. Would you comment on  
12 what you see as the number that are going into Column 3; why and what's  
13 the issue behind that?

14                   MR. MALLET: Let me answer that in probably a little  
15 different way. First of all, I do believe that we have a very dedicated staff,  
16 both in the regional offices and in our Office of Nuclear Reactor Regulation  
17 and Incident Response offices that are, I think, always looking for ways of  
18 detecting performance problems. We've had a number of situations where  
19 I believe their dedication and diligence has prevented problems and  
20 actually reduced the scope of the performance problems.  
21 I didn't highlight those in my presentation because I was looking forward.

1           Now, to answer your question specifically. When you do  
2           that, however, and we look at the number of plants that have gone into  
3           Columns 3 and Column 4 over the years, what we started doing is looking  
4           at common indicators. I think you all suggested this to us during the last  
5           agency action review meeting back in May of 2007.

6           So, we put together a list of those actually last September when we  
7           all got together -- all the Regional Administrators, myself and Bill Kane and  
8           said here's some common indicators that we have for those plants going  
9           into those columns. What we did was we lined them up with the  
10          crosscutting issues in the current program and said, "Do they lineup?" We  
11          asked ourselves the question: Is there anything else we need to do in our  
12          inspection program to focus on those? I would be remiss if I said we've  
13          conquered that.

14          I think all we gotten to this point is an alignment on what those  
15          indicators are and then we need to go forward from here and look at how  
16          we put those into the program. But we do think Elmo Collins, if he were  
17          here, would tell you that, "Bruce, there's nothing new. All those are in the  
18          program." He did a comparison and showed, for example, one of the  
19          indicators was inadequate investment in the future. We see that as a  
20          common theme for licensees that move from the action matrix Column 1  
21          over to Column 3 and then to Column 4.

1           He said that's included in our safety conscious work  
2 environment, problem identification and resolution crosscutting issues and  
3 decision making. We ought to be doing a smart sample to look for that  
4 during our PI&R inspections. I'm sorry; our Problem Identification and  
5 Resolution inspections. I think I would characterize it as we've identified  
6 these, now we need to look at do we need to make changes in the  
7 program to put those in place or does our smart sampling already address  
8 them? Does that answer your --?

9           MR. REYES: Can I supplement this because I want to put  
10 this in the right perspective. If you look at the abnormal occurrence report  
11 and if you look at the severe accident and precursor report, what you find  
12 out is that those are either stable or declining. To me, this is a success.

13           We have a program, an oversight program, that's identifying issues  
14 early on and we need to aggressively pursue them. But I don't want to  
15 leave the impression that this equates to abnormal occurrences or  
16 precursor for significant events because those are either stable or going  
17 down. So, what we're trying to do is refine that tool to identify early onset  
18 of performance declining. What Bruce talked about are the elements of  
19 our program which we think we're being successful in.

20           CHAIRMAN KLEIN: One comment that was also on that  
21 same page five is on the vendor inspections. I do think as we look at our

1 human capital in the vendor inspection program because things  
2 have changed a lot from the '70s and '80s when all the vendors were U.S.  
3 that we will have to look at how do we staff up, train and also how do we  
4 take advantage of other international inspection programs so that we can  
5 compliment what other regulators do on that vendor inspection because  
6 that clearly will be different this time around as you look at the number of  
7 people in that area.

8           On your page six on your safety culture, I thought Jim Ellis had  
9 really given a good comment. I think all of us heard his speech in terms of  
10 the safety culture and the kinds of things that they're doing. Do you have  
11 any comments, I guess, on the safety culture from his comments and how  
12 we might incorporate those as well? Because I think they're a common  
13 theme, both from INPO's perspective and our perspective.

14           MR. MALLET: Yes. I would add to that that I believe he did  
15 a very good job of scoping all the indicators that you see of problems with  
16 people and safety culture and actually success stories of licensees that do  
17 it well. I believe when you take those-- he may be using some different  
18 words in his list of eight, I have a list of about 20, but you can incorporate  
19 those and I think they all line up. So, I think he's right in the areas.

20           The question then to me is how do we look for those to determine,  
21 as I said before, the early indicators that you might want to use as a tool to

1 say you need to change something. In ours, we look for it in  
2 our reactor oversight process. Marty looks for it in his fuel facility  
3 inspection. I think in theirs they're looking for excellence. We're looking  
4 for our licensees going to go down this path of declining performance.

5 So, there's a little bit of a difference in how you look, but I think the  
6 end goal is the same. When you see those indicators, what are you going  
7 to do to prevent somebody from declining in performance? I thought he  
8 was all encompassing in his comments and the right look.

9 We also share with INPO our findings and they share theirs. We try  
10 to do that certainly on an annual basis. The senior managers get  
11 together, but I'm trying to do it monthly by phone calls and sharing and we  
12 compare notes on what we're finding and what notices we might need to  
13 put out to licensees which is helpful.

14 I'm careful to say we don't compare plants, although we do ask a  
15 question sometimes if we have a plant in Column 3 or 4, do they see  
16 problems at those facilities and if not, why not. And they ask us the same  
17 question. If they see problems, why don't we see it?

18 MR. REYES: I think success here is how we leverage this. If  
19 you look at what INPO does and what we do and you put it together and  
20 you look at what other nations do, we do more in the U.S. than anybody  
21 else. If you take those two components and you see it as a grand sum,

1 what we need to work on is how to best leverage each other's  
2 information to make the right outcome. I think that's what Bruce is talking  
3 about to make sure we take advantage of that wealth of information from  
4 both organizations and how do you make it get the right outcome?

5 CHAIRMAN KLEIN: Well, I've got a few more questions for  
6 you later, Bruce, before I move over to Marty. But we'll go to  
7 Commissioner Jaczko for the first round.

8 COMMISSIONER JACZKO: I just wanted to make a quick  
9 comment before I get into my questions. On the enforcement discretion  
10 issue, I think it's important to keep in mind what we're talking about is  
11 enforcement discretion against Appendix R or whatever license conditions  
12 or other issues. Those are issues that could be long standing. They're  
13 manual actions which have been longstanding issues. These are not new  
14 issues.

15 The enforcement discretion was intended as a way to ensure that  
16 plants would more quickly move to NFPA 805. Extending it doesn't  
17 necessarily seem to me that it's going to make a difference one way or  
18 another because if you don't get the enforcement discretion then you go  
19 back and if you don't do an NFPA 805, then you've got to deal with  
20 Appendix R, which you're probably not in compliance with, otherwise you  
21 wouldn't need the enforcement discretion.

1           So, the original paper that came up to the Commission  
2           was for a two-year extension. At that time the Commission changed it and  
3           the staff in the process of voting on that paper came back and said, "No,  
4           we prefer three." So, we went with three. So, we've already done a little  
5           bit of an extension here. I think at some point we have to just enforce or  
6           deal with these issues. Digital enforcement discretion in my mind is not  
7           going to accomplish much.

8                       MR. MALLETT: If I could make a quick comment on that.

9                       COMMISSIONER JACZKO: I have too many questions,  
10          Bruce, to get through.

11                      MR. MALLETT: Okay, I'm going to get to question number  
12          two, right?

13                      COMMISSIONER JACZKO: I don't remember. Question  
14          number two is status of the voluntary efforts due to the increased design  
15          basis threat exercises. Maybe we'll start with that one. Where do we  
16          stand? Last year we did a series, or we had two plants that volunteered to  
17          do these additional voluntary design basis inspections. Do we have any  
18          volunteers for this year?

19                      MR. MALLETT: Let me ask Roy Zimmerman to come to the  
20          microphone and answer that one, but I can tell you that we have been  
21          dialoguing with industry on what ought to be included in these and working

1 on that scope and there are some concerns in the industry  
2 about how we're treating the results of that. Let me let Roy answer your  
3 question specifically.

4 MR. ZIMMERMAN: With regard to beyond DBT, Exelon has  
5 indicated their willingness as has Progress Energy. So, we have two  
6 organizations that, depending on how the force-on-force exercises go, will  
7 be looking at their third exercise potentially being a training exercise.

8 COMMISSIONER LYONS: Okay. I guess I'll start with and  
9 go back to some of these issues. The issue on -- we talked about the  
10 beyond 60 license extensions. We're anticipating in about four or five  
11 years that we will see new applications for that. Will those be for plants  
12 that are actually operating in their 40-year license extension at that point?

13 MR. REYES: The rules allow you to ask for a license  
14 extension 20 years before the expiration of your license. So, the plants  
15 that are becoming 40 in '09 and 2010 in theory in '09 or 2010 could come  
16 in and ask for the second wave.

17 COMMISSIONER JACZKO: So, it have to be those plants  
18 that are in their 40 year operating --

19 MR. REYES: Practically, we're saying well, within four or five  
20 years because we have technical issues that need to be resolved and so  
21 we anticipate in four or five years. And the reason is when you look at the



1 licensee's long-term business plan, if they had to replace a  
2 generating source with another source of any kind, whether it's nuclear or  
3 gas, they need about a decade. So, when you subtract from the end of  
4 their 60-year life down -- you come down to 50 because they have to  
5 decide, okay, this is not an option; we have to replace it.

6 So, practically in the next four to five years we expect to start  
7 seeing interest from people looking into is this an option or not; if not, my  
8 business plan has to change.

9 COMMISSIONER JACZKO: Turning to waste confidence,  
10 Marty, you touched on it and you mentioned that you're working with  
11 Karen on some issues. I know at previous meetings the Commission has  
12 expressed a strong interest in rulemaking in this area. Are their options  
13 other than rulemaking right now that would be available?

14 MS. CYR: The option is whether you need to really do the  
15 rulemaking. So, we're doing the assessment that would underlie a basis  
16 for going forward and providing you the options. And when you look at all  
17 that, you can decide whether or not based on all the information you really  
18 feel that this is an occasion in which you, in a sense, need to readdress in  
19 some way your waste confidence finding.

20 COMMISSIONER JACZKO: In terms of timing, when do we  
21 need to have waste confidence -- if we were to have to go down the road

1 of rulemaking do we need to have that done before license  
2 issuance?

3 MS. CYR: No. We're on a timeline to deliver something to  
4 you, I think, in the June timeframe and that's certainly plenty of time for the  
5 Commission if they decide to go with rulemaking to proceed with that and  
6 conclude that.

7 COMMISSIONER JACZKO: So, it would need to be done by  
8 the time we would issue a COL or not?

9 MS. CYR: Not necessarily, but I think we're on that time line.  
10 If you started a rulemaking sometime in the summer depending on your  
11 comment period you could finish it in potentially a year.

12 COMMISSIONER JACZKO: Okay. Marty, I think I asked  
13 you this question. On SOARCA, you said the plant does have a staff -- a  
14 plan to address the staff -- the ACRS comments in SOARCA. Maybe you  
15 can fill me in a little bit more on what that plan is and what the intention is.  
16 I read the comments.

17 MR. VIRGILIO: They're looking for a full scope PRA.

18 COMMISSIONER JACZKO: They called into question the 10  
19 to the minus 6 cutoff. There are a lot of issues that would cause one to  
20 reevaluate in some fundamental ways, I think, SOARCA.

21 MR. VIRGILIO: This is an opportunity for Farouk to give you

1 his views. Based on my views -- well, first of all, we're still  
2 doing the cost-benefit analysis as to whether we do or don't need to do  
3 that. However, I think we've got all the information that we need. I think  
4 we've got the sequences.

5 By using the cutoff, by looking at potential for early bypass and  
6 release, I think we have it covered. It's a different approach and we're  
7 following Commission direction. Commission direction was 10 to the  
8 minus 6 consequence analysis. What ACRS is saying is put a PRA  
9 overlay on top of that and see if the results differ and based on our initial  
10 assessments, we don't think they differ.

11 MR. ELTAWILA: I think Marty answered the question, but if  
12 you want me to elaborate a little bit. High consequences scenarios are  
13 those associated with early containment failure immediately after a vessel  
14 failure. We resolved this issue based on phenomenological  
15 understanding. It has nothing to do with PRA. So, based on that, you are  
16 not going to identify any high consequence scenario.

17 The 10 to the minus 6 is intended as a screening criteria to do the  
18 consequences analysis, but we look at the same time we have looked at  
19 all the PRA scenarios and we assured ourselves there's nothing below this  
20 ten to the minus 6 that can lead into a different accident scenario.

21 In addition to that, we have benchmarked our scenario against the

1 applicants for the two plants that we analyzed. We have  
2 identified nothing that's different from us.

3 Third point: We are planning a peer review. So as Marty indicated,  
4 we really don't believe there is any additional benefit to begin a full scope  
5 PRA except two minor issues that we are focusing on, power operation  
6 and low power and shut down. But these are very slow developing  
7 scenarios that you have plenty of time before you can get into trouble. So  
8 again, the full scope PRA will not shed any light upon that.

9 COMMISSIONER JACZKO: I appreciate that and I look  
10 forward to seeing certainly what the formal response is on that.

11 The Chairman touched a little bit on fire protection and I guess I  
12 would ask a couple questions on that. One of the outstanding issues, I  
13 think, has been PRA quality and perhaps you can update me on where we  
14 are. We just did Shearon Harris review of their PRA. I think Oconee is  
15 either ongoing right now. Diablo, I think, has had an industry peer review.  
16 We're starting to get better at this now. As these peer reviews have  
17 identified issues are the PRA improving? Where do we stand on that?

18 MR. MALLETT: I would ask Jim Wiggins to supplement me  
19 again, but my understanding is we are learning from these pilot  
20 inspections that the PRA quality is not there, but improving as we do each  
21 one. I think that's a very important basis. I know you don't agree with the

1 enforcement discretion extension, but I think that's another  
2 reason we might want to have that as I hear from industry is more time to  
3 develop that.

4 But I do think it's important to make sure we identify what these  
5 lessons are and how long we would give and tie it to that extension if we  
6 ask for it. But as far as details of what the findings are, I don't have them.  
7 I don't know if we have that. I'll have to get back to you that.

8 MR. WIGGINS: I don't think I have details.

9 MR. MALLETT: Mark is here.

10 MR. WIGGINS: Mark Cunningham is here. He'll come up  
11 and we'll give you some layers. We did enough on the pilots to  
12 understand you can't do a scoping study. You can't go through it. I'm Jim  
13 Wiggins. I'm the Deputy Director in NRR.

14 The initial cut at the PRA least wise for the Harris plant would  
15 indicate that you can't do this in a gross weight. The gross numbers -- a  
16 gross approach goes back to gross numbers that don't give you anything  
17 meaningful to advise or inform your decisions on what to do in the  
18 problem. It does require an extra level of attention.

19 Of course, this is another problem that we are trying to fix from the  
20 middle working to both ends. We don't have yet to complete the PRA  
21 quality review standard. That's still in the last stages of completeness.

1 That's a regulatory guide that we need to issue that would  
2 endorse or endorse with some caveats ASME-ANS standard. So, we're  
3 trying to fix that at the same time we're trying to fix an operational problem  
4 that's a compliance issue in the field. So, we're in the normal fire  
5 protection mode of operation. We're trying to fix a problem from the  
6 middle working from both directions. Maybe Mark can add a little bit more  
7 detail on Harris and Oconee.

8 MR. CUNNINGHAM: Yes. We've completed the Harris  
9 review about a month ago and the public information on that, the trip  
10 report if you will, will get out sometime this week. It's big in the sense of  
11 it's about 100 pages, if you will, but that's partially because of the format  
12 that's used in these peer reviews. It's sometimes not much on an  
13 individual page.

14 With respect to Harris, I think our basic conclusion was they were  
15 making progress, but they have a ways to go yet before their PRA is going  
16 to be ready for -- in tune with the application. Harris says they're coming  
17 in in late May or early June with their application. They are sticking to that  
18 schedule.

19 The staff from NRR and Research are down at Oconee this week  
20 doing an audit of the Duke PRA for the Oconee site. You mentioned also  
21 the Diablo Canyon. The two pilots are being done as audits by the staff,

1 the peer reviews if you will. In addition to this, all of the other  
2 NFPA 805 plants are having their own peer reviews; industry sponsored  
3 peer reviews.

4 Our staff observed the Diablo Canyon review about a month ago, if  
5 you will. There's a trip report out on that as well. So, there's a lot of  
6 activity out there in looking at the quality of the PRAs, the fire PRAs that's  
7 happening kind of under their pilot plant radar. Where we're trying to do is  
8 just feed back through our frequently asked questions process, the public  
9 process for that, is to communicate the insights from those things and help  
10 them -- help all of the licensees that are transitioning to have the same  
11 information base.

12 MR. MALLET: I would reiterate it's very important to make  
13 sure to communicate those insights as the right ones, the right set that we  
14 think the subsequent licensees need to use.

15 COMMISSIONER JACZKO: I appreciate that. As I said, I  
16 think that is a separate effort from compliance with Appendix R. And I  
17 think when we get back to enforcement discretion, that is an issue for  
18 Appendix R. I'm not exactly sure what additional enforcement discretion  
19 gets us. I have some more questions, so if we have another round I'll ask  
20 them then.

21 CHAIRMAN KLEIN: I think we'll have multiple rounds.

1 Commissioner Lyons?

2 COMMISSIONER LYONS: Let me start by thanking the  
3 three of you, but I also recognize that you're speaking for a large number  
4 of staff and management and I think you did an excellent job in laying out  
5 the breadth of the program, the range of challenges and we have a lot to  
6 be both proud of in the past and challenges to look forward to in the future.

7 I, too, have a number of comments and questions and I'll start with  
8 slide 16 with a couple of comments. Slide 16 has two points, one of which  
9 Greg's already mentioned that I personally feel very strongly about. Slide  
10 16 starts with the challenge of maintaining NRCs independent analytical  
11 and modeling skills.

12 Particularly as I've gained a little bit of experience in the  
13 international community and started to realize how unique the NRC really  
14 is in the international community in having the in-house modeling and  
15 analytic skills, it makes me, number one very proud of our organization,  
16 but I also am growing to realize the tremendous importance of maintaining  
17 those skills within the agency.

18 It's fine to supplement and ping technical support from a wide range  
19 of organizations, but I think the fact that we have those technical skills  
20 within the NRC allows us to, if you will, be smart customers, to evaluate  
21 the products that we get from external organizations and certainly I think



1 it's absolutely vital that we maintain it. Not really a question,  
2 just an endorsement that that's a challenge and one that I feel very  
3 strongly about.

4 Greg started to talk a little bit about expanding SOARCA. That  
5 remains of great interest to me. I will be very interested as you move  
6 ahead with some of the reports that were alluded to in response to Greg's  
7 questions on ACRS versus where we currently are proceeding in  
8 SOARCA. My own very, very strong interest in SOARCA has not  
9 diminished at all. If it needs to be improved or if its fine now, okay, but I  
10 continue to believe that SOARCA will provide extremely important  
11 planning tools to the agency in a variety of different scenarios in the future.

12 And with that, I wanted to sort of morph into an area where I was  
13 hoping to ask for your comments to tie together SOARCA where we  
14 currently have a paper asking us to provide some guidance on thresholds  
15 for dose consequences. I want to tie that together with - I think it was  
16 Marty's comments - on needs for ICRP, the potential recommendations  
17 and the extent to which we endorse or update with some of the ICRP  
18 more recent publications, even though the potential changes may be very  
19 small.

20 And then also tying it in with the discussion on cesium chloride,  
21 RDDs in general, the need to define and come up with definitions of

1 RDDs. It seems to me that that, too, ties in with questions of  
2 low dose responses, dose thresholds. And I guess what's going through  
3 my mind is that if any of you would like to comment on whether the time  
4 may be right instead of dealing with these different areas separately, if we  
5 should be looking towards an agency policy, or re-look at agency policy on  
6 general areas like the use of LNT, like the use of thresholds.

7 For example, to me -- and collective dose -- At least to me, as soon  
8 as you say you're going to do LNT with zero threshold you have said  
9 you're going to accept collective dose. And some different studies, BIER,  
10 BIER 7, ICRP, NCRP do recommend the use of LNT, but then they turn  
11 around and say, oh by the way, don't use collective dose or at least don't  
12 use collective dose for assessment of risk. It's fine to use it for screening,  
13 but not for risk.

14 To me, those statements simply aren't self consistent. And I really  
15 wonder if we could accomplish a number of different areas related to the  
16 use of doses in these fairly diverse areas that I mentioned by examining a  
17 revised policy. And I'm hitting you cold on this, but I'd just be curious on  
18 any comments you might want to make.

19 MR. VIRGILIO: I'll give it a start. You and I both had  
20 discussions about the ICRP recommendations and the treatment of LNT  
21 and I was pleased at least in the final write up that they recognized that

1 they don't even believe in it at this point, but they have no  
2 better model to use. And so, when I thought about SOARCA and as we  
3 developed the policy options, what was running through my mind was how  
4 do we deal with this?

5           How do we -- and not get ahead of the rest of the world with  
6 respect to creating a new model, but recognizing that the existing model is  
7 just that, a model, and may not represent and probably doesn't in the view  
8 of most of the scientific community what is really happening at low dose  
9 exposures. I had not thought about how to combine cesium chloride.  
10 That one really catches me cold.

11           COMMISSIONER LYONS: Well, RDDs in general.

12           MR. VIRGILIO: But it is part of what we're thinking about  
13 when you think about are we going to look at consequences beyond  
14 prompt fatalities.

15           COMMISSIONER LYONS: I'm starting to become convinced  
16 that we do need to look, probably at economic consequences, which will  
17 be a great challenge for the agency, but there's commonalities that we  
18 ought to be capturing.

19           MR. VIRGILIO: Yes, there are.

20           COMMISSIONER LYONS: I just wanted to throw this out  
21 there for consideration.

1 MR. REYES: Your statements make all the  
2 scientific sense in the world. What I don't know is practically can we get it  
3 in the time frame that you can resolve it because if you look at what the  
4 federal government is now trying to resolve what is an RDD and trying to  
5 define that, I agree with you that I think in terms of the rationale we should  
6 all be across, but I'm afraid practically that won't happen in the time  
7 frames involved and the driver's; the environmental drivers, I think, are  
8 going to get you in two different situations. From a science point of view, I  
9 agree with you.

10 COMMISSIONER LYONS: You may be quite right, Luis, but  
11 I think we should be striving maybe over a period of time to have a more  
12 consistent – to have an internally consistent treatment of different aspects  
13 or responsibilities that appear to be quite different, but they really come  
14 back to very similar considerations.

15 MR. REYES: Radiation is radiation whether it comes from a  
16 RDD or whatever. I agree with you. I understand that. I'm not sure that it  
17 will be decided that way. Bruce, you want --

18 MR. MALLETT: Well, at the risk -- I would say that I think  
19 Luis is correct and Marty as well that it's probably too difficult of a political  
20 public perception problem to resolve it all in one swoop. So, I think what  
21 you have to do is take each of the scenarios you're talking about and

1 resolve it, but keep in mind when you have made a decision in  
2 a particular scenario like RDDs, when you consider another scenario that  
3 you factor that in so you're consistent amongst them. I don't think you're  
4 going to be able to do it generically.

5 COMMISSIONER LYONS: It still makes me wonder if it  
6 could be a useful long-term goal to try to bring some more consistency.  
7 Let me jump to a completely different area and that's the whole range of  
8 issues associated with high level waste; spent fuel storage transportation.  
9 A very small part of that was a little bit of discussion on the package  
10 performance study.

11 Yes, I was very interested in that. Yes, I'm still interested in it, but  
12 until there's a whole lot more definition of whatever the nation's high level  
13 waste spent fuel program is I wouldn't have the foggiest idea of what we  
14 should be doing.

15 But what I wanted -- doing by way of a package performance. But  
16 what I really wanted to do was to get your thoughts on an area, I guess,  
17 that I'm increasingly concerned about and the Chairman referenced this in  
18 at least one of his speeches recently and that's the disconnect between  
19 the resources that are being provided to the agency and to DOE, but I'm  
20 concerned specifically about ours and the guidance that we have on a  
21 repository.

1           It seems to me that we're being -- we're in a position that  
2   is guaranteed no win and I hope we're finding adequate opportunities to  
3   note to Congress that the current budgets simply are not consistent with  
4   legislation. If they want to change the legislation, that's great. If that's the  
5   view, but the fact that we are in some sense caught in the middle with  
6   inconsistent guidance and budgets is of great concern to me.

7           MR. REYES: Since we just came down from a briefing this  
8   morning downtown and we briefed our Senate appropriators, we made  
9   specifically that point that the Department and the NRC had to be funded  
10  in a relative similar way and much higher than is now if we are to comply  
11  with Congress mandated three year review. And the current funding, I  
12  made it very clear that we would not. They needed to understand that.

13           I'm not sure we got any body language back one way or the other,  
14  but my reading is that they understood the issue. They didn't give us any  
15  feedback. Now, we have done that also with other staffers downtown and  
16  every place we go we make the point how connected those two things are  
17  and if the three year is in fact a serious goal that we need to review those  
18  budgeted resources for both entities. Everywhere I go I make the same  
19  point. I get traction in that they understand it. I'm not sure that will turn  
20  into action.

21           COMMISSIONER LYONS: Well, it would certainly be difficult

1 issue for Congress to take up, but I do think it's very, very  
2 important that we keep raising the disconnect and if that leads to a  
3 re-evaluation by Congress of the spent fuel management programs, fine.  
4 Just come up with something that's consistent as a nation and move  
5 towards it. But we're simply not there now. I appreciate that you are  
6 emphasizing that. Thank you, sir.

7 CHAIRMAN KLEIN: Well, you'll have the chance for  
8 additional questions. I would like to follow up with what Commissioner  
9 Lyons said. There is a disconnect between our guidance from Congress  
10 and associated funding. I think more will come into focus if and when we  
11 get the application. I think the challenge that exists right now is that since  
12 DOE had missed an earlier deadline are they going to miss this one.

13 I think everybody is sort of waiting for who blinks. I think once an  
14 application arrives, if it does arrive as Ward Sproat indicates this June  
15 then I think we can probably articulate a little bit more vocally now what  
16 our situation is. So, I think we need to keep raising it as we've done and I  
17 tried to do that in my speech to say there's a disconnect.

18 One of my concerns is if we do get the application and we have  
19 RAIs will anybody be home to answer them. Ward indicated that they  
20 were focusing on being able to answer our questions, so I'm sure we'll  
21 pursue that as time goes on.

1           Let me get back to -- I only had three more questions,  
2 Bruce. On page seven, you talked about intergovernmental coordination  
3 and one of the things that I'm surprised at being an independent agency is  
4 that we don't often automatically get invited to executive interdepartmental  
5 type activities. And I guess is there any recommendation you have on  
6 how we can get more involved in intergovernmental coordination because  
7 there are departmental meetings, deputy's meetings that we're not invited  
8 because we're not a part of that side, but we clearly have a role to play  
9 and certainly in matters of radiation.

10           MR. MALLETT: Yes. Thanks. I'll ask Roy to supplement me  
11 if I don't answer satisfactorily. I would say the key to me is to get involved  
12 early in those areas that we propose we need to be involved in. Let me  
13 explain that. I think Roy Zimmerman and his staff have done an  
14 outstanding job this past year in getting us involved in the National  
15 Response Framework. At the deputies and higher levels, I've been to  
16 several meetings downtown to where it used to be we didn't go to those  
17 meetings.

18           He and his staff have established a working level with those  
19 organizations which I think is the first step. Then that also gets us invited  
20 to the table at the deputies and the principal's cabinet department level  
21 office participation.



1 I think another area where they've been successful is  
2 this working group with the Federal Emergency Management Agency and  
3 the NRC to look at the exercises and how we conduct and review those.

4 So, my point again to reiterate is I think we need to be looking for  
5 those areas where we want to get involved and pursue that and I think  
6 we've done that very well.

7 We also -- the regions have, especially I know in Region IV, just  
8 coming from there, and Region II as well I know are quite active with the  
9 other federal partners and looking at hurricane response. And so the  
10 areas where we've identified we want to get involved early, I think, are  
11 paying off in that arena. We probably need to scope what other places  
12 that we feel we need to be the table at that level.

13 CHAIRMAN KLEIN: I would say just stay proactive on that  
14 one.

15 MR. REYES: Proactive and make awareness; make them  
16 aware of who we are, what we have and how we can contribute. And Roy  
17 Zimmerman and his staff have done a good job on that in certain areas,  
18 but we may have to look for other opportunities.

19 CHAIRMAN KLEIN: Another question near and dear to my  
20 heart is on page 10 where you mentioned non-power reactors. Having  
21 suffered through a license renewal, they're awful. Maybe they've gotten

1 better. I haven't followed it for a while. But I guess what I  
2 would hope is that we can somehow streamline that process with no  
3 compromise on safety that wouldn't have such a burdensome requirement  
4 both on us and the licensee. I guess would you care to comment on how  
5 that's perceived?

6 MR. MALLETT: No, I would not.

7 MR. REYES: We have two actively being reviewed. You  
8 know we made a decision based on past resources and we had a backlog.  
9 We have a backlog of those activities and that doesn't help any because  
10 you now have a document that was submitted here several years ago and  
11 you're trying to recover from that.

12 So, I think the best way to do that is to keep the right resources so  
13 we don't get into this backlog situation where the people who are  
14 participating in all that putting it together may not even be around.

15 CHAIRMAN KLEIN: I would also encourage you to look at  
16 what information do you really need. It really -- from my personal  
17 experience, though, it's not a license renewal. It was a new license. So,  
18 that was a challenge. I think it would be good if you went back and asked  
19 the questions; what information do you really need on those facilities,  
20 particularly in a safety related area that can streamline that process with  
21 no compromise on safety.

1 MR. MALLET: One of the things we are -- to  
2 answer your question -- is we are looking at the guidance to the staff in  
3 doing those reviews and we have a knowledge transfer challenge there as  
4 well. Many of the previous reviews were done by people that aren't here  
5 and so I think that's a key to us. But I'm -- unless Jim Wiggins has -- I'm  
6 not aware of any specific effort we've had to streamline the process. It's  
7 more been what Luis says to try and catch up with the backlog of the  
8 reviews. Jim, do you want to add to that?

9 MR. WIGGINS: Jim Wiggins, NRR again. What Bruce says;  
10 nothing specific to date. We just finished one probably Friday and that  
11 was like you said. It's a relicensing. Of course, as with some license  
12 activities this was not simple. This is a unit that was 250 kilowatts when it  
13 was last licensed. The license expired in October 2002. It's been  
14 operating under timely renewal. It's now 1,250 kilowatts, so there's a large  
15 uprate in the package that we had to consider.

16 That wasn't the major thing, though. The major part of the review  
17 was the financial. The financial qualifications and the financial  
18 requirements have changed significantly since the initial time to the  
19 licensing of these very old plants. So, yes. We have a cadre of  
20 individuals now. We've built up the level of expertise. Like I said, we're  
21 serious in the research and test reactor business now.

1           The staff was telling me as they were showing me this  
2   license that they were asking us to get a signature for that there was -- it  
3   took more time than they thought was needed and we do need to focus  
4   attention. So, right now there's nothing formal on it. We'll collect  
5   ourselves now that we've got one out and see where we want to go and  
6   put a plan together.

7           CHAIRMAN KLEIN: An opportunity for Lean Six Sigma.

8           MR. WIGGINS: There's an opportunity, yes.

9           CHAIRMAN KLEIN: Thanks. Marty, the fact that when you  
10   go through your program at the same time that Bruce does his it is good to  
11   notice that we do have things other than just power reactors. There's  
12   quite a slew of things that we look at. I guess on the SOARCA activities,  
13   how are we doing on volunteers to come through and provide information?

14           MR. VIRGILIO: We have three now. What we really believe  
15   is eight would be the right number of volunteers. We've done some  
16   discussions. I think people are taking a wait-and-see -- the licensees are  
17   taking a wait-and-see attitude. As to what we get as results, how we  
18   communicate the results, we continue to work on this, but Luis and I had a  
19   number of discussions with Brian and we agreed that rather than to  
20   continue to try and beat the bushes to get additional volunteers, we ought  
21   to complete at least the first two, roll out the results and then let licensees

1 make their own decisions.

2 Initial dialogue with the licensees -- and I haven't caught up with the  
3 staff since the RIC, but what they were hearing about what we were doing  
4 was very positively received. I think that if we can roll out the results, I  
5 think we will, in fact, get additional volunteers.

6 MR. REYES: I think Marty got it right. I think if we put out  
7 the results of the first two and you know we're doing number three, that  
8 will get more volunteers. I think we need to scope the volunteers. We  
9 now have a containment. We have an ice condenser. I think we need to  
10 make sure that the volunteers we get cover the whole envelope, so when  
11 we have eight or nine, we can certainly say that we think we have  
12 enveloped the whole fleet -- and that's type of reactor, type of  
13 containment; all the variations.

14 We may get a volunteer where it may not add a lot to the repertoire  
15 of the designs that we have looked at. We may have to go someplace  
16 else, but I'm sensing that we are going to get more volunteers once they  
17 see what the outcome is of the first two.

18 CHAIRMAN KLEIN: Good. On the Agreement States, I was  
19 encouraged to see the list. You've got Pennsylvania, Virginia, New  
20 Jersey, Michigan, Connecticut, and Hawaii. Any others expressing  
21 interest yet or any others thinking about it?

1 MR. VIRGILIO: Those are the ones that we know  
2 are seriously thinking about it. From time to time you hear about others,  
3 but as far as serious contenders that's our list right now. Unless Charlie  
4 has some additional?

5 MR. MILLER: Charlie Miller. Yes, Chairman, I think what  
6 Marty said is fairly accurate. I know that you would be interested in seeing  
7 Missouri become an Agreement State, but we've got no indications that  
8 Missouri is going to do that at this point in time.

9 CHAIRMAN KLEIN: We'll keep nudging, won't we? Thanks.  
10 On page 21, you mentioned about expanding NSTS. I think first we ought  
11 to get it going.

12 MR. REYES: We're in the homestretch. We're in the  
13 homestretch.

14 MR. VIRGILIO: We fully agree. We want to get Version One  
15 operational and that's scheduled for December of this year. And then we  
16 worked on Version Two, which provides a lot of additional features. A lot  
17 of the automated alarms and notifications that we really want and as part  
18 of that then you start -- or beyond that, then you start expanding.

19 CHAIRMAN KLEIN: Good. Thanks. I have a few more  
20 questions, but we'll go to Commissioner Jaczko.

21 COMMISSIONER JACZKO: Thanks. I just wanted to follow

1 up on, I think, Commissioner Lyons' point about the  
2 interconnectedness between low dose issues both in the power reactor  
3 and in the materials arena. I tend to agree with him. I think that there is  
4 ultimately when we're talking about some of the issues for an RDD, it gets  
5 into land contamination fundamental.

6 We use prompt fatalities as a screening criteria and found that in  
7 general that is not a major contributor in most of these events other than  
8 potentially whatever explosive device or whatever would actually be used  
9 in the event.

10 Ultimately what you're dealing with is cleanup activities and what  
11 would be the implications for cleanup activities and potential exposures  
12 after the event. So, those are ultimately going to be generally in the area  
13 of low doses and long-term exposures to low doses. I think in a lot of  
14 ways it does it back into some of the issues which are similar to what  
15 we're looking at with SOARCA.

16 The one point I would add is I think you can -- while I don't  
17 completely agree that linear no threshold necessarily drives you to  
18 collective dose. I think you can separate those. I think collective dose is  
19 how you apply linear no threshold when you're dealing with large  
20 populations. I think you can take linear no threshold. It gives you a risk  
21 result from a low dose exposure, but you can do that on an individualized

1 basis which eliminates taking 1 million people with a small dose  
2 and winding up with five fatalities. That is the element of collective dose  
3 and I think that's the area that's a challenge.

4 But if in the end it turns out that linear no threshold is the right  
5 regulatory model, I think we can still do that in a way that doesn't require  
6 collective dose because I agree, I think that's not necessarily an efficient  
7 and effective method for communicating and making decisions about  
8 ultimate safety.

9 I did want to turn to a couple of points. One, I think Bruce, you  
10 started us off talking about the operating experience program, which I  
11 think is a very good program. One of the things I was a little bit concerned  
12 by as I was going through and reading some of the background material.  
13 One of the issues that was identified as a challenge to success for the  
14 operating experience program was that -- and I'll quote -- this is from the  
15 staff's materials. "At current personnel levels the operating experience  
16 program is stretched to carry on its day to day and periodic briefing  
17 analysis functions for the over 3,000 operational experience items  
18 screened annually."

19 I hope that's something that will be highlighted in the budget  
20 whenever we see it, because I certainly think that's not an area where we  
21 want to see funding challenges because it is such a vital program and I



1 think it's getting more and more important as we go forward.

2 So, I certainly would be supportive of efforts to provide resources in that  
3 area that are necessary.

4 MR. REYES: It's fully funded in '09 and we're going to be  
5 asking you to fully fund it in 2010. So, we're not planning to change it.

6 COMMISSIONER JACZKO: Okay, good. One of the  
7 questions -- the next one I had gets to the issues of the vendor inspection  
8 program. I know we recently did an inspection or visit at one facility, a  
9 pipe manufacturing facility, and found sufficient areas of weakness.  
10 Again, going through some of the background, the staff indicates that  
11 based on the inspections to date even certain experienced vendors do not  
12 completely understand our requirements in the vendor arena.

13 So, I'm wondering what are the things that we're doing to ensure  
14 that there's a good understanding and that we're putting the right  
15 inspection resources out there right now because there may be  
16 weaknesses that we weren't necessarily anticipating in this area.

17 MR. MALLETT: I'll start out, but I'll need help from, I think,  
18 Bill Borchardt and Jim Wiggins on this one. I'm not aware of what we're  
19 doing to put them back into the program. We do have, I think, if I have the  
20 number right, about eight vendors that we visited as part of the new  
21 reactor program this year.

1           Out of that there's been sufficient lessons learned like  
2   your talking about and I know Bill Borchardt's staff has talked to the staff  
3   and Jim Dyer and Jim Wiggins office with what they've learned from that. I  
4   don't know what we've done to incorporate those back into the program.  
5   So, with that I'll ask -- they're not willing to come up and help me, I guess.  
6   I'll ask Bill and Jim to come up.

7           MR. BORCHARDT: Bill Borchardt, Office of New Reactors.  
8   We have about 10 to 15 vendor inspections per year planned this year  
9   going out for several years. There have been some good findings, as you  
10   identified. We're working with NRR very closely coordinated to make sure  
11   that the inspection program gets updated. We're also preparing generic  
12   communications to the industry to send it out globally, both U.S. and  
13   internationally because all of these inspection activities have an  
14   international component.

15           We're accompanying our foreign counterparts when the activity is  
16   overseas and we've had a number of countries participate as observers  
17   and participants on the vendor inspections we've done domestically. So,  
18   the inspection findings are being shared internationally as well as,  
19   obviously, with the industry.

20           COMMISSIONER JACZKO: Thanks. Turning to another  
21   question. We had recently issued a generic letter on the gas

1 accumulation. I think having been through the experience here  
2 at the Commission of the generic letter on sump performance and sump  
3 blockage, I'm wondering if we have lessons that we've learned on how  
4 these programs go and I know Brian has talked to me in the past about  
5 efforts to improve handling of generic safety issues and to get resolution of  
6 these issues sooner.

7 But I'm wondering if you can comment specifically on the issue of  
8 the generic letter on gas accumulation and how you see those issues  
9 being resolved compared to, I think, what we're still kind of struggling  
10 through with the chemical affects on the sump blockage.

11 MR. MALLETT: I would suggest on the gas accumulation  
12 that is a success story in the sense that we have seen a number of these  
13 issues reoccurring in industry. The gas accumulation and piping and  
14 proper venting of that piping has been an issue for several years and what  
15 we thought was that most people had resolved that issue. But we found  
16 over the past few years that there are recurring issues in that area.

17 I think that's a success story of the operational experience program  
18 and NRR taking that and saying we need to put out another generic letter  
19 and ask licensees how they're responding to the issues we're finding in  
20 the field in the inspection area.

21 I think the lesson learned from other generic letters in my view is

1     how we follow up on the responses we get back from  
2     licensees. They had 60 days from the date of that generic letter to come  
3     in with their response, if I remember the time frame correctly. And so we'll  
4     have to review those fairly quickly to decide what we do to resolve issues  
5     if there are any at the plants.

6             The other thing it does is the NRC inspectors at those facilities that  
7     received those notices and even the ones that haven't had a problem, they  
8     go out and look for those to see if their licensees are addressing those  
9     issues. So, I think there's some positive benefits of that correspondence  
10    going out when it did. And that is to get our inspectors to look to see if  
11    they have similar problems at those facilities, get licensees to look.

12            But the key in going forward to me will be timely review of those  
13    responses and what we do. I didn't, if you notice, on purpose compare it  
14    to the sump issue. I hadn't really thought about that, but I think I've  
15    characterized what I think are the positive aspects of the generic letter.

16            COMMISSIONER JACZKO: One of the issues that I've  
17    certainly been interested in for a while is how we're doing, in particular in  
18    the security area to provide appropriate information to the public where we  
19    can. And one of the areas that I've been concerned about since I came --  
20    we had a decision in 2005, I think it was, where we took the element of the  
21    Reactor Oversight Process involving security and removed those from the

1 public view. And ultimately separated out security and  
2 performance from safety performance.

3 One of the things that I think has become quite clear since Peach  
4 Bottom is that it's important that those issues are fully integrated. I think  
5 that also means that from a regulatory perspective we need to consider  
6 security findings with the same level of importance as we do areas more in  
7 the traditional findings, so, the overall performance of plants.

8 I'm wondering if perhaps the staff can update me on where we  
9 stand with re-examining some of those issues about perhaps reintegrating  
10 the security cornerstone into the ROP and also just on ways that we can  
11 continue to provide information.

12 MR. MALLETT: I'll ask Roy to add to this, but let me make a  
13 couple comments on that. As far as far as information sharing, Roy can  
14 tell you what we've been doing to dialogue. We have increased the  
15 amount of information we put in our assessment letters in the security  
16 area. Some people fed back that is not very satisfying. They still want  
17 more details.

18 Where individuals have raised a specific concern, however, we  
19 have provided those complete details to them, lessons that we've learned  
20 not only from the recent Peach Bottom incident, but from the South Texas  
21 event.

1           With regard to integrating, one of the things we've  
2 taken to heart is the direction that you're proposing we take for the fiscal  
3 year 2010 budget and that is to look at ways that we might be able to  
4 integrate --.

5                   COMMISSIONER JACZKO: The Commission has provided  
6 no direction in that regard right now. That's an issue that the Commission  
7 is considering right now. I don't think that -- my personal view is the Office  
8 of Nuclear Security should stay as appropriately separate from the rest.

9                   MR. MALLET: I appreciate that. I wasn't going there.  
10 Where I was going is I think one of the issues we need to look at is this  
11 integration -- should we go back integrating the two programs as you're  
12 suggesting for the oversight piece. That doesn't mean people. That  
13 means putting them in the same process without having two independent  
14 processes. That's where I was going.

15                   COMMISSIONER JACZKO: Thanks.

16                   MR. ZIMMERMAN: Roy Zimmerman, NSIR. We did have a  
17 very good session at the Regulatory Information Conference with a variety  
18 of stakeholders including the industry and there was pretty good alignment  
19 that we need to continue to look that there may be additional areas where  
20 our stakeholders will say that some additional openness considerations  
21 are appropriate.

1           We are looking at having additional public health  
2 sessions. We are looking to perhaps do two in different venues across the  
3 country later on this year and then providing the Commission a paper later  
4 on in the year to be able to give you what we got from our stakeholders as  
5 well as our recommendation for going forward.

6           Our sense is that in areas where we can bring the Reactor  
7 Oversight Program and the security cornerstone even closer together  
8 without identifying or telegraphing any potential vulnerabilities is where the  
9 staff currently is. Again, we got off to a good start at the Regulatory  
10 Information Conference breakout session.

11           COMMISSIONER JACZKO: I certainly think that that's good.  
12 I'm glad to hear progress. I would hearken back to what I said on this  
13 when I voted on this issue previously. I think we have to realize that this --  
14 making public information about plant performance is somewhat different,  
15 I think, than separating the various elements in overall plant performance.  
16 I think there's a simple solution here and that is simply that we provide an  
17 action matrix which doesn't necessarily always reflect completely what a  
18 plant's performance is.

19           And that at least internally we track these things together so that  
20 while we may be aware of security deficiencies, we do internally combine  
21 those and keep track of that. I certainly think that's something we can do

1 and should be able to do. Again, it would mean that in many  
2 ways the action matrix would represent a best available information about  
3 a plant's performance and not necessarily the complete picture because  
4 we couldn't necessarily provide that.

5 I think unfortunately as part of that issue we lost one issue, one  
6 important issue, which is that integration when we were dealing with the  
7 openness aspect or the security aspect of what can be made public.

8 MR. ZIMMERMAN: If I can, one of the areas -- the area that  
9 I spoke about was looking at what additional information potentially is  
10 information that would be appropriate to release. The other thing that we  
11 are looking at which may or may not be viable is as we look at the  
12 performance indicators, as we look at the significance determination  
13 process, does it make sense to open that program up broader than it is  
14 just in its generic sense to have stakeholder input on what the  
15 performance indicators ought to be and what changes may be appropriate  
16 for the STP.

17 That also around the end of the year will be something that the staff  
18 would make a recommendation to the Commission on.

19 COMMISSIONER JACZKO: Good. Well, I look forward to  
20 that. I think that will be interesting to see.

21 MR. MALLET: I want to add one more thing. I don't want to



1 leave you with the impression that we don't integrate some  
2 today. When we review licensees assessments at the six month intervals,  
3 whether we call it mid cycle or end of cycle reviews, the regional offices  
4 and the Office of Nuclear Reactor Regulation and Nuclear Security and  
5 Incident Response all come together and review that assessment, both  
6 from security and safety during that meeting.

7 So, I think where we have some areas we can improve on in that  
8 matter, I don't want to leave you with impression that we don't have some  
9 integration today.

10 COMMISSIONER JACZKO: I appreciate that and I guess  
11 ultimately my concern is fundamentally if we have a plant that has a yellow  
12 finding in security and a white finding or a yellow finding in the safety and  
13 those are in separate cornerstones, that would have an impact in the  
14 action matrix if that was fully integrated whereas its not now. So, that has  
15 a different impact and I think it doesn't then reflect the overall true  
16 performance of the facility. Thank you.

17 CHAIRMAN KLEIN: Commissioner Lyons?

18 COMMISSIONER LYONS: I wanted to follow up on some of  
19 the comments that you made Marty from the standpoint of research  
20 aspects of NGNP and advanced reactors. And this certainly ties into  
21 issues on reactor licensing in these areas. I just wanted to suggest that,

1 at least in my mind these, these are also areas that we should  
2 be discussing with Congress as we have the opportunity. Because at  
3 least in my mind on NGNP we have a clear Congressional mandate -- we  
4 don't have congressional funding, but we do have a clear mandate that  
5 NGNP is a Congressional priority.

6 On the advanced reactors, setting aside NGNP, it's far less obvious  
7 to me. When we had the recent meeting, I made the comment that I think  
8 we should be looking for a U.S. customer. Yet the reality in saying that, to  
9 me doesn't make a whole lot of sense, because those small reactors in  
10 many cases are not going to be appropriate for a grid like the United  
11 States.

12 I think it was Dennis Spurgeon at that same meeting who talked  
13 about a little bit about their interest in grid appropriate reactors. Grid  
14 appropriate for other countries for export. Well, if that's the case, then I  
15 would hope that that would be communicated to Congress and that  
16 Congress would help to provide emphasis to that.

17 To me, those various advanced reactors outside of NGNP we  
18 should not be taking out of the fee base. To me, that's something that  
19 needs to be discussed with Congress that if there is to be a real priority,  
20 as I think from a national standpoint I think there should be on grid  
21 appropriate small reactors, then I would hope that we could communicate

1 to Congress the importance of recognizing that in the funding  
2 line that doesn't derive from the fee base. Comment or not, I don't know if  
3 you want to.

4 MR. REYES: I've been approached by an entity that says  
5 that they do have a U.S. customer for one of those smaller reactors, but  
6 they believe that those individuals are caught in a loop and it has to do  
7 with how we're going to appropriate the fees for a small reactor. They are  
8 waiting -- it's a chicken or the egg issue. They are waiting for us to be  
9 clear on how we're going to apportion the fees for such a facility before  
10 they publicly endorse and a commitment that in fact we're behind that.

11 So, there may be some issues in house that we have to  
12 communicate or clarify before, but I was surprised when they said we do  
13 have a customer in the U.S. There are some uses for some of these  
14 facilities, but the issue has to do with the cost, including the fees, howe  
15 would we apportion the fees -- a large reactor versus the small one.

16 COMMISSIONER LYONS: If that's truly an issue, then I  
17 personally would be very interested in a paper coming up with some  
18 suggestions on that so that we can get a policy out.

19 MR. REYES: We're probably going to have to resolve that  
20 before somebody would come forward with an application and a sponsor.

21 COMMISSIONER LYONS: I'd welcome such a paper.

1 MR. REYES: One application and a sponsor in  
2 the U.S.

3 COMMISSIONER LYONS: Changing gears. A question  
4 probably for Bruce. Bruce, you talked a little bit about operator licensing  
5 and some of the challenges that we're facing there. I was just curious as  
6 you talk about operator licensing, are you folding in -- it seems to me this  
7 is a multi dimensional challenge. On the existing reactors, we certainly  
8 have operators retiring. We have somewhat more stringent work rules,  
9 which certainly are going to lead to a continued flux in new operators, but  
10 in addition we have Digital I&C making a strong in-roads into the existing  
11 plants.

12 We have the new plants certainly are going to be probably largely  
13 exclusively Digital I&C and that's going to put some different perspectives  
14 on our operating licensing. It's probably going to put some additional  
15 demands on our own people who assess those operators. I'm just curious  
16 if we're trying to fold in some of these different changing criteria that are  
17 going to, I think, put real stresses on operator licensing looking into the  
18 future.

19 MR. MALLETT: I think those are very good insights. We do  
20 need to fold those into our planning, not only from the aspect do we have  
21 enough resources to do this amount of licensing, but what kind of training

1 do we need to give people on some of these as far as we  
2 don't even have simulators.

3 COMMISSIONER LYONS: That was my follow up question.

4 MR. MALLETT: So, we are looking at that. I raised that --  
5 this is going to be a challenge for us truly during this period 2008/2009.

6 COMMISSIONER LYONS: I sure think so.

7 MR. MALLETT: Maybe even in to 2010.

8 MR. REYES: We have a particular problem in the immediate  
9 future. We sent out a document to the industry and tried to get feedback  
10 on what their request for examining operators is so we can put it in the  
11 budget. For the 2010 budget, which we're assembling together right now,  
12 the answer is less than in the past. That makes no sense.

13 That makes no sense because when you take the work hours issue  
14 then if you think about the expansion of the fleet and if you take a person  
15 with -- a degreed engineer with a license of any kind, RO or SRO, they're  
16 the first people who the companies who are going to build these power  
17 plants and are going to provide the vendors services and all that; go after.

18 So, my impression -- and I'm going to take this to the CNO's -- my  
19 impression is that those surveys were filled at lower levels in the  
20 organizations and I don't think that they bubbled up to the higher levels of  
21 the organization. So, right now with the information we have we're going

1 to bring you a budget that actually goes down in operator  
2 licensing. When we need to hire ahead of the request about two years to  
3 do exactly the training you're talking about. So, we have a challenge in  
4 front of us that we need to resolve.

5 COMMISSIONER LYONS: I think you both outlined a  
6 number of very real issues here. I can't begin to believe the numbers are  
7 going to go down. I think they have to go up and the challenges are going  
8 to go up and it ties in with simulators. This is a big issue.

9 MR. REYES: We agree. We're trying to highlight to the  
10 utility that we didn't think the survey was answered at a high enough level  
11 in the companies and we're going to cut down on those resources in 2010.  
12 That does not seem to fit the scenario we have in front of us.

13 MR. MALLETT: We also raised this at the Regulatory  
14 Information Conference and probably the one of the best testimonials was  
15 the Tennessee Valley Authority and the recent licensing they did for  
16 Browns Ferry. They indicated you need to -- to all the other Chief Nuclear  
17 Officers -- that you need to back up at least two to three years before  
18 you're going to start and that was for an existing technology and existing  
19 program.

20 COMMISSIONER LYONS: Hopefully, a very quick question.  
21 We have an unfunded mandate at Hanford. Roughly, how large is that

1 unfunded mandate?

2 MR. VIRGILIO: Less than a half dozen FTE. Right now, I  
3 think we're using approximately three or four of our staff, some of which  
4 are coming from our high level waste program in order to support  
5 completing the review. It's a very well-defined --.

6 CHAIRMAN KLEIN: So, it's not terribly large?

7 MR. VIRGILIO: But we are delaying the development of  
8 some guidance. We are delaying the development of some low priority  
9 licensing actions, as I recall, but it's not a tremendous program. It did  
10 require us to make shifts, very tight schedule. We've got to provide that  
11 report to the Commission and then get it to Congress I think the date is  
12 June or July. I can't remember.

13 MR. REYES: It's expected to come to me in June. It's  
14 expected to be on my desk the first week in June and we can provide it to  
15 you right away.

16 COMMISSIONER LYONS: I need to follow up a little bit. I  
17 think it was Greg who raised the operating experience or had some  
18 questions in that area. That's certainly an area that I also agree is  
19 absolutely critical and I strongly, strongly support. I had some offline  
20 discussions at the RIC with some of our international attendees that  
21 somewhat surprised me in that they seemed to feel that there was room

1 for significant improvement around the world in assessing  
2 international operating experience.

3 And I would be very curious from two perspectives. If you feel in  
4 our operating experience program that we have adequate access to  
5 international challenges that should feed into our database and I'm also  
6 curious if you have a perspective as to whether our information is  
7 adequately available to the international community. These individuals at  
8 least suggested it wasn't, which surprised me quite a bit.

9 MR. REYES: Let me address the first one and then maybe  
10 ask somebody to address the second one. The availability of the  
11 experience overseas is a function of how well they do that. And let me  
12 give you an example; the Forsmark event. It was not until over a year  
13 later when we were talking with them that we pointed to them that there  
14 actually was a loss of cooling accident in there. We would have never --  
15 they never told us that. We found it by us reviewing the actual pressure  
16 and level charts on that.

17 So, of course this is a separate different design that we have in the  
18 U.S. So, maybe the relevance is not there, but it's a function of how well  
19 the information is available. What's available we think we have and we  
20 share it, Forsmark, it's a good event, a good example.

21 Our information is available to the international community and I



1 don't know if Jim wants to address.

2 MR. DYER: Jim Dyer, the Director of Office of Nuclear  
3 Reactor Regulation. Yes, just to say what Luis said. I think there's two  
4 aspects to it, Commissioner. The first part is availability of the raw data or  
5 understanding the events and that. That's a direct function to how open is  
6 the country. Part of the work that we've done through the Nuclear Energy  
7 Agency and the committee on Nuclear Regulation and the Working Group  
8 on Operating Experience is to improve our access to the information from  
9 the country and get it into common databases that can communicate with  
10 each other and improve that.

11 I believe some of the concerns you've heard are -- that has been  
12 the focus of the Nuclear Energy Agency in recent years to set this up and  
13 we've had a leadership role in that. In fact, many countries in Europe want  
14 to mimic our system that we set up post Davis-Besse as well as  
15 throughout the world in various areas. That has come at the expense of  
16 detailed reviews of limited information.

17 So, the old operating experience reviews where you would go in  
18 and look for Forsmark events and do a detailed in-depth analysis of the  
19 root causes of problems or look for commonalities in a very, very deep  
20 look at it, that has been the sacrifice, if you would, because internationally  
21 we made the decision collectively at least the Nuclear Energy Agency in

1 working with IAEA that we needed to get the information out  
2 to the countries.

3 So, I think it's a matter of timing. Once now we have the  
4 information in the systems to facilitate the information exchange, now we  
5 can start moving on to taking a look at more in-depth reviews.

6 MR. MALLETT: I would add to what Jim says, though. I  
7 think there is a challenge for us. I think we've come a long way. But I do  
8 believe when you go to these countries and dialogue with senior leaders  
9 and we also had inspectors out for various countries now as part of the  
10 new reactor program and from NRR, you'll find that there are different  
11 thresholds and different methods for reporting of events.

12 I think as we dialogue, we need to make sure we understand each  
13 of those because you'll find we have different thresholds than some of the  
14 countries. It's not so much they don't want to release the information, I'm  
15 just not sure the regulator gets all that information early on. So, I do think  
16 this is an area where we need to dialogue further with them on where are  
17 our thresholds and how do they equate.

18 COMMISSIONER LYONS: I'm out of time, but just quickly.  
19 Am I correct that our operating experience is well shared internationally?

20 MR. MALLETT: Yes, that's correct. Of course, we will  
21 always say we do it right. They need to improve.

1 MR. REYES: But it's available. Our 50.73's are  
2 all public and our operating experience information is available to our  
3 colleagues. So, it's not the same in every country.

4 MR. WIGGINS: There are distinct differences between  
5 domestic information and international information. This is Jim Wiggins  
6 from NRR again. Domestically, we have access to everything we need. If  
7 it's not for what our licensees are reporting through our reporting  
8 requirements, we have connections and memorandums of agreement with  
9 INPO that gives us access to what they have.

10 When you look at the international picture, as Jim said, we get stuff  
11 from our regulator partners under the NEA process. We get some stuff  
12 from international through INPO, only that stuff that WANO will allow INPO  
13 to tell us, so, there's a gate in there. So, if there's an area for making  
14 some international progress, that's trying to get that to open up somewhat.  
15 There's proprietary interests that apparently affects the ability of the folks  
16 outside this country to share that type of industry information.

17 So, your answer about adequate; it's always that question of  
18 adequate enough to do what? I think we have enough to basically do  
19 what we should do for safety here today. Can it be made better? Sure. It  
20 can always be made better.

21 MR. REYES: And ours is available to them. So, if

1 someone's having difficulty, we just need to work with them  
2 and see what their concern is.

3 COMMISSIONER LYONS: Thank you.

4 CHAIRMAN KLEIN: Well, Marty, you'll be happy I only have  
5 three more questions.

6 MR. VIRGILIO: Okay.

7 CHAIRMAN KLEIN: On page 24, the bottom of that slide,  
8 you talk about the blending of waste. I have a big concern about massive  
9 blending of waste to meet a different regulatory requirement. Could you  
10 comment on your thoughts on that?

11 MR. VIRGILIO: I would say we do, too. The Commission  
12 has always been somewhat cautious in this area about how we approach  
13 this issue. And as a matter of fact, I think that thinking has evolved a little  
14 bit as we've looked at Barnwell closure and the need to continue to do  
15 this. We're developing the guidance and we will have the guidance and I  
16 think some policy issues. This is clearly a policy issue that the  
17 Commission is going to have to address.

18 CHAIRMAN KLEIN: I think I see Commissioner Lyons in  
19 agreement.

20 COMMISSIONER LYONS: Just put me down as  
21 extraordinarily cautious about waste blending.

1 CHAIRMAN KLEIN: I think that's one that we --

2 MR. VIRGILIO: There are situations where you can do it and  
3 it can be done without harm to the environment. And that's what we want  
4 to focus on.

5 CHAIRMAN KLEIN: We have to be cautious. On page 26,  
6 we've talked a little bit -- Commissioner Lyons and Commissioner Jaczko  
7 talked a little bit about our unfunded mandate on Hanford waste treatment.  
8 All I would say is I think we should caution our involvement to the extent  
9 practicable as we move forward on that one. Clearly, Congress gave us a  
10 scope and I think we have to be careful not going beyond that scope as  
11 we look at writing that report.

12 MR. VIRGILIO: We agree. I've had some discussion with  
13 DOE because we've go -- as a result of our site visit, we do have some  
14 findings that may be out of scope. We'll communicate those separately to  
15 DOE if they're important and that's the agreement that we've worked out.

16 CHAIRMAN KLEIN: Sounds like a good approach. On page  
17 31, you talked about some attrition in your spent fuel and storage  
18 transportation area; about 30%. Could you comment on the reason for  
19 that?

20 MR. VIRGILIO: This has been a real problem for us. Let me  
21 give you the context. If I think, and Luis can correct me if I got the

1 numbers wrong, if I look back at last year, we had 220  
2 retirements, 440 gains. What we don't focus on very much is we had 350  
3 internal moves within the agency for promotions and for people wanting to  
4 work in other areas.

5 CHAIRMAN KLEIN: They all moved over to Bill Borchardt's  
6 area.

7 MR. VIRGILIO: Not all of them. This is what happened in  
8 our spent fuel storage area. I credit the staff in that organization for hiring  
9 and developing some excellent engineers. These are people that had the  
10 opportunity and exercised the opportunity. When you go back and look at  
11 the statistics for three years, this is what has dominated. It's been internal  
12 moves for promotions.

13 CHAIRMAN KLEIN: We should always encourage that. So,  
14 that's a good sign. It's a good news/bad news story. The good news is  
15 you did a great job. The bad news is you need to do it again.

16 MR. REYES: The good news is they stay with the NRC and  
17 now they have worked in more than one program. So, our wealth of  
18 knowledge base goes up. Unfortunately, in small organizations like this  
19 one, 30% turnover, even if it's internal, is an impact.

20 CHAIRMAN KLEIN: Thanks. Commissioner Jaczko?

21 COMMISSIONER JACZKO: I would just say in this

1 discussion about international operating experience. I think  
2 it's a good point that Commissioner Lyons' raised. The theme that kept  
3 coming out is really I think that openness and transparency is an issue  
4 that in other countries we need to continue to work on.

5 I was fortunate. I was able to participate in an NEA working group  
6 that's been set up to look at that issue. I think that is certainly a working  
7 group that has a lot to offer and hopefully they will continue with their  
8 activities because I think it is an area where we continue to be able to  
9 have a real positive impact with our regulatory colleagues throughout the  
10 rest of the world on really the importance of that issue.

11 We can have the best international operating experience program  
12 and any other regulatory body could as well, but if we don't have a good  
13 way to communicate that and provide that information to each other it's  
14 really a tremendous loss.

15 Turning to a couple questions. This was I think last fall, the  
16 Inspector General took a look at some areas. I think this was their look at  
17 areas facing significant challenges facing the NRC and one of them was  
18 developing a more risk informed performance based regulatory framework  
19 for fuel cycle facilities. This has been something that's been important for  
20 me for a while.

21 In particular, I was supportive of trying to develop performance

1 measures and performance indicators in the fuel cycle arena  
2 that the Commission decided not to do that, but I hope that at some point  
3 we'll come back and revisit that.

4 I'm wondering if perhaps, Marty, you can just comment on where  
5 you see those issues as we go forward, particularly now that we have the  
6 ISA program. We've completed all the ISAs now, I think, at every facility  
7 and that perhaps we can begin to learn from that and use those as a way  
8 to develop a more transparent and better regulatory oversight program for  
9 the facilities.

10 MR. VIRGILIO: I tried to make a point in my presentation  
11 that we believe the new Part 70 and the ISAs have made significant  
12 contributions to safety for both the operating facilities and for the facilities  
13 that we're reviewing today under license applications. We definitely want  
14 to move that program forward. We definitely want to continue to use the  
15 insights from the ISA to risk inform our licensing and inspection activities.

16 That being said, we've had a somewhat schizophrenic response  
17 from the industry where they've been on-again/off-again about supporting  
18 our efforts in this area. Performance indicators is a great example of  
19 where the Commission charged us with going forward, developing  
20 performance indicators. This is before your time. The industry came back  
21 to the Commission and said, "Please, we can't do everything that we're



1 trying to do."

2 We're trying to implement the new Part 70. We're trying to get  
3 applications together for new facilities. So, we really do need their support  
4 to get to performance indicators in other areas, but we definitely want to  
5 continue to risk inform the program.

6 COMMISSIONER JACZKO: I think it's an important area and  
7 sometimes I think we need to perhaps be a little bit more assertive in what  
8 we think is in the best interest of public health and safety in this area. I  
9 think this is certainly one that perhaps licensees may need more  
10 encouragement than perhaps we're giving.

11 One last question, I think, and this is perhaps a question for  
12 whoever wants to answer it. We focus a lot in the issues of safety culture  
13 and I think it's an extremely important area. Our focus has been  
14 predominantly external to the agency. One of the things that I'm always  
15 interested in is what we're doing internally to continue to address our own  
16 safety culture and where there are issues improving it and where there are  
17 strengths and encouraging those areas where there are good things going  
18 on.

19 So, I don't know who wants to --

20 MR. REYES: I'll start and then I'll let Marty add some other  
21 things we have done on the differing professional view program that's

1 within the Office of Enforcement. But if you go back six years  
2 ago when the IG survey started looking into this area, what we have done  
3 is after every survey, we take a hard look at the feedback from the staff  
4 and have come up with a lot of countermeasures, changing from  
5 communications that we didn't have before, establishing or clarifying  
6 different professional view program, acknowledging the submitters or  
7 DPVs with certificates and trying to enhance the non-concurrence  
8 program.

9           So, we're trying to make sure that the staff knows that we want to  
10 hear all their concerns of any kind. At the end of it, we may not agree on  
11 it, but we do think it's important to have that put on the table. I think it's  
12 probably the best way to answer your question. We have another survey  
13 coming in --

14                   COMMISSIONER JACZKO: When is the next survey?

15                   MR. REYES: It's going to be at the end of this year, early  
16 next year depending on the contract. The IG is setting up the contract and  
17 it's going out for bids and all that. So, it's hard to predict a date, but it will  
18 be later this year or early next year by the time we put out the survey  
19 again.

20           The continuing measuring and feedback from the staff and going  
21 back and putting measures into place to make sure that we're comfortable

1 doing that, I think that it's the best way to do that. You want to  
2 add to that?

3 MR. VIRGILIO: I just want to add we're rolling out two new  
4 initiatives. One in what we call a team player. And that is if you raise a  
5 concern or an issue within your office or you're observed to raise a  
6 concern within your area that individual can get nominated. We're actually  
7 going out to the offices and asking for requests to get this program started.  
8 That individual could be nominated for an award and recognized by Luis in  
9 a small ceremony. That's one piece of it.

10 The other piece of it is we're establishing with each office an  
11 ombudsman. That would be a staff person that is available to anybody in  
12 the organization. If somebody, for example, is hesitant about coming  
13 forward to management, that person can go to that other staff-designated  
14 staff member to get information about all the programs and all the  
15 avenues available to them for raising concerns and that person also will  
16 provide advice and council to the Office Director or Deputy Office Director  
17 on how to improve the office's program around safety culture.

18 So, I think we're doing more and every year we look for  
19 opportunities for new initiatives because it's really important to us.

20 COMMISSIONER JACZKO: Well, I do think it's certainly an  
21 important area and I do hope we will continue to focus in particular on the

1 IG survey on these areas and make sure get the right kind of  
2 questions asked and do get the feedback. Thanks.

3 CHAIRMAN KLEIN: Thanks. Commissioner Lyons?

4 COMMISSIONER LYONS: Well, I only have one more  
5 comment or question. It's really more a comment, but it would tie in,  
6 Marty, in one of the research areas that I had meant to highlight perhaps  
7 in relationship to the advanced reactors, but I think also in regard to  
8 research on severe accidents. And that's at least my concern that we  
9 need to be looking at the types of facilities that we need looking well into  
10 the future for either existing or anticipated future reactor types and asking  
11 where in the world those facilities exist.

12 I could anticipate that it could make considerable sense for us to  
13 perhaps even join in support of an international -- of a facility in another  
14 country if it's one that we anticipate a strong need for in the future. And I  
15 say this given that the number of such facilities that we have in this  
16 country is not exactly large and the number around the world is not exactly  
17 large, either. It's just a general plea that we look towards perhaps  
18 coordination of critical research facilities on an international scale.

19 MR. VIRGILIO: NEA and CSNI has been a very good forum  
20 for us to have these discussions to understand what facilities are  
21 available, what facilities should continue to get funded and continue to

1 operate. Brian's been -- Brian Sheron has been intimately  
2 involved in some of the decision making there and he understands, I think,  
3 very well what our needs are and is looking out for our interest in the  
4 forum.

5 COMMISSIONER LYONS: That was the only comment I  
6 had. And unless Greg wants to hand some of his 32 questions, I'm done.

7 Mr. REYES: 39.

8 COMMISSIONER JACZKO: I will hold off on the rest.

9 CHAIRMAN KLEIN: Well, on behalf of the Commission, I'd  
10 like to thank you for your great presentation because I think this was a  
11 good integrated strategic look at some very important programs. We do  
12 have a few other minor programs that we're dealing with; minor things like  
13 IT, minor things like space and minor things like human resources that we  
14 need to look at, but I think this was a good overview, a good strategic.

15 So, thank you for your good work and for the staff assembling the  
16 briefing books on the heels of RIC. Meeting adjourned.

17 (Where upon meeting was adjourned)