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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
PLANT OPERATIONS AND FIRE PROTECTION SUBCOMMITTEES
REGION II VISIT

WEDNESDAY, JUNE 19, 2002

8:30 a.m.

24th Floor

SAM NUNN FEDERAL CENTER

61 FORSYTH STREET SW

ATLANTA, GEORGIA

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P R O C E E D I N G S

1
2 MR. ROSEN: Good morning.

3 This is the Advisory Committee on Reactor Safeguards,
4 joint Subcommittees on Plant Operations and Fire Protection.

5 I am Steve Rosen, Chairman of the Fire Protection
6 Subcommittee, and also substituting for Jack Sieber who is
7 Plant Operations Subcommittee chairman who is unable to be with
8 us today.

9 On my right is John Larkins who's the technical
10 director of ACRS, Mario Bonaco who is the vice chairman of
11 ACRS, also Graham Leitch a member from the ACRS, Dr Vic Ransom
12 a member of ACRS, Dr. Dana Powers from the ACRS and Dr. Bill
13 Shack a member of the ACRS.

14 We also have a member of the ACRS staff with us, Ms.
15 Weston who's a project engineer with the ACRS, Kendra Bilk and
16 Martha Whitaker.

17 We are all very glad to be here. We had an
18 interesting and exciting day yesterday at Watts Bar, and we
19 look forward to having a fruitful discussion here today.

20 MR. REYES: And we want to welcome you to Region II.
21 I know you had a good tour of the Watts Bar facility yesterday.
22 We would like to make today better yet.

23 We have an agenda on the right-hand side of your
24 folder that we believe is responsive to your request, but as
25 the day goes along if you find a need for information
26 different, we will do that.

27 The agenda that we have prepared has a lot of actual

1 presentation by members of the staff, from management, from
2 inspectors, resident inspectors. I think you're going to find
3 it very engaging and direct feedback from the people who are
4 implementing the programs.

5 We would like to just briefly give you a refresher on
6 Region II just for a few minutes -- we're not going to dwell on
7 it a lot -- before we get into the subject matter.

8 Just as a reminder, Region II covers the Southeast of
9 the United States, it's ten states on the Mainland. We also
10 cover the Caribbean; the U.S. Virgin Islands is also under our
11 jurisdiction, and we do have licensees there. No reactors, but
12 we do have industrial radiography, medical irradiators, et
13 cetera, et cetera, so we have a lot of licensees in the U.S.
14 Virgin Islands.

15 The region organization is typical with other
16 regions. We have four divisions, three technical in nature who
17 specifically you're going to hear from today. The Division of
18 Reactor Projects and the Division of Reactor Safety are going
19 to have members of their management and inspection staff
20 present to you today on the different topics, because that's
21 what's more relevant to this subcommittee.

22 A brief background, we have a large population of
23 licensees. Of the 103 reactors in the United States we have
24 33, so we do have about a third of the operating nuclear
25 reactors in the country, and most of them are pressurized water
26 reactors, but we do have a little bit of a mix in terms of
27 vendors.

1 In terms of fuel facilities there's nine fuel
2 facilities in the country; we regulate five of them, so we have
3 half of the fuel facilities we regulate here. We have a
4 relatively modest materials licensee population on the order of
5 800 give or take a few every day.

6 But most of our efforts are in the reactor side of
7 the house, so I think that would be relevant to the committee.
8 And we have a large population of them, about a third of the
9 units, so the staff that's going to be talking to you have
10 broad experience in that in that kind of day-to-day activity in
11 this.

12 I would like Bruce Mallett, my deputy, to briefly
13 talk to you about some of the challenges we're working on in
14 the region from an organizational point of view, and after that
15 we will move right into the technical subjects on the agenda.

16 MR. MALLETT: Thanks, Luis.

17 I would add that the last time you were in Region II
18 I know Dr. Powers was here, I don't know if Graham was here or
19 not. I think he might be the sole person that was here the
20 last time.

21 We have made some changes since you were here. One
22 of the concepts we have put into the region is the team leader
23 concept, and with the new reactor oversight program which we
24 have people who are going to talk about later on today one of
25 the keys to that are teams, and we have installed a team leader
26 in each branch to not only lead those teams, but also help the
27 branch in managing the branch.

1 We also think since you were last here have license
2 renewal, and several of our plants have achieved license
3 renewal, and we have special teams to inspect those license
4 renewal functions, and you may hear some of that later on from
5 some of the speakers during the day.

6 Also on the agenda I want to highlight one thing.
7 You had asked for input on what we feel are the challenges,
8 where we feel we are in the reactor oversight process.

9 You heard some of this from the Watts Bar licensee, I
10 know they're not bashful in giving you some of that
11 information.

12 So what we thought might be a good way to do that is
13 to have a spectrum of individuals from the inspectors all the
14 way up to the managers to provide you their thoughts on that
15 this afternoon, and then allow you to ask them questions, and
16 I'm sure you're not bashful in asking those questions either.

17 Luis and I thought it might give you an idea of the
18 regional operations if we tell you what we think our challenges
19 are, and these are right out of our operating plan, and we'll
20 try to point out some things that we've done to address those.

21 They also are connected if you look down the list
22 with the ten challenges that the chairman gave the agency not
23 only last year in the agency action review meeting, but also
24 this year at the review meeting.

25 One of the challenges he gave us was in human
26 capital, and we have changed that a little bit in area to call
27 focus workforce planning on retention and development of skill

1 needs.

2 We established a strategic workforce plan here, and
3 that has helped us bring together in one area a focused plan on
4 how we're going to recruit and maintain the skills in the
5 region that we need not only for new business, but also to
6 conduct the inspection program and operate in licensing and
7 reactor areas.

8 So several years ago a part of that was to develop a
9 matrix of skills of the people that we need, not necessarily
10 that we have on board, and so we established that list of
11 skills and there were some holes in it, and that's what we
12 used then to target recruiting of individuals.

13 Some of the individuals you see over here in the
14 audience have been here several years, Billy Crowley, and some
15 of the people have been here just a few weeks, so we have a
16 whole gamut of individuals, and part of that is due to this
17 recruiting effort to obtain those skills.

18 Our next step in that strategic workforce plan is
19 obviously to develop people, and also to develop them before
20 the person with that skill leaves.

21 For example, if we have an expert -- and, Billy, if
22 you don't mind I'll use your name -- like Billy Crowley in the
23 materials area, then we want to develop someone before Billy
24 decides to retire and leave the agency for at least a year and
25 maybe two years before he leaves, rather than wait until he
26 leaves and then we've lost that transition. So we believe in
27 this, we think the strategic workforce plan has helped us in

1 that.

2 Luis, is there anything you wanted to add?

3 MR. REYES: No.

4 MR. LEITCH: Could you give me an idea of how many
5 people are in Region II?

6 MR. MALLETT: We have around 200 I think is a good
7 number to use.

8 MR. LEITCH: That includes the sites?

9 MR. LEITCH: There's about fifty-some resident
10 inspectors, and there are some site secretaries, but they're
11 only working maybe ten hours a week, so they aren't a full --

12 MR. LEITCH: So it's about 200?

13 MR. REYES: If you include part-time employees it's
14 222.

15 MR. LEITCH: Thank you.

16 MR. MALLETT: We at most of our sites are now down to
17 the number N of residents; we only have N plus 1 at two sites
18 -- or are we down to one now -- one site.

19 The second bullet we have -- Does that answer your
20 question?

21 MR. LEITCH: Yes, it does. Thank you.

22 MR. ROSEN: That N you mean, that's the number of
23 units at the site?

24 MR. MALLETT: That's correct. We only have one
25 three-unit site that's operational right now, and that's
26 Oconee. The other ones are all two or one.

27 MR. REYES: The policy is we have a minimum of two

1 residents, and for those units who have three reactors we will
2 have three meeting the number of units, but if there's only one
3 reactor we still have two residents there, a minimum of two.

4 MR. LEITCH: We have Loren Plisco, our division
5 director of projects, on the agenda later on. He can give you
6 some more information.

7 And one of the challenges is obviously to when those
8 people are up for their rotation to get them to a new site, or
9 get somebody there to fill in the void when they have left that
10 site.

11 MR. LEITCH: As you have identified here the skill
12 set needs for different individuals, can you compare that
13 throughout the regions so maybe there's some cooperative
14 efforts to identify particular skills that are needed, and if
15 one region doesn't develop it maybe another region will develop
16 it?

17 MR. REYES: We're doing a little bit of that. The
18 agency is putting together a strategic workforce plan, and in
19 fact they're using outs as an input to that.

20 One of the discussions is for efficiency and
21 effectiveness should we go in the future to a center of
22 excellence.

23 Let's take fire protection for example. Should we
24 have a fire protection engineer or two in each region, or
25 should we create a center, meaning one of the regions will hold
26 all the skills in fire protection as a mechanism to keep a
27 large group with that skill, and of course you can travel in

1 any direction. So we haven't finalized that.

2 What we do at the present time is we share resources.
3 At the present time we have inspectors helping Region IV do an
4 inspection at the Coopers Station. You may have heard of some
5 of the agency activities there.

6 We helped Region I on Indian Point. We do examining
7 of operators in another region, they help us with some exams.
8 So we share resources, but it's not part of the integrated
9 workforce plan.

10 At the present time each region has, is designed to
11 have resources to do all the inspections, so we would expect,
12 Bruce and I are expected to have fire protection engineers do
13 the fire protection inspection, and metallurgical engineers.
14 That's because the design on the region when I talked to you
15 about the organization is identical, and we all do the same
16 kind of implementation. But we do share resources, and the
17 question into the future is that the best way to do that.

18 I can tell you specifically on the fuel facilities
19 which is a smaller number, and we have five, that means some
20 regions have one or none, and at the present time there's a
21 proposal in front of the commission to make a change in that
22 arrangement, so maybe the most efficient and effective way is
23 to regulate all the fuel facilities from one location, and then
24 you can keep criticality expertise, chemical and nuclear safety
25 expertise, and it will be a better approach.

26 And I think on the reactor side we're probably going
27 in that direction for certain specialties where they're hard to

1 get, hard to keep, and you don't need them every day.

2 MR. MALLETT: One area in particular we have shared
3 outside the routine reactor oversight program is in the license
4 renewal. We have several people that I would consider experts
5 in that area now in reviewing licensees' programs for aging,
6 and we've sent them to other regions.

7 We have probably done the most license renewals,
8 inspections in Region II of any region.

9 MR. REYES: When a region only has one of those we
10 share with them our expertise and resources. There's a lot of
11 sharing going on, but not as a design of the organization.
12 That's what we're questioning now is should we design the
13 organization differently.

14 MR. MALLETT: The next challenge area that we have
15 that we're quite excited about some of the things we have been
16 doing is the use of information technology. We changed this
17 one a little bit. In our view it ought to be to reduce
18 operational burden and gain efficiencies, not just to use the
19 latest bells and whistles that come along.

20 And we've done some things that we like in that area.
21 For example, in our operator licensing where we go out and
22 review individual an individual candidate's job performance
23 we're working on, in Chris Christianson's division we're
24 working on using a -- what do you call it, a tablet? -- a
25 notebook computer instead of taking all these pages that you
26 record candidates' results on you have it on electronically on
27 a little tablet no bigger than about his size [indicating], and

1 you carry that around with you. It's going to prove much more
2 efficient than in the past.

3 We are piloting some use of personal data assistants,
4 PDAs, for inspectors to use on inspection. For routine simple
5 things you can use a checkoff type thing. We're doing that
6 both in the reactor area and in the materials area.

7 And something we just started is use of digital
8 cameras -- and Luis may want to say something more about that
9 -- for the residents.

10 MR. REYES: One of the issues you'll see later on is
11 improve communications, and as a mechanism to improve internal
12 telecommunications the technology today offers you a situation
13 where you're going to go with a digital camera and take a
14 picture of the component, the equipment, or the situation, put
15 it in our system and not only we have it, but we can put in the
16 inspection report, and a picture is worth a thousand words, and
17 a way to communicate better with the public. So we are now in
18 the field testing several brand names.

19 DR. POWERS: We got a demonstration of that during
20 our visit to Watts Bar. It was I thought a terrific
21 communication device just within the confines of the site
22 itself.

23 MR. REYES: It's been very effective. As you know,
24 we have instructed licensees to do reactor vessel head
25 inspections, and now it's easy when the inspection is going on
26 the inspector can go in and photograph, take pictures, and
27 immediately we have access to a visual description of the

1 inspection and we can share that internally. And we're looking
2 forward to getting the whole fleet of inspectors with that
3 equipment.

4 MR. MALLETT: In fact, some of our residents are
5 getting innovative. Loren Plisco shared an anecdotal story,
6 some of the residents are taking a picture of a material
7 condition that's not what you would want it to be in the plant,
8 and they're going up to the plant manager and showing him right
9 on camera "Is this what you would want in your plant?"

10 MR. REYES: It's faster than paper.

11 DR. POWERS: The one that was described to me was of
12 some leakage, and they could take it in the motion picture mode
13 and they could come up and say "Did you understand that the
14 leakage is this bad?", and they could see it.

15 MR. REYES: It is a very effective tool. We're just
16 doing field testing with several models and brand names before
17 we do the big investment, but we made the decision to go
18 forward. We just want to make sure it's a smart decision.

19 MR. MALLETT: The other thing we're doing in this
20 area that's proved very effective for us is we have what we
21 call docking stations now. Instead of permanent computers on
22 the desktop we have a station you can dock it or plug in
23 essentially your laptop, and you can take that with you in the
24 field. It's saving inspectors having to take volumes and
25 volumes of things on paper; now you just have one little CD,
26 even the regulations, and just plug it in if you need it, and
27 that's worked out very well for us.

1 The next one I would combine with the last one on
2 communication. You know, one of the agency's challenges was to
3 work on the communication, and we've done several things there.
4 One is internally we have our own communications plan to help
5 us improve how we communicate not only up and down the chain,
6 but also across organizations between the division of reactor
7 safety that Chris Christianson is the division director of, and
8 the division of reactor projects that Loren Plisco who is going
9 to speak to you later is the division director of, and we've
10 found that plan is a good tool to guide us through some planned
11 activities to try and improve in that area.

12 One of the things Chris's division has done a lot of
13 is meet with their staff in small focus groups for a what-
14 would-you-like-to-have changed, and kind of a -- what do you
15 call it, Mark Lesser, a three-sixty review I guess of where
16 we're going and what we ought to do, and that's proved fruitful
17 for us.

18 Externally we tried something that we're working on
19 is instead of the meetings we have had just with licensees at
20 the end of the cycle, we have targeted some meetings with local
21 officials, and even a town meeting with Commission Diaz, so
22 what we hope to gain out of that is interface with the public
23 to answer questions not in response to a particular event or
24 issue, but at a time when you're not in that scenario we find
25 we get a lot more candid discussion, and I think it proves to
26 improve the public's confidence in us.

27 When you're responding to an event in a meeting

1 you're always coming from the negative side of trying to say
2 what we did and respond.

3 The last bullet there is to improve the use of the
4 significance determination process for after-inspection
5 findings. I won't go into any great detail on that because we
6 have Loren Plisco who is going to talk to you about that in his
7 presentation, and Charlie Payne in the fire protection is going
8 to talk about that.

9 Probably the overall challenge in Region II is we're
10 working on an up-front plan to determine how much time we
11 should spend on the Phase III portion of the significance
12 determination process rather than run the model to the same
13 time frame so that we don't have cases that are three years old
14 we can try to have some scope up front of how much time do we
15 want to spend determining is this a white-white or a full white
16 finding for example.

17 That's the end of our introductory remarks. If you
18 have any other questions, we'll be glad to answer them.

19 DR. POWERS: Some questions about the prioritization,
20 your district thinking about prioritization.

21 You get a bunch of findings in that you say, well,
22 I've got a stack of findings here, I think they're probably
23 green, you know, just looking at them, but I've got this other
24 one that's more complicated, and do you set those kind of green
25 ones aside and work this complicated one, or is there a queuing
26 process, or how do you think you would work this thing?

27 MR. REYES: Well, what we have tried to do, and I

1 think somewhat successfully, most inspectors screen quickly out
2 in the screening process the ones that are not significant, and
3 I think this afternoon when you talk to them I think you'll get
4 that feeling.

5 The ones that now have some significance and then
6 you're trying to determine Phase II or Phase III and all that,
7 we engage our senior reactor analyst, and basically use all the
8 resources to help him do that.

9 The problem is that they're very resource-intensive,
10 and specifically in some areas. In mitigating systems it's not
11 that difficult.

12 We have been at it -- the technology has been at it
13 as you know for a long time. Fire protection is very
14 frustrating. We have the previous problem with security, and
15 we end up changing our whole security significant determination
16 process, so the areas we're using the risk is fairly new,
17 they're really resource-intensive and --

18 DR. POWERS: Well, that's basically what I'm asking.
19 Say you ask your senior reactor analyst who's the one to attack
20 this, I mean that would go and process one at a time. He's got
21 to figure out which one he picks up.

22 MR. REYES: Yes.

23 MR. MALLETT: Exactly right.

24 MR. REYES: We're trying to follow the ones we had to
25 him, if you follow what I'm talking about.

26 DR. POWERS: I'm still talking when it gets to him
27 he's got five of them, how is he picking them up?

1 chronologically?

2 MR. REYES: We have, organizational-wise we have two
3 senior reactor analysts, and they have particular plants
4 assigned, so first we divide the workload.

5 And the second one is basically when they arrive. We
6 try to do them by when they arrive, but what happens -- I'll
7 give you an example -- you've got a fire protection on one
8 that's taking all of your time and we're trying to interface
9 with headquarters on it.

10 The second one comes in which is straightforward
11 mitigating systems. That one gets work and probably would get
12 resolved much faster than the other one. We've got another one
13 with shutdowns, in the shut-down mode, and it will take us a
14 year to get through -- and that's a give and take as we go and
15 have headquarters' help.

16 But they come in sequentially, and one of the senior
17 reactor analysts is going to talk to you this afternoon, and I
18 would encourage you to explore this further with him. But we
19 have to work by plant between two of them, and then they
20 process them as they arrive.

21 Remember, we're dealing with the site to correct the
22 safety issue, so the fact that colorizing, risk assigning an
23 event may take a year or two has nothing to do with the field.
24 The field has been corrected or compensated somehow. We do
25 that right away.

26 MR. MALLETT: The other thing we did which I think
27 helps that process is we had the senior reactor analysts

1 reporting to the division director. We changed this year to
2 have them report to branch chiefs in Chris' division of reactor
3 safety. We think that gets them closer to where the decisions
4 are made as to which one you work on first.

5 MR. REYES: Right.

6 MR. MALLETT: And Mark Lesser is going to talk to you
7 about Alloy 600, but he's also branch chief in that division
8 and may want to share some things.

9 DR. POWERS: I understand. I have no idea what the
10 right way to do it is. Actually I'm curious how you're
11 thinking about it.

12 MR. MALLETT: We're working on that. We don't have
13 it solved totally yet.

14 MR. REYES: It's by plants, and then how they come in
15 into the pipeline and they get processed, but some of them get
16 backlogged.

17 DR. POWERS: If Steve would just run his fire
18 protection subcommittee correctly, we'd have all this fire
19 protection done real fast; right?

20 [Laughter.]

21 MR. CHRISTIANSON: Additionally on the SDPs which are
22 greater than green, we have established a tracking system for
23 them, and every Wednesday we have that DRP division and the DRS
24 division in a morning meeting get together and go over the
25 status of that to make sure that everything is tracking okay
26 and that we understand where it is in the process.

27 And that's to try to -- we have an internal goal of

1 90 days. We don't make it all the time on some of the
2 complicated ones, but that's what we're trying to do on the SDP
3 process.

4 MR. MALLETT: One of the reasons we did that was we
5 got some cases that were out there a long time, and we said why
6 did this take us this long, and in looking back we felt that we
7 should have done a better job up front in deciding how much
8 effort are we going to spend. But we haven't solved this
9 thing.

10 DR. POWERS: When you have a chance if you can go
11 back and look at things and say, now, what tools should we have
12 had to accelerate this process. You know, that's feedback
13 that's really useful to us.

14 MR. MALLETT: You're going to get that this
15 afternoon.

16 MR. REYES: You're going to get a lot of it.

17 MR. ROSEN: Are you keeping up with the flow of
18 findings that you have to do these analyses on, or are you
19 falling behind?

20 MR. REYES: We were not, and then we established
21 several things such as the tracking mechanism, we talked to the
22 program office. One of the problems is that we're not going to
23 invest any. For example we had one that still is not finished
24 and they're in shut-down, and those resources are down limited
25 to one or two individuals in headquarters, and so the reason
26 the reason why the agency has some particular topics are
27 limited, so we have met with Sam Collins, the director of the

1 office of NR, and he understands the situation and there's
2 changes being made.

3 Today we're much better off. I think we're getting
4 closer to the goals that we want to accomplish.

5 Now, one thing I should have said before was while we
6 were talking about structure, we're trying to increase the
7 knowledge of all the inspectors on risk, because what we would
8 like to do is exactly what you talk about, quickly process
9 those that have no significance so we can leave the limited
10 resources we have such as senior reactor analysts and all that
11 to only have a handful, so we only have a handful getting to
12 those that are the real significance, and they don't have to
13 deal with the other ones that can be disposed of rather
14 quickly.

15 So we're sending a good number of our inspectors and
16 managers to the whole series of courses that the SRAs went to
17 just as a mechanism to keep those limited resources dealing
18 with the important cases, and be able to use the larger
19 population to process the ones that don't have real
20 significance.

21 DR. POWERS: You will be gratified to know that this
22 has worked, by the way.

23 MR. REYES: Is that right.

24 DR. POWERS: I was walking through with your resident
25 looking at trains and whatnot, and he was explaining to me how
26 it was counterintuitive what the risk significance of the
27 various trains were, and why, and he's very knowledgeable in

1 risk technologies.

2 MR. REYES: And I don't know if you remember, we have
3 an amendment to the commission that as of December of 2001 we
4 would have every resident go through the early-on training, and
5 we did that.

6 And what we're trying to do now is we're trying to
7 nudge that up, because we think if the inspectors and their
8 first-line managers can deal with most of the flow, the ones
9 that are no significance, then we can be more effective with
10 the ones that are because the senior reactor analyst has a less
11 number of issues to deal with, and they don't get distracted
12 with the ones that could have been handled by the staff.

13 DR. POWERS: This was a very difficult risk analysis
14 to do mentally.

15 MR. REYES: Oh, yes.

16 DR. POWERS: And he lined it up for me very clearly,
17 and so, yeah, I would say your residents based on that
18 interaction are getting very knowledgeable and very
19 sophisticated.

20 MR. REYES: It's a very hard goal, I have to tell
21 you, because we have competing interests as you know. But we
22 are determined to do it, and I think it's paying off.

23 MR. ROSEN: I think you've got a very large problem
24 here, Luis, in that order to maintain both the external and
25 internal confidence in this whole process you need to not have
26 important events that are risk-significant linger very long.

27 MR. REYES: We agree.

1 MR. ROSEN: And in that because the input of the
2 equation is not under your control. The class are going to
3 have findings, and you can't control how many that is going to
4 be, so at any given moment, any given morning you could come in
5 and find your nice work plan disrupted by two or three major
6 findings of the 33 sites in your region.

7 MR. REYES: Yeah.

8 MR. ROSEN: So given that, if I were in your shoes
9 what I would want to do is make sure I keep that backlog
10 squeezed down real tight so that I don't have the vulnerability
11 of having a number of findings coming in on any given day that
12 overwhelms the rapid remedial capability.

13 MR. REYES: We are relatively lucky compared to the
14 other regions. Our two senior reactor analysts are graduates
15 from class number one, and we have had no turnover, we have had
16 no turnover in the senior reactor analysts, so what that has
17 done for us to help us -- and I agree with you -- and that is
18 that they're very familiar with the facilities, and since we
19 have them assigned split, and they're familiar with previously-
20 done risk analysis at those assigned facilities and have helped
21 them.

22 But I can tell you my colleagues in the other regions
23 have a little more difficulty, they have had turnover of the
24 senior reactor analysts, and being new to the plant, and being
25 new to the business is just -- it just aggravates the problem
26 you're talking about.

27 MR. ROSEN: And I would think, though, that the one

1 possible way to improve your effectiveness a great deal would
2 be to lean on the licensees quite heavily in the sense that
3 most licensees have the scope PRAs for at least three internal
4 events, and maybe for external events as well, and that your
5 first reaction to a serious finding seems to me ought to be a
6 meeting of your resident, and maybe even the SRA with the
7 licensee and ask them for their take, and then you can compare
8 that with yours before you light off independently and try to
9 create a new wheel.

10 MR. REYES: We're doing some of that. Because we
11 have the SRAs here for a long period of time and they have
12 assigned facilities we have a couple of matrixes that we use to
13 help us in this.

14 One is the name and the interface for each facility
15 in terms of risk, so we know who to call and who to talk to.
16 The SRAs can show you that.

17 The other thing we have done since implementation of
18 the program is that we have taken each facility in Region II
19 and developed a predetermined set of events and calculated the
20 risk for it. In other words, at midnight I pull out this sheet
21 and Summer had singular tube rupture I already have the number,
22 and the licensee has agreed with that number we have
23 calculated, and we have had a dial-up. So I can tell my boss,
24 by the way, we're in this, we're in this bracket. It's not
25 perfect, but we're in this bracket.

26 MR. ROSEN: You may not have had that exact event,
27 but knowing what one of the things is you can say that the

1 difference between that event and his event is probably to make
2 this less significant or more significant.

3 MR. REYES: Correct. And we can tell them, by the
4 way, there were many malfunctions in addition to the main event
5 so that as a minimum the risk is this, and probably worse, or
6 higher risk.

7 MR. ROSEN: That fact he's very familiar with in the
8 human performance area with the anchor action technique that's
9 in some of the successes where you set up operator actions and
10 you decide what the risk of a given operator recovery action,
11 is it likely that an operator will recover under certain
12 circumstances, you get a panel of experts together and do that,
13 and then when you get another event you say how complicated was
14 that compared to the one you just analyzed, so you're actually
15 using the same sort of technique as used in the success
16 likelihood index method, and I think that's a good thing to do.

17 MR. REYES: In fact this matrix is kind of intuitive.
18 We look at a set of examples like a steam generator tube
19 rupture, and the numbers vary from plant to plant in some cases
20 significant, and then when we say why and then it gives
21 insights about the plant. Some of them have added additional
22 makeup pumps for operational and safety reasons so they have
23 extra, they have additional resources that make the changes
24 significantly. And we have now those insights in a very handy
25 area available, we'll be glad to share that with you if you're
26 interested.

27 It helps us a lot, because we agree with you it is

1 very important that we handle events and findings in a rather
2 expeditious way for public confidence, and we would like to get
3 the results.

4 DR. SHACK: Who generated the matrix for you?

5 MR. CHRISTIANSON: The senior reactor analysts.

6 MR. REYES: We took the SRAs, senior reactor analysts
7 who are assigned to the plants, and we say, okay, let's come up
8 with a matrix. Say at midnight on Sunday -- I'm not a
9 practitioner, so I told them at midnight on Sunday -- I said
10 when you guys are here and it happens during the day it's easy
11 for me, I knock on the wall and say come over here and we get
12 it done.

13 But the for the worst-case scenario Sunday at
14 midnight I said I have to have a mechanism to talk to the
15 senior managers in the agency, and I would like to have an idea
16 of the zone we're in, how bad it is. So we created this matrix
17 and then filled the numbers, and they calculated them, and we
18 actually exchange out with the utility, and they know we have
19 this matrix, and they know we agree in general terms with the
20 number.

21 And what I wanted to do too was that I found out that
22 the utility management had this problem too. We had an event
23 where -- and what I forced them to do is if plant managers know
24 I carry that in my briefcase so now they force their analysts
25 to give them the list of key events and what the risks are, and
26 so I wanted to force a change in the utility to this risk
27 mentality, and we're being somewhat successful with that in

1 putting this matrix together.

2 MR. ROSEN: They followed all this through when the
3 reactor oversight process was set up, but the fact that you're
4 doing these things, and the fact that the licensees for their
5 own health and safety are picking up on it is a very good thing
6 that the agency and the licensees are working together to
7 understand risk management, which is what we're really doing.

8 MR. REYES: Yeah.

9 MR. MALLETT: The other thing we're doing which we
10 have also preached this, we have an advantage here we're close
11 to INPO, so we go to all their new INPO managers seminars, and
12 Luis has been on the agenda, I've been on, Loren has been on
13 there, and we go and we preach this to them that here are some
14 lessons learned that you ought to have when you respond to an
15 event, and here are some issues.

16 That's been quite effective interchange, and so
17 eventually you get to every manager in their organization with
18 that concept. So now we have managers, senior managers decide
19 to call us very early as you suggested during an event to just
20 say, hey, this is where we think we are, where do you think you
21 are.

22 MR. REYES: It's very important I agree to have that
23 dialogue.

24 Okay. That's all we wanted to talk about in terms of
25 the general discussions. We have a detailed agenda and we're
26 almost on schedule.

27 Do you want to continue with the agenda the way it

1 is, and then you let us know when you want to pause.

2 MR. ROSEN: Let's move on. We'll try to get most of
3 the agenda behind us by four if we can.

4 MR. MALLETT: I see people looking at coffee. We did
5 have a break built in after Mark Lesser's time.

6 MR. ROSEN: Let's keep rolling.

7 MR. LESSER: Good morning. My name is Mark Lesser,
8 I'm Chief Engineering Branch 2 here in Region II, and I would
9 like to talk about some follow-up of some of the Alloy 600
10 issues in Region II, and specifically we'll talk about the
11 latest on V.C. Summer pipe crack that occurred in 2000, and
12 what your status is on follow-up on Bulletin 2001-01 control
13 rod drive mechanism vessel head penetration cracking, and the
14 temporary instruction that our inspectors are doing.

15 Okay. The V.C. Summer crack follow-up activities, a
16 brief refresher, in the fall of 2000 the licensee during their
17 outage identified a 2 1/2-inch long axial thru-wall crack in a
18 'A' hot leg weld, and they cut out that section, a 12-inch
19 spool piece, they cut that out and rewelded it.

20 Basically they did a root cause evaluation, we did a
21 special inspection. The cause was attributed to primary water
22 stress that caused the cracking, and complicated by, or
23 contributed by high residual stresses from multiple weld
24 repairs during the field installation, the field construction
25 of that weld.

26 DR. BONACA: Did the root cause ever question why
27 they didn't know of the cracks previously in other inspections?

1 MR. LESSER: The root cause looked into that, and
2 they had done their ten-year ISI a few years before that, and
3 with ultrasonic testing, and --

4 DR. BONACA: They didn't see it? '

5 MR. LESSER: They didn't see it, and they didn't see
6 this crack if it existed, and there's the possibility the crack
7 did exist at that time, and that basically the equipment
8 there's a possibility that a lost -- well, actually a lost
9 coupling, with the ultrasonic it did not have a good coupling
10 at this particular point on the pipe, and so that was basically
11 -- you know, we didn't see that. So they felt that that was a
12 generic problem.

13 DR. BONACA: There wasn't only that crack, there were
14 other cracks in other nozzles, and they could identify --

15 MR. LESSER: Yes.

16 DR. BONACA: -- in the previous inspection the year
17 before the primal crack, so that crack must have been there.

18 MR. LESSER: It was there.

19 DR. BONACA: The reason I'm asking that question is
20 trying to build some more confidence in inspections.

21 MR. LESSER: And there are briefings that are
22 ongoing. For instance, improved sled design for transducers
23 that are running along side the pipe wall to reduce the
24 possibility of a loss of coupling.

25 MR. REYES: One of the contributing causes is -- and,
26 Billy, you just jump in if we do it wrong -- the sled, the
27 machine that runs over the pipe with the sensors, the older

1 designs didn't have what you would call a shock absorber,
2 didn't have robotic articulated for the sensors, and it turns
3 out that this weld in particular which was a weld made by hand
4 it was rough, it was rough by today's standards, the sled
5 actually lifted the sensors over that area, and it's hard to
6 prove, it's hard to prove it but with today's technology their
7 articulated sled is much more likely to keep the sensor in
8 touch with the pipe and the weld in question.

9 Billy, anything else to add to that? So technology,
10 I think the new technology is going to assist in trying to
11 eliminate some of the contributing causes.

12 MR. CROWLEY: All of them were similar, they were all
13 manually welded, and the inside surface which the UT transducer
14 was traveling on was rough, which didn't provide an optimum
15 surface for examination.

16 MR. CHRISTIANSON: Bill Crowley was the team leader
17 for the special inspection for the pipe crack issue at V.C.
18 Summer.

19 MR. ROSEN: You just said something that interests
20 me. You said the UT inspection was from the inside surface?

21 MR. CROWLEY: Correct.

22 MR. ROSEN: How big a pipe was this?

23 MR. LESSER: 29-inch inside diameter, 2 1/2-inch wall
24 thickness.

25 MR. REYES: The biggest pipe you have on site, all of
26 their main steam.

27 MR. LESSER: Right next to the outlet from the

1 reactor vessel, so it's fairly close.

2 DR. BONACA: That to me though would be an essential
3 part of the root cause if I understand it, and also
4 communication with other licensees if it is an issue of
5 contact.

6 MR. REYES: And in fact every licensee who did the
7 inspection subsequent to that, that articulated sled was in
8 high demand because nobody wanted to use the old technology,
9 worry about the sensor not coupling well based on an
10 imperfection of the pipe, and all the licensees are aware of,
11 one demanded the contractor use the new technology to make sure
12 the coupling was there.

13 DR. BONACA: One last question I have, clearly that
14 experience shows that the use of eddy current combined with
15 metric [?] is ineffective to identify to a T the existence of a
16 crack.

17 Is this being expanded in use, or is it too
18 burdensome?

19 MR. LESSER: I can tell you I sat in some meetings
20 where the rule of the industry is taking the lead in working
21 with NRR staff in the materials reliability project referred to
22 as the MRP. They're doing a lot of work in where all the Alloy
23 600 is in the plant first of all, identifying all the
24 dissimilar metal welds, and trying to identify the best
25 technology to find these, to gather data.

26 In fact, one of the pieces of data is the follow-up
27 inspection at V.C. Summer which they did this last spring, so

1 there's a lot of work going on there between the industry and
2 the agency to find what needs to be done.

3 MR. REYES: The problem too in testing is that
4 there's no baseline. The plants have been operating now for 25
5 years, 20 years, and this was not done during construction, so
6 you are going to have a lot of indications, we saw that at
7 Summer, and it could be as simple as a scratch on the pipe from
8 construction, or it could be incipient developing of a flaw,
9 and then you would have to dispose of all that large volume of
10 information, so there's some hesitation from the industry from
11 a practical point of view on if we this then what are we going
12 to do, is the regular going to impose us to stay shut down
13 until we analyze every one, so that's part of the exchange with
14 the industry.

15 DR. BONACA: The reason why I was pursuing it, we are
16 reviewing license renewals, and they depend so significantly on
17 the quality of the inspections, so I was pursuing that to see
18 if you have confidence that they have tried hard to do it
19 right, or if it was simply an inspection that was maybe split
20 up somewhat.

21 MR. REYES: Let me ask Billy to add to that, because
22 he's been in the team inspections for all the license renewal
23 inspections in Region II, and we've done the most, so Billy, do
24 you want to add to that a little bit.

25 MR. CROWLEY: I didn't quite understand what the
26 question was.

27 DR. BONACA: We ask you know are doing the regular

1 license renewals, and we depend on these programs that include
2 particularly these kinds of inspections for the license
3 renewals. As the plants are getting older these kinds of
4 things will be getting more common, you may get more cracks
5 that may expand to open a crack, so the point I was trying to
6 understand is do we understand the cause of this completely,
7 and can we be confident that when the next license renewal
8 application comes in and they say yes, we have performed in-
9 service inspections that we can be confident of that.

10 MR. CROWLEY: I think a lot depends upon what comes
11 out and what's going on in the industry. We're trying to
12 understand what needs to be done to get the best inspection, do
13 we need to add eddy current. You know, if so, a lot of work
14 has to determine what the acceptance criteria are.

15 So I feel like with the NRC and the industry together
16 looking at this issue and determining the best inspection
17 methods, you know, we can be confident we're doing everything
18 we can to preclude passing something like this up.

19 MR. REYES: The utilities are very sensitive to this
20 for a lot of reasons in terms of having to put the unit out of
21 service for long periods of time. We've seen a lot of work in
22 trying to identify it early, and I'm looking at Billy here, but
23 we feel comfortable with the extent of what they have done, but
24 this Eddiker & Tussen [?] is still an issue on the table.

25 The biggest issue from where I sit is coming up with
26 an acceptance criteria that the industry and the regulator can
27 agree on, because it becomes a practical matter once you get

1 all the information, what do I do with all this information.

2 DR. BONACA: I just have this last comment to make,
3 but I just thought of a question. You mentioned the root cause
4 was TWSC, and it was allowed to propagate right through the
5 whole nozzle. That's a long process, and it just goes to the
6 heart of the issues of license renewal because there's a crack
7 that's going to elongate through a long time, and we depend on
8 those programs for saying yes with confidence, we have
9 confidence that we can go 20 more years with that plant. And
10 we are likely to see some of these issues crop up more
11 frequently now as the plants are getting older.

12 MR. ROSEN: What was the agency's response to all
13 this? If we're getting this kind of finding in more than a few
14 questions it could put into question the whole process.

15 MR. LESSER: At this point the agency has not put out
16 any new regulations or requirements for that, and there was
17 some uniqueness in V.C. Summer. This was field welding versus
18 shop welding.

19 But as I said, we're in the process of looking at the
20 generic --

21 MR. ROSEN: Excuse me. Are you saying that this was
22 the only field welded pipe in the region?

23 MR. LESSER: I didn't say that.

24 MR. REYES: On the location of the large line, the
25 hot legs and cold legs, this was the only one that was started
26 and finished by hand -- is that right? -- and all the errors
27 were grinded out. From there on they started the automatic

1 welding process on the other legs at the station.

2 MR. ROSEN: At V.C. Summer.

3 MR. REYES: At this station.

4 MR. ROSEN: You have 33 plants out there.

5 MR. REYES: Yeah.

6 MR. ROSEN: How widespread was that kind of manual
7 operation? is the next question.

8 MR. REYES: In the early days it was common.

9 MR. ROSEN: Common.

10 MR. REYES: In the early days.

11 MR. LESSER: This was field welded with -- the other
12 thing was multiple welder errors.

13 MR. ROSEN: That was the situation that was at the
14 root cause of this, not PWSCC, which is field-welded, multi-
15 repaired nozzles is common, so --

16 MR. REYES: Well, the licensees, because we need to
17 follow on your question --

18 MR. CROWLEY: Not all of them were field welded, not
19 all the dry metallic welds were field welded.

20 MR. ROSEN: Common doesn't mean all; common means
21 half, or every plant might have one or two, so that should be
22 the focus of what you're thinking about.

23 MR. REYES: Knowing that, the utilities took that
24 information, and they can tell from their records which one was
25 what we call a problematic during construction, meaning it had
26 to be repaired many times, and grinding, and all that, and they
27 went in and specifically looked at those, and the results we

1 have back we haven't seen this again, it doesn't mean that we
2 won't, but they realized that if you have all these conditions
3 you are more likely to have a problem, and they have been
4 looking at that.

5 The industry was really taken aback by this his event
6 because of its implication, and we have a lot of PWRs in Region
7 II, so we have followed this closely.

8 I guess time will tell, but so far we haven't seen
9 something similar.

10 MR. ROSEN: But I wouldn't take a lot of comfort from
11 that, because this was just the fall of 2000, and so it's the
12 summer of 2002 and not much time has elapsed. When you think
13 about crack propagation rates and the kinds of --

14 MR. REYES: And I was thinking of the older units
15 that are more likely to experience this, and we have a few of
16 those here. So far -- they actually looked, they went and
17 looked at this situation, and it hasn't shown up. Doesn't mean
18 we're not going to see it.

19 MR. LESSER: Getting back to the other cracks that
20 were found, the second bullet, when they did remove this spool
21 piece and examined it they used eddy current, and they found
22 other cracks in the unit with eddy current shallow cracks, and
23 as part of their extent of condition looked at the other loops
24 with eddy current, and they found cracks there, generally
25 shallow cracks of the size-length of about a quarter inch to
26 about six tenths of an inch was about the size.

27 The licensee back in 2000 did a structural integrity

1 analysis that was submitted tot NRR staff who reviewed that and
2 accepted those flaws as is for one cycle of operation with the
3 understanding that they would go back at the next outage and
4 inspect.

5 And so V.C. Summer's next outage was just this last
6 spring. They did two things. They not only went back and
7 inspected, relooked at the 'B' and 'C' hot legs, but they also
8 did mechanical stress improvement process.

9 This is actually a clamp that's put on the weld, and
10 they actually compress that, squeeze the pipe to try to
11 eliminate the tensile stresses on the inside diameter of the
12 pipe.

13 MR. REYES: What it does, it changes the surface on
14 the inside of the pipe and the weld there, the starting
15 location of the PWSCC.

16 MR. LESSER: And actually they're using about 20,000
17 pounds of pressure to actually plastically deform the weld, the
18 pipe about 1 percent and actually get a 1-inch reduction in
19 circumference of the pipe.

20 They did this on the 'B' and 'C' hot legs. We had an
21 inspector observe some of those activities, and NRC research
22 also had their contractor who was on the original special
23 inspection team come back to V.C. Summer and look at the new,
24 the later nondestructive examination activities that they were
25 doing. They inspected 'B' and 'C' hot legs before mechanical
26 stress improvement and after mechanical stress improvement.

27 DR. SHACK: Do other licensees, your BWI licensees in

1 Region II use MSIP?

2 MR. LESSER: It has been used in -- yes, it has been
3 used in the past on BWRs, yes.

4 MR. REYES: This is the first PWR that we know of.
5 This is the first BWR that we know of that it's been used on.

6 MR. LESSER: The eddy current inspections this year
7 showed good correlation with the results of 2000. There were
8 no new indications in 'B' and 'C,' and basically any changes in
9 length that they observed they attribute that to measurement
10 uncertainties and different technologies. And the licensee
11 concluded, and the NRC concluded there was no growth in the
12 crack length for any of those. There's four indications that
13 follow, a total of four indications in the 'B' and 'C' hot
14 legs.

15 And the NRC staff approved V.C. Summer for start-up
16 for another, one more cycle of operation, again with the
17 understanding they will do another inspection at the next
18 outage.

19 MR. REYES: This is the best data we're going to have
20 on eddy current testing on this application, so everybody is
21 looking at it very closely.

22 DR. BONACA: The other plants out there that find
23 cracks, they're not doing this stress relief operation, they're
24 not being committed to inspect every cycle and so on, so we
25 will see. But you're telling me that the inspection techniques
26 are being improved.

27 MR. REYES: Yeah, specifically for the known causes

1 or contributing causes at Summer like the articulated sled and
2 the position of the sensor, being sensitive about field welds
3 that had a lot of grinding, a lot of rework, and things like
4 that.

5 That intelligence, I think Summer brought that to the
6 light, and we've seen that on the field work.

7 MR. LEITCH: Would you think that the mechanical
8 stress improvement would destroy some evidence of the crack
9 growth rate? Would they still be able to look at these cracks
10 and get meaningful crack growth data with the mechanical stress
11 improvement?

12 MR. REYES: I'll ask Billy. Billy, do you have a --
13 Do you understand the question?

14 MR. CROWLEY: We should arrest any crack growth, but
15 I guess as we continue to inspect these welds in the future we
16 will find out. If the mechanical stress improvement does what
17 you expect, you should stop the growth.

18 DR. SHACK: In fact, in theory you should be able to
19 see it easier because it should blunt the crack which means
20 your chances of getting a crack tip reflection are actually
21 improved. That's the theory at any rate.

22 MR. LESSER: Let me move on to Bulletin 2001-01,
23 control rod drive mechanism vessel penetration, cracking and
24 temporary instruction status.

25 We have been doing the temporary instruction which is
26 gathering data and inspecting licensee activities as they
27 implement this bulletin, the bulletin inspections.

1 It is being performed by the resident inspectors
2 and/or regional experts in nondestructive examinations. That
3 means basically the licensee is going to do a visual, pretty
4 much we'll have resident inspectors do the temporary
5 instruction. If they're going to be using volumetric
6 techniques we will have one of our DRS inspectors do the
7 temporary instruction.

8 The current status, the Bin 1 plants, these were
9 defined by the temporary instruction. Bin 1 were those plants
10 that at the time of the bulletin had already had active
11 cracking. Our only plant in Unit 2 was Oconee. All three
12 Oconee units have shown thru-wall cracks, have penetrations.
13 We have done the temporary instruction on Units 1 and 3, and
14 Unit 2 we will do it this fall.

15 Bin 2, those were plants that were within five
16 effective full power years of the reference plant, Oconee 3,
17 and we have done the temporary instruction on both the North
18 Anna and Surrey units.

19 North Anna 2 and Surrey 1 both had cracks that were
20 repaired. Robinson, we will do the TI this fall.

21 MR. LEITCH: You said North Anna and Surrey both had
22 cracks that were repaired?

23 MR. LESSER: Yes, North Anna 2 and Surrey 1.

24 MR. LEITCH: And the other units have been looked at,
25 and no cracks found?

26 MR. LESSER: That's correct.

27 MR. LEITCH: And how many cracks were in the units

1 that were repaired?

2 MR. REYES: While he's looking for that --

3 MR. LESSER: I've forgot the number.

4 MR. ROSEN: We have a special interest in that,
5 because North Anna and Surrey are currently up for license
6 renewal.

7 MR. REYES: Correct. But they have purchased reactor
8 vessel heads, and they will be replaced in 2004. We have eight
9 -- what I was going to tell you while Mark is looking for the
10 numbers -- we have eight units that have announced head vessel
11 replacements, the three Oconee, Crystal River, and the four --
12 the two Surrey and the two North Anna.

13 In fact, going back to our strategic work force
14 planning, starting in 2003 other than Davis Bessie will be the
15 first region that's going to go into a very heavy schedule of
16 spring-fall, spring-fall, spring-fall replacement of vessel
17 heads.

18 Some of those include cuts into containment,
19 containment will be cut. In fact, the top of the containment
20 will be cut in some cases to get them in. So our engineering
21 resources starting in '03 are going to be very taxed.

22 MR. ROSEN: It seems to me this is not a regional
23 problem.

24 MR. REYES: No, no.

25 MR. ROSEN: I mean that's a whole new ball game,
26 cutting into containments and things like that, so it's not
27 just head replacement, and you need to get some input from

1 headquarters.

2 MR. REYES: We've done it before. The steam
3 generator replacement at Surrey, Turkey Point, and Robinson
4 required containment cuts.

5 MR. ROSEN: I don't mean to interrupt. I don't think
6 one containment cut is not equal to another containment cut.
7 Containment cuts, some cuts are a specialty art.

8 MR. REYES: Yeah, and we went through Surrey one
9 before when they replaced the two generators, and so we'll have
10 to go through all that again.

11 MR. ROSEN: To me it's more like original
12 construction, and your expertise have to be -- how should I say
13 -- not as vigorous as they once were.

14 MR. REYES: Correct. We are very fortunate that we
15 have people like Billy Crowley and others who were in those
16 days. And our intention, just so you now part of the
17 strategic work force plan is every one of these activities will
18 have an experienced inspector who's done it before, and they
19 are going to be accompanied by a designated person who will
20 have had upon designated to have been through concrete school
21 and all those things, and will be the designated person to take
22 this --

23 MR. ROSEN: Rebar.

24 MR. REYES: Yeah, rebar. So we have a very heavy
25 period of work coming on because of all the announced reactor
26 vessel heads replacements.

27 MR. LESSER: I think to answer your question, North

1 Anna 2 had three thru-wall leaks, and Surrey 1 had two thru-
2 wall leaks.

3 DR. SHACK: Is Ocone the only one with leaks that's
4 been reinspected?

5 MR. LESSER: Yes.

6 DR. SHACK: When's the next reinspection coming up
7 for some of these that had leaks?

8 MR. REYES: North Anna 1 is coming into a full outage
9 on September, and --

10 DR. SHACK: Because it was rather surprising you
11 didn't have more leaks.

12 MR. REYES: In Region II we don't have anybody in
13 that situation, but there may be some in other regions.

14 There was not leaks every place. In these eight I
15 talked to you about they basically decided, it's a business
16 model decision, the time out of service for the station and the
17 cost of doing the NDE and the repairs both from money and
18 exposure. In a business model the decision is quick, you spend
19 \$10 million to buy a new one and get it over with, and that's
20 why I think you're going to see more and more.

21 DR. BONACA: Most of the cracks were axial; right?
22 The ones you discussed.

23 MR. REYES: You mean the ones that we found leaking?

24 DR. BONACA: Yeah.

25 MR. LESSER: Some of them have been circumference,
26 and some of them have been axial. Most of them are axial.

27 MR. REYES: One or two of them.

1 MR. ROSEN: Tell me a little bit about what you saw.
2 Was this popcorn boric acid deposits?

3 MR. LESSER: Yes.

4 MR. ROSEN: In every case, or thru-wall cracks? Was
5 it identified from the boric acid deposits, and later confirmed
6 by volumetric inspection?

7 MR. REYES: I'm looking at Billy. The ones that I'm
8 aware of, the pictures that I've seen, you have a little bit of
9 boric acid deposit, you can describe it as popcorn, and we can
10 get you some of the pictures.

11 And then the question is where did that come from,
12 and then you go and do the NDE from inside the vessel head and
13 confirm either axial or circumferential, depending.

14 I think we only had one circumferential, and North
15 Anna had two. I think that's correct.

16 MR. LESSER: You know, when they visually look at the
17 head with either remote optics or something you can see boric
18 acid crystal around the nozzle, around the four-inch nozzle, if
19 that has been squeezed up from the annulus from the bottom of
20 the vessel.

21 Now, part of the bulletin is they have to be able to
22 show that in fact there's enough room in this interference bit
23 that will move up and make itself known there. All the plants
24 may not necessarily be able to show that, and if they can't
25 show that then they can't call themselves -- they can't call
26 that a qualified visual inspection. They have to -- if they're
27 in a higher susceptibility category they would have go to in

1 and do volumetric inspections.

2 MR. REYES: But the pictures are very telling. I
3 mean you look at it and right away you know it's boric acid,
4 popcorn kind of shape, and you right away know you have to go
5 underneath.

6 MR. ROSEN: I believe -- and I'll ask the other side
7 of the question -- if it doesn't show that do you know
8 anything?

9 MR. REYES: No.

10 MR. ROSEN: It could still be going on?

11 MR. REYES: Yes, that's correct.

12 MR. ROSEN: It could be still cracked, certainly it
13 could be -- not thru-wall, but the next question is could you
14 have a thru-wall crack and it doesn't show at the surface?

15 I have examined that question several different ways
16 in several different forums, and the answer I typically get is
17 if you have a thru-wall crack it will show on the surface, and
18 I was wondering what you think.

19 MR. LESSER: Well, no, I don't believe that's the
20 staff's position. I believe that you have to be able to also
21 show analytically and with as-built dimensions that the
22 interference, the nozzle though the head will in fact expand
23 when you're heated up and there will be an annulus to allow
24 that to travel.

25 There is some thought that, you know, that if it's
26 too tight you may not see it bubble up there.

27 MR. REYES: I don't know what the answer is to the

1 question, but I can tell you what the answer is to the problem:
2 replace the head with different material, and that's what I am
3 -- you know, as far as I can tell that's why you have eight
4 vessel heads in Region II already lined up for replacement.
5 I'm just giving you --

6 MR. ROSEN: If I'm wearing your moccasins, Luis, I
7 would be a little bit uncomfortable about a clean inspection
8 because it it's clear to me that that crack would not be
9 damaging the head without showing boric acid deposits on the
10 surface.

11 MR. REYES: Correct.

12 MR. ROSEN: I have never been fully apprised of that.

13 MR. REYES: You have to use several things that get
14 you to the comfort factor. One is the equation that gets you
15 to is it a likely situation to be occurring or not, and we
16 learned -- and I'm no expert on this -- we learned from the
17 French that we may have to modify our equations a little bit,
18 but I agree with you. But I think if you do a visual and you
19 don't have any more gaps in it, then by analytical you don't
20 think it's likely either I think you have reason to believe
21 it's okay.

22 Now, we have a lot of plants that are not in that
23 category, and that's why I think you'll see the replacement of
24 the vessel heads, and as far as I'm concerned that's the only
25 answer.

26 I think you're going to see a lot of replacement
27 vessel heads coming up. Once the first ten or twelve get it

1 pretty much done and all the lessons learned are there, I think
2 you're going to see more utilities going in that direction.

3 I have several executives who have told me that
4 they're going in that direction, they're just trying to figure
5 the timing.

6 DR. BONACA: Those are only the ones in the highest
7 susceptibility category, so the intermediate they would not
8 jump to that conclusion yet. I think with the questions that
9 Steve is pursuing I think that's very significant. One could
10 say why not have an automatic inspection of all those
11 intermediate class to get a sense of where you are unless the
12 decision is made to replace the head, which I don't think is
13 going to be made for most of us.

14 MR. LESSER: I think you're right, because the Bin 4
15 plants for example, some of the projections show -- corrosion
16 is a function of time and temperature, and if they have a lower
17 head temperature the likelihood of corrosion and the corrosion
18 rate is going to be much smaller, and some of the models are
19 showing it may be many, many, many years past their license
20 where they would start to see this, so it will be the ones that
21 are susceptible first.

22 MR. REYES: The ones in the top tier are going to go
23 to the bottom because they're going to put new vessel heads
24 with new material, and then what used to be in the middle is
25 now your top concern as a regulator.

26 DR. BONACA: I mean it seems to me is the opposite
27 situation. The burden is to demonstrate that there is a

1 concern with the boiler head.

2 MR. ROSEN: I asked of the MRP, Don Refus, and he
3 showed me a chart applying the temperature, compliance, and
4 various things, and he told us how all these points seemed to
5 be consistent with the model, the time and temperature model,
6 and I asked him what would not be consistent with time and
7 temperature, and he pointed to a plant, a low-temperature
8 plant, or a low-temperature region on the graph and said if we
9 get a crack in one of those we'll go back to square one in
10 designing the system. So I think that's what we will be
11 looking for.

12 And you're right, the picture will change as people
13 change heads, but it may come out that those hot level, most
14 susceptible plants will be rather not susceptible. Even though
15 they are the most susceptible in their remaining BWI they will
16 be rather unsusceptible because of their temperatures.

17 So then you can go a little bit relaxed except if you
18 get aa leak in one of those. That's a telltale that says
19 something is wrong with the simple model, and there are more
20 factors involved here.

21 MR. LEITCH: Was there any commonality in heat
22 numbers of the nozzles having cracks in North Anna and Surrey?

23 MR. LESSER: I don't have that information. I think
24 there's some site --

25 MR. REYES: I know a little bit about it, the B&W
26 units. I was told, and I cannot confirm this, that they were
27 looking at the tube itself, the material for Crystal River,

1 Oconee, and Davis Bessie to see if there was a heat of material
2 was involved in it, and I haven't heard the answer whether
3 there was.

4 MR. LEITCH: And I think we heard, if I recall
5 correctly, that the ones that were cracked at Davis Bessie were
6 from the same piece that was common strata, but I don't have
7 that data.

8 MR. LESSER: Some of the open issues still with the
9 bulletin, again we have a few plants that we're going to
10 complete the temporary instruction on this fall, and we'll be
11 all done with that, there are some plants that have not
12 received a closure letter from the NRR, NRR is continuing to
13 review that.

14 And also how we disposition and document the
15 enforcement of thru-wall cracks, still we're working through
16 that to be consistent throughout the region.

17 And also from a significance determination the first
18 of set of cracks that occurred at Oconee, we considered that we
19 used enforcement discretion, the second set of cracks we would
20 consider those, but that's still predecision.

21 And I think we talked, we were talking about vessel
22 head replacements. Oconee is starting with the spring of 2003
23 they're going to replace Unit 3; Crystal River in the fall of
24 '03. I didn't put North Anna up there, but North Anna and
25 Surrey we've got some indications that they're planning to
26 replace their heads.

27 We are planning to go -- the Oconee heads are

1 currently, they were fabricated in Japan, they're currently at
2 the B&W facility in Canada. A couple of my staff is planning
3 on a visit of that facility in July along with NRR to observe
4 basically some of the fabrication of the heads.

5 With that that concludes my presentation. Are there
6 any other questions or discussion?

7 MR. ROSEN: Is the head fabrication in your
8 understanding going to be very much like what we've got now? I
9 mean is it a straight fit on those nozzles?

10 MR. LESSER: I believe so. They would be using Alloy
11 690.

12 MR. ROSEN: Are the fabrication techniques still the
13 same?

14 MR. LESSER: I don't know a lot about it, to tell you
15 the truth. I'm making the assumption it is.

16 MR. ROSEN: Clearly if that's what we're doing we
17 want to know a lot more about the dimensional fit.

18 DR. SHACK: Of course they will do a baseline
19 inspection this time.

20 MR. LESSER: Oh, yeah.

21 DR. SHACK: We will get a pre-service inspection.

22 MR. LESSER: Okay. Well, thank you very much. Yes.

23 MR. ROSEN: To come back for a different thing, on
24 the boric acid inspection programs, how sensitive do you think
25 your licensees are about removing -- you know, did they leave
26 boric acid on susceptible materials? Is that -- You know,
27 they did that at Oconee, I mean at Davis Bessie. Do you know

1 that that's going on in your plants that somewhere they're
2 leaving boric acid on materials because they feel it's harmless
3 and they don't want to spend the command RIMS to get it off?

4 MR. LESSER: You know, that's a good question. I
5 don't think we've looked before Davis Bessie obviously. I
6 think there's a big difference before and after Davis Bessie
7 would be my feeling talking to people, but I don't think it's
8 something that people -- we don't know if they looked that hard
9 at it, and we were relying on their 2002-01 bulletin responses
10 and then what we do with that.

11 DR. SHACK: Do you have any feeling for how they
12 react to tech spec leakage?

13 MR. LESSER: Yes.

14 DR. SHACK: Everybody has a one-GPM limit, but what
15 do they really do, you know, when do they really start to worry
16 about the leakage?

17 MR. LESSER: That's a good question. >From my
18 experience, and I think I would probably say generally most of
19 the plants monitor it and have a baseline unidentified leakage
20 that they have seen for a long time, and when it goes up
21 there's a bit of a spike well below one GPM, even well below a
22 half to a quarter GPM at some point they say, hey, something
23 has changed in here, let's go in and look. They may send
24 people to go in and look-see if they can find something.

25 I think -- you know, my feeling is that most of them
26 are pretty sensitive towards that because they know it's only
27 going to get worse once it starts coming up.

1 MR. ROSEN: Mark, isn't it your experience or the
2 experience of your inspectors that that's not the first
3 indication they have of a leak, that the first indication is
4 typical radiation monitoring alarms from particulate or other
5 sensors in the containment?

6 MR. LESSER: No, I don't know that they're that
7 sensitive, the rad monitors are that sensitive to pick up leaks
8 at low levels about a tenth, or a change in a tenth of a GPM.

9 My experience is that they pick it up, they see
10 something when they do their three-day unidentified leakage
11 calculation is their first sign that something has changed.

12 DR. SHACK: When French went through, they wanted to
13 do leakage monitoring on the heads they built a can over it so
14 they could contain it and then sniff it, so obviously you're
15 sort of pushing the limits at the kind of leakage levels you're
16 interested in.

17 MR. ROSEN: Especially plants that don't have fuel
18 leakage problems.

19 MR. LESSER: That's right. That's a big input into
20 whether the rad monitors will pick it up, absolutely.

21 Okay. Thank you very much.

22 MR. ROSEN: I think that's when our break was
23 scheduled. What do you think?

24 MR. CHRISTIANSON: We were regularly scheduled for a
25 break from 10:00 to 10:15. If you would like to have a 15-
26 minute break we can reconvene at 25 after.

27 MR. ROSEN: Yeah, I think that's a good idea. So

1 we're on break until 25 after ten.

2 [A brief recess.]

3 MR. CHRISTIANSON: The next presentation is Plant
4 Operating Experience, Loren Plisco, Director, Division of
5 Reactor Projects.

6 MR. PLISCO: Good morning.

7 What I would like to do is I was going to give an
8 overview of plant operating experience in Region II really from
9 an ROP perspective.

10 I'll give an overview of plant performance showing
11 the action matrix, and a summery of which cross-performance
12 indicator thresholds we think here in Region II, and a summary
13 of our nongreen findings that we've had through the first two
14 inspection cycles.

15 And then I'm going to ask individual branch chiefs,
16 they're going to come up and talk about some specific -- and I
17 wasn't going to cover them all, but I picked out some specific
18 findings and PI issues that have come up that we have run
19 through the process, and they'll talk a little bit about what
20 the technical issue was and how we handled it within the
21 process.

22 What I was trying to do is give you an idea of the
23 kinds of things that have bubbled up out of the program that
24 we've had to deal with in the process, the kind of technical
25 issues and the kind of performance indicators.

26 MS. WESTON: Loren, if I may, do you have in your
27 packages the printouts for those issues?

1 MR. ROSEN: Also, Loren, would you also indicate how
2 the regions are doing in terms of not generating false
3 positives in terms of scores on, you know, getting a red when
4 it really looked to be a yellow. Have there been any Region II
5 cases where you said it was yellow and after the regulatory
6 conference it came out lesser than that, or greater than that?

7 MR. PLISCO: We have had some. They either stayed
8 the same or they were lesser. None of them went up.

9 MR. ROSEN: I'm interested in those not because it
10 changed so much, but because clearly there was some lack of
11 understanding of the actual circumstance that got rectified in
12 the process, and that's inefficient, and it's something we need
13 to work -- I don't think you'll ever get a hundred percent on
14 it, but you need to work to minimize that.

15 MR. PLISCO: Well, two of them specifically we're
16 going to talk about. I think Kerry is going to talk about both
17 of them. We had one in security which is another issue.

18 MR. ROSEN: Well, those are flags for us about some
19 process issues that -- you know, nothing against the people,
20 but it's the process issues I'm after.

21 MR. PLISCO: And they weren't issues of new
22 information, they were really issues of assumptions, or models
23 that were used, and then in the discussion with the licensee
24 there was agreement to either use a different model, or
25 approach in the modeling.

26 MR. ROSEN: And the lessons-learned process was then
27 generated which puts that in the front end so the next time

1 that kind of thing comes up you don't end up in that same
2 place.

3 MR. REYES: We'll show you one example particularly.

4 MR. PLISCO: And Kerry actually has two he's going to
5 talk about. One is a Surrey diesel issue which the SDP
6 analysis came out higher, and after the reg conference it ended
7 up a little way. And then the Summer-Watts Bar issues, the
8 same thing is true. And there's a different story on each one
9 of those and why that ended up --

10 MR. ROSEN: I'm interested in learning provision for
11 the staff.

12 MR. PLISCO: The other point I wanted to make is that
13 when I show these summaries the good news and bad news about
14 the rank oversight process is it's more real time than the
15 When you look on the Web site, and you look at summaries of
16 where the plants are that's as of a certain time frame, and if
17 you look a month later, you know, on a day-to-day basis it
18 changes, which is good because then we have some current
19 information rather than SOP you look back 18 months when you
20 look at the most recent SOP it was really whole information,
21 real time.

22 MR. ROSEN: You're giving a plant that's really
23 solved a lot of problems a very bad report.

24 MR. REYES: Two years later you'll see it's --

25 MR. ROSEN: Two years later, right.

26 MR. PLISCO: But it has caused a few communication
27 difficulties, since it is a moving target and there's a lot of

1 information out there, and what's on the Web site is typically
2 updated quarterly where the plants are action measures, where
3 it really can change daily if a new finding comes up, or a new
4 finding it changes their status, which has been a new
5 communication issue we've had to deal with.

6 And I'll show you an example on the first slide.
7 This is a summary of where we are nationwide. This was as of
8 March 31st, the first quarter, and that's what's currently on
9 the NRC's Web site.

10 In Region II you can see we don't have any plants
11 that are in the degraded cornerstone or above.

12 MR. ROSEN: This says you need to be in an even-
13 numbered region.

14 MR. PLISCO: And I was going to walk through that
15 this is a snapshot. We have actually had two plants that have
16 been in the degraded cornerstone; they're out of it now, and
17 you're going to hear some of the discussion when the branch
18 chiefs talk about that.

19 Oconee 1 has been degraded cornerstone and they are
20 currently out; Farley 2 was degraded cornerstone and they're
21 currently out. So as I said, it's a moving target. If you look
22 back historically we have had plants in these categories.

23 And the same for regulatory response. Right now we
24 have three plants, that's Oconee 1 and Surrey 1 and 2, and the
25 branch chiefs are going to talk about the specifics of the
26 reasons why they're in there.

27 But we have had about eleven plants that have been in

1 and out of that category through the first two inspection
2 cycles.

3 DR. POWERS: You have no idea how much more
4 enthusiastic I am about your headings, your columns than
5 colors.

6 MR. PLISCO: And these are what we try to use in the
7 public meetings when we're trying to communicate to get away
8 from the colors.

9 DR. POWERS: Because those communicate, whereas your
10 colors don't. This tells you what you're doing, and the colors
11 just don't.

12 MR. PLISCO: Any questions on this overview of where
13 we are and where the rest of the regions are?

14 MR. LEITCH: This is as of the end of March?

15 MR. PLISCO: March 31st, that quarter. And it's
16 updated -- we update the matrix that's on the Web site at the
17 end of the quarter.

18 MR. LEITCH: The fact that Davis Bessie is not in the
19 unacceptable performance column --

20 MR. PLISCO: All that means is it hasn't been
21 resolved yet.

22 MR. LEITCH: That's still in the pipeline.

23 MR. PLISCO: The final finding hasn't been issued yet
24 as of March 31st is what it means.

25 MR. LEITCH: I think that's one of the issues,
26 though, that we were talking about that were related to public
27 comments. If you showed the public that slide and said this is

1 as of March 31st I think they would expect to see one in the
2 unacceptable performance column, or maybe that's not where it's
3 going to wind up, but it's unacceptable to me, though.

4 MR. RISEN: I think they're through with drawing
5 conclusions on --

6 MR. LEITCH: They're not, that's the point. What I'm
7 saying is if you showed this in a public forum it doesn't
8 exactly instill public confidence when you see there's no
9 unacceptable performance.

10 MR. PLISCO: And that was the point I was trying to
11 make, it's a snapshot at the end of the quarter, and you really
12 have to look at other information to find out where you really
13 are. And we have an example we're going to cover today in
14 Region II. We actually have plant in the degraded cornerstone
15 as of last week. Harris went into degraded cornerstone. We
16 issued a white finding last Thursday that gave them two
17 mitigating system cornerstones which puts them in the degraded
18 cornerstone, and George is going to talk about the technical
19 issues that put them there, but in fact this just happened last
20 Thursday. So it says zero, but we have one now.

21 MR. REYES: In two weeks, June 30th when the next
22 quarter rolls over it will show that.

23 MR. PLISCO: It will show that, yeah, sure.

24 This is a summary for the Region II plans where
25 licensees have crossed the PI thresholds during the first two
26 assessment cycles.

27 MR. ROSEN: That's impenetrable for me.

1 MR. PLISCO: I was going to explain that.

2 The column on the left are the cornerstones. It's
3 initiating events, mitigating systems, barriers, emergency
4 preparedness, radiological protection, occupational
5 radiological protection, public, and physical protection, the
6 seven cornerstones. I was trying to get it all on one slide.
7 I'm guilty.

8 MR. ROSEN: It's just a little to short for me.

9 MR. PLISCO: I'm guilty.

10 And as you can see, most of our activity has been in
11 mitigating systems. That's where a lot of our inspection
12 effort is focused.

13 In the PIs there were a lot issues especially early
14 on with interpreting how to do that performance indicator, how
15 they collect the data, what counted and what didn't count, and
16 there's actually ongoing work that the program office has in
17 place to try to address some of the problems that were in that
18 performance indicator.

19 But as you can see in the first cycle we had five
20 crossed thresholds in that performance indicator. We're going
21 to talk about some of those when the branch chiefs talk about
22 the specific issues, they will give you some examples of the
23 kinds of things that cross thresholds and why they cross the
24 thresholds.

25 One I wasn't going to speak too much about when the
26 branch chiefs talk is in the barrier. We did have three cases,
27 you can see two in the first cycle and one in the second.

1 Those were RCS leakage issues, and that's been interesting from
2 a public confidence-public communication issue. That PI
3 threshold, the white/green threshold is only 50 percent of the
4 tech spec limit, so you can have a plan as a white issue that
5 they can continue to run, but the problems are still there.
6 That's been a little bit of a communications issue.

7 We respond, we do extra inspections, and they still
8 haven't even reached the tech spec. But that was one of the
9 PIs that had a lot of debate early on, should we have a
10 performance indicator. That was a discussion of making sure we
11 had something that showed the public where our plants were as
12 far as what their system leakage was, and that was the
13 threshold that was picked.

14 And that green-white threshold was really intended to
15 be I think a 95 percent outlier threshold, and that's why they
16 picked the 50 percent. But we do have problems in risk
17 communication with the public on why the agency is responding
18 when they haven't even reached the tech spec.

19 MR. ROSEN: Remind me, is that a 50 percent of
20 unidentified or identified?

21 MR. PLISCO: It's identified, 50 percent of
22 identified leakage.

23 In a couple cases there was valve leakage, a packing
24 leak, or a pressure seal type leak that exceeded the 50 percent
25 of the tech spec, and that drove that into the white threshold.

26 I also want to mention since January 1st we haven't
27 had any new, this is all we've had since March, two inspection

1 cycles and the current one that we started January 1st.

2 The next, this is inspection findings, the nine green
3 findings that have been issued during the first two assessment
4 cycles, and again you can see most of our activity is in
5 mitigating systems.

6 We're going to talk about all the specific issues
7 that are listed here, the six mitigating systems issues, and
8 the one physical protection issue. That was a Farley issue
9 that Steve is going to talk about.

10 And as I mentioned, we've had a one new finding, that
11 was the issue at Harris, and we'll talk about the technical
12 issues related to that. It was a foreign material issue at
13 Harris, and that was a white finding in mitigating systems. It
14 was just last week we issued that.

15 MS. WESTON: Let me ask you a question. The first
16 quarter 2002 had a yellow; there were none in this region, but
17 you're showing the end of the year, not first quarter 2002.
18 Any particular reason?

19 MR. PLISCO: Well, what we're trying to depict on
20 here is completed cycles. The January one just started. I
21 mean it will go through December. And I mentioned what has
22 changed the first couple months in the first quarter, but I
23 didn't show it on here because it really had only been three
24 weeks.

25 MR. REYES: If you see the dates at the top, we
26 decided, the agency decided to change what we call the cycle of
27 assessment to end-of-year, end of calendar year, so the

1 headings are different because we as an agency shifted to the
2 year calendar.

3 MR. PLISCO: This year is going to be a full calendar
4 year inspection cycle. We did that to sort of balance the
5 workload in regions of the assessment cycle, to get out of the
6 fiscal year because our workload in the regions when we did the
7 assessments at the end of the year was laying on top of the end
8 of the budget year, and appraisals, and everything else, and we
9 shifted to a calendar year cycle for the inspection program.

10 MR. ROSEN: Now I understand what you're doing here.
11 My comment is really about tell me about the ones
12 that shifted from yellow to white, really about the inspection
13 part.

14 MR. REYES: Those are the examples we have.

15 MR. PLISCO: We'll talk about some of those.

16 Any questions from an overview standpoint? The
17 branch chiefs will talk about some of the specific finding
18 issues.

19 MR. ROSEN: You know, I do have an overview comment.
20 Let's just go back one slide. I'm a little bit slower than you
21 are.

22 Just looking at the pattern of findings of mitigating
23 systems, not in the other place --

24 MR. REYES: You mean why? Is that the question?
25 Why?

26 MR. ROSEN: No. I don't even know how to formulate
27 the question. It just seems so narrow.

1 MR. REYES: We have taken a hard look at that. If
2 you get another region you'll see a different spread. For
3 example, in Region IV they've been having a lot of emergency
4 preparedness kind of findings, and if you do that table for
5 Region IV you'll see yellows and whatnot in NEP.

6 We have taken a look at our program, and the program
7 office comes and takes a look when there's a difference in
8 terms of the population or findings from the regions to try to
9 see is there something that's being told here, and we haven't
10 been able to correlate it either, so if you have an answer
11 we'll work on it because we think it's hard to make some
12 correlations in some of the other areas, but we don't have an
13 answer why one region will have a different spread than another
14 region.

15 MR. PLISCO: And we have findings of other regions,
16 but none that have crossed the threshold.

17 MR. ROSEN: Well, clearly mitigating symptoms, that's
18 the readiness of the plant to deal with transient actions.
19 That's really important.

20 DR. POWERS: It's also the area that you would hope
21 that the NRC inspectors are focusing most of their attention
22 on.

23 MR. ROSEN: True. And why is his region so good and
24 all the other places have only one finding.

25 DR. POWERS: Well, again, you don't want to get too
26 excited about a small sample.

27 MR. ROSEN: True. All I'm expressing is my --

1 MR. REYES: We have looked at --

2 DR. POWERS: It seems to me much more impressive to
3 me actually as being the fact that we actually get findings in
4 the colors other than green out of the system at about the rate
5 that we kind of anticipated we would get them the system was
6 set up. I think that's the real take-home lesson at this stage
7 in the experience with it, because experience is just too short
8 to start drawing patterns and conclusions.

9 MR. REYES: To give you one thing that my bosses have
10 done, and they have met with INPO, the senior managers meeting
11 between NRC and INPO, and they have asked INPO to take their
12 plants, group them geographically like the regions, and look at
13 the rankings that they give them, INPO 1s, 2s, 3s, and 4s.

14 There is a correlation, there is a general
15 correlation. We at the agency are trying to make sure that in
16 fact we're implementing all the programs the right way, and we
17 have exchanged with the other regions to do inspections to try
18 to if we're doing things differently and all that, and --

19 MR. ROSEN: I think it's the right thing to do, and
20 I'm trying to sit here and say now suppose that you came back
21 with no correlation how would you react to it, and are we being
22 overly confident when we see there's a correlation.

23 MR. REYES: Right. And it just --

24 MR. ROSEN: And it's a small sample.

25 MR. REYES: But I'm just trying to note we have asked
26 the same question in trying to find out other ways to make sure
27 that we are --

1 MR. ROSEN: I mean I think you have to do that, I
2 think it's unavoidable, but I don't think I would expect
3 anything to come out of it until you have like five or six
4 years of experience, and especially at first when you get a big
5 perturbation you learning, licensees learning, everybody
6 learning, definitions kind of floating a little bit, things
7 like that.

8 MR. REYES: I'll give you an example. There's a
9 randomness on the barrier, those three -- on the barriers is
10 the PI what I'm thinking about -- it basically was equipment
11 that started leaking, and for a while we had three units, three
12 different components and they just started leaking, and the
13 plant eventually shut down and replaced the whole -- there
14 doesn't seem to be a relationship there. We probably don't see
15 any for a while, and then we have three.

16 MR. ROSEN: I mean that's exactly what we're trying
17 to do is get some indication. The telling thing is if you
18 could in doing the root cause analysis you found that there was
19 something deficient in their corrective action program that was
20 leading to this. If you don't, then you say, well, fair
21 enough, and then it eventually works its way out of the rolling
22 average and whatnot.

23 MR. PLISCO: And we did find that in one case. It
24 was a -- one of the rack system PI hits was North Anna, they
25 had a rack and system and system bypass valve packing leak.

26 I think when our inspectors went back and looked at
27 it they didn't have a program to replace the packing.

1 MR. REYES: That was a real problem.

2 MR. PLISCO: It had been in there fifteen years or
3 something. That's what the problem was.

4 DR. POWERS: Yeah, that's what you wanted to do. I
5 mean it works, score one for the -- take a structuralist view,
6 Steve. Quit taking the rationalist view. This is a
7 structuralist program.

8 MR. ROSEN: I am a rationalist with structural
9 tendencies; you are a structuralist with rational tendencies.

10 [Laughter.]

11 MR. REYES: I just wanted you to know that we raised
12 the same question, the agency senior management raises the same
13 questions all the time making sure that we're not missing
14 something.

15 MR. ROSEN: Yeah, I think you need to pass swinderize
16 [?] and look at the patterns, but not draw too much from it
17 right about now.

18 MR. PLISCO: Some people would also say, especially
19 for the inspector findings, if you laid on top of that how many
20 hours were spent in each of those categories the bulk is in
21 mitigating systems, so some people would say that's where you
22 spend your hours, that's where you're going to define the
23 issues.

24 DR. POWERS: And where thou looks thou will find.

25 DR. LARKINS: The more you compare DIE for mitigating
26 systems, how does that rack up?

27 MR. PLISCO: I don't know the percentage, but we have

1 some inspectors here and I think they can tell you most of the
2 areas that they look at is in mitigating systems, when we look
3 at maintenance and operation --

4 MR. REYES: The real significance is there, so it
5 takes you there.

6 MR. PLISCO: Steve.

7 MR. CAHILL: My name is Steve Cahill, I'm a branch
8 chief over the Southern Company plants. I took over that
9 branch right before even the ROP, so I have been with them all
10 through this cycle.

11 It started out well when we entered the ROP Farley
12 had all green performance indicators and we were in the
13 licensee response band, but very quickly just a couple weeks
14 into it we had an issue come up, and that was their first
15 status for the PIs, it was the first quarter of the calendar
16 year with data they submitted at the end of April.

17 They wound up having a white performance indicator
18 that affected both units. It was on emergency AC power on
19 availability, and it crossed the white threshold.

20 DR. LARKINS: Excuse me. Both units where?

21 MR. CAHILL: Everything I'm talking about it just
22 Farley.

23 That's in the mitigating systems cornerstone, and as
24 the slide says the cause of it going across the line was fault
25 exposure hours. They were doing some 18-month surveillance as
26 it failed, and it was a long-duration surveillance, and so the
27 fault exposure hours at that time were T over 2, and nine

1 months at a time those added up very quickly.

2 We wind up for our process we told them we were
3 coming in and do a supplemental, and we had our resident
4 inspectors do our supplemental inspection 95001 which basically
5 is just verifying their root cause, and they come up with the
6 appropriate corrective actions.

7 We looked into that and concluded they adequately
8 addressed that. And we also had a regulatory performance
9 meeting with them for the first white in the regulatory
10 performance column. It was just a meeting with myself and the
11 plant manager.

12 The PI returned to green about a year later, so that
13 in and of itself was not that significant, but when we go on to
14 the next one very shortly after that -- and this was actually
15 something Luis took a lot of pride in -- in the next period,
16 the first period, basically the second quarter of calendar year
17 2000 Farley recognized that they had a lot of issues going on
18 with all the speed work, and in this case the PIs called heat
19 removal, and they had had some surveillance failures, they were
20 having some fault exposure hours they already knew were adding
21 into their PI calculation, and they had a performance problem
22 that lingered for a while.

23 Basically they knew beforehand that their data
24 submittal was going to cross that white threshold. And this is
25 data they were not supposed to submit until July, so we engaged
26 early on this. They basically admitted that it had crossed the
27 threshold, and we initiated our process.

1 This also -- this only affected Unit 2, but it also
2 is a mitigating systems cornerstone, so knowing that the white
3 PI would be in that mitigating systems cornerstone two white
4 PIs constitutes a degraded cornerstone.

5 The root causes of this were also pretty much
6 similar. We went and -- we started out doing -- there's a lot
7 of comment themes, preventive maintenance and maintenance rule
8 limitations, so we started out doing our supplemental
9 inspection 95002 on this. Again, we were letting the residents
10 do it.

11 And the difference between the first supplemental,
12 the 01 we did versus the 02 was it looks at their root cause
13 and their corrective actions, but it takes a broader scope of
14 it and also looks at an extending condition, how broad is this
15 problem.

16 And when the residents finished that phase of the
17 inspection they came up with a couple of common themes in the
18 maintenance rule limitation.

19 And so we wound up doing this inspection in two
20 parts, the proposed and actually implemented a second part of
21 the inspection with a DRS, division of reactor safety
22 specialist going in and looking at their maintenance rule
23 implementation. So we actually show two separate inspection
24 reports for this one inspection.

25 Again we concluded that Farley's performance in
26 addressed the root causes and developing corrective action was
27 acceptable.

1 Also in the course of this after the residents had
2 concluded their portion of the inspection, but before the
3 specialists came in we held for our action matrix a regulatory
4 performance meeting, and Loren actually chaired that. It was a
5 higher level when the action matrix was the integrated
6 cornerstone.

7 This was a public meeting where we basically
8 initiated dialogue with Farley's plant management on what the
9 issues were.

10 And after we completed those supplemental inspections
11 and did our performance meeting that completed our actions for
12 the integrated cornerstone and the action matrix, and that PI
13 also returned to green in the first quarter of calendar year
14 2001.

15 In the fall of 2000 we had another PI that crossed
16 the threshold. This was the initiating events cornerstone that
17 was the Unit 1 on the plant power changes PI, so the fact that
18 it was in a different cornerstone I think interacts with the
19 other one, so it was basically a single white PI in isolation,
20 so we went in and did the same IP that we did the first time
21 around which is our IP 95001.

22 The cause of this PI crossing the threshold -- and
23 this is another one that they knew they were heading this
24 direction and initiated dialogue with us, they were being very
25 open and up front -- they had a lot of cooling tower problems.
26 Those aren't something that we would normally focus much
27 inspection resources on, and Farley had not focused a lot of

1 their resources in maintaining them, so they actually had
2 portions of their cooling tower collapse, and they wound up
3 taking six unplanned power changes in this year period the PI
4 calculates, and four of those were directly due to the cooling
5 towers.

6 And their obvious corrective action plan out of that
7 was they're doing a wholesale cooling tower replacement. They
8 have not implemented that. They did short-term repairs, but
9 they will be replacing their cooling towers next year.

10 MR. PLISCO: They're just the old wooden style, just
11 collapsing.

12 MR. ROSEN: How old are they now?

13 MR. CAHILL: They're original.

14 MR. REYES: Yeah, 30-some-odd years. These are low
15 profile mechanical drive cooling towers, and their sides are
16 made out of wood, and wood and water for 25 years gets you into
17 trouble.

18 MR. CAHILL: This was a fairly easily-understood
19 issue, so we elected to have the resident do the supplemental
20 inspection.

21 MR. REYES: They knew they needed to do the work, but
22 they delayed it, and they made some assumptions, and it didn't
23 turn out that way.

24 MR. PLISCO: But again I think this is a success of
25 the ROP. This is an area where we may have handled it
26 differently in the old program. You know, cooling towers, BOP,
27 we really wouldn't have said much. But now with the impact of

1 looking more at risk, and the power changes, and transients
2 they had to do something to fix it.

3 MR. LEITCH: Interesting you bring it up. We heard
4 yesterday that Watts Bar took a scram several months ago due to
5 a cooling tower fill problem. It's kind of the same type
6 situation.

7 MR. CAHILL: One issue that came up a little with
8 this point, Farley was very sensitive that they had crossed the
9 threshold, and obviously wanted to get back to green, so they
10 were preplanning several down powers in the future for any
11 future cooling tower problems, and they were trying to make it
12 so that they wouldn't have to take future PI hits.

13 Basically once they crossed the white threshold they
14 started looking very closely at the criteria and making sure
15 they understood them, and could do everything possible to make
16 sure they didn't have to take future hits. So there was a lot
17 of dialogue between us on letting things just fall where they
18 may versus the fresh views of managing the PIs.

19 MR. ROSEN: When the licensees now really start
20 thinking about these PIs and start managing their way around
21 the PIs to me what I see is not -- this is not managing the
22 indicators; this is really managing the risk because they end
23 up doing things that result in no unplanned power changes, or
24 fewer of them, and that is not just managing indicators.
25 That's managing the real stuff. That's what I like to call
26 chicken, not feathers. It matters.

27 I think the behaviors you see out of this system are

1 the ones we intended to promote.

2 MR. REYES: I think that the examples we're showing
3 you, and we share the view, is that the ROP has really
4 highlighted issues that perhaps may not have been highlighted
5 before, but more than that, it has changed their behaviors, or
6 reinforced certain behaviors, and you see the plants coming out
7 of the white PIs and white findings and go to the green, after
8 doing a review and changing the way they do business. So it's
9 been successful.

10 DR. POWERS: Surely you're not suggesting, Steve,
11 that we're managing the culture of the plant.

12 MR. ROSEN: They're managing their behavior, and
13 behavior is a part of culture.

14 MR. PLISCO: I do have to say we did have some
15 discussion with Farley. What they did after they had some of
16 these cooling tower cracks is their original procedure had been
17 to do down powers of more than 20 percent, and after they hit
18 the threshold they changed their procedure to do 19 percent
19 power reduction.

20 MR. ROSEN: That sounds a lot more like feathers than
21 it does chicken.

22 [Laughter.]

23 MR. REYES: But eventually -- you know, that was
24 short-term management controlling the PI, but eventually they
25 realized they had to move up the whole project on fixing the
26 cooling tower, and they actually did some temporary repairs
27 that solved the short-term problem awaiting for the material to

1 do the full scope.

2 MR. ROSEN: I would suspect that at least the staff
3 have enough sensitivity and sophistication to be able to detect
4 the difference between feathers and chicken, and to make your
5 views known when you think that they're fooling around with the
6 feathers too much.

7 MR. REYES: We do.

8 MR. CAHILL: And the residents are invaluable in
9 that. They're the ones that are seeing this firsthand.

10 MR. REYES: Because they actually sit down on the
11 meetings and decide where the discussions are going on, and you
12 know right away.

13 MR. ROSEN: And it gets painfully obvious to the
14 licensee that that's not what you intended, that's not the
15 behaviors you were intending to promote, so they don't want to
16 be in that circumstance.

17 MR. REYES: No, they don't.

18 MR. CAHILL: This PI quickly returned to green in the
19 third quarter of 2000 as some of those first down powers fell
20 off the rolling one-year window that they look at.

21 So at the end of the calendar year, or actually the
22 first quarter of 2001 none of these PIs were in the white band,
23 they were all in the green which -- the reason I'm mentioning
24 that is because the next issue we had was a white finding in
25 the physical protection cornerstone.

26 This was actually started in July of 2000, we did an
27 OSRE about it, and preliminarily we said three out of four the

1 drills that they had failed, but at that point we had a lot of
2 issues with the protection SDP, and basically that SDP was, or
3 the significance determination process was in limbo, and we
4 were really hamstrung in moving forward, so these were put in
5 abeyance for a while while the SDP got finalized, and it wasn't
6 until the spring of 2001 that we really had the SDP finalized
7 so we could move forward on this.

8 MR. MALLETT: Steve, you might clarify, move forward
9 on what we did with the finding. They proceeded to fix the
10 issue.

11 MR. CAHILL: The performance issues that came up,
12 they took immediate corrective actions on those.

13 The findings were apparent violations, they were just
14 basically held open until the spring of 2001.

15 Our first look at that was in June we sent them a
16 choice letter saying that this looked like a potential yellow
17 finding.

18 MR. ROSEN: You called that a what?

19 MR. CAHILL: A potential yellow finding.

20 MR. ROSEN: You said a choice letter?

21 MR. CAHILL: We sent a choice letter. It's basically
22 a --

23 MR. ROSEN: I know. I just hadn't heard that term.
24 You can choose to have a regulatory conference, or you can
25 choose not to have one.

26 MR. REYES: You're right. That's what we call it,
27 it's a choice.

1 MR. CAHILL: They obviously elected to come in in
2 July of 2000 when we had an enforcement conference.

3 MR. ROSEN: Enforcement conference, or was it a
4 regulatory conference?

5 MR. CAHILL: It was both.

6 MR. ROSEN: Isn't there a difference between a
7 regulatory conference and an enforcement conference?

8 MR. REYES: This is in the transition, so we had to
9 have two kinds of meetings. But today we would have a
10 regulatory conference.

11 MR. ROSEN: Okay.

12 MR. REYES: In those days we were mopping up old
13 issues and new issues, so we had both.

14 MR. CAHILL: Basically at the time of the choice
15 letter Farley realized that this yellow would overlap, would
16 backdate to July 2000 when the OSRE was because that was on a
17 timely finding, and that's why it would show up in our action
18 issues, and that would overlap with our degraded cornerstone
19 that I talked about earlier, performance indicators. So even
20 though it was a year later we were processing this the
21 backdating of that thing to the time of the finding would
22 overlap, and that could constitute multiple degraded
23 cornerstones.

24 Farley's efforts to work on this physical protection
25 finding obviously escalated accordingly, but there were
26 multiple degraded cornerstones that would have been the same
27 type of inspection that Cooper is getting now and that Indian

1 Point has gotten.

2 So anyway, we had this enforcement conference in
3 July, and a lot of issues came up, but the drills -- basically
4 two of drills were invalidated from us processing the SDP. One
5 for some artificialities, and one was basically we did not
6 comply with the design basis threat on the way the drill was
7 conducted, so it wasn't valid for the OSRE conduct guidelines
8 we have now.

9 You asked before about ones that came out high. Our
10 final decision which we issued in August was this was a white
11 finding. A lot of that, the SDP for physical security is
12 fairly subjective, you have to make programmatic assumptions to
13 be able to take it from white to yellow, and without having
14 that large a number of drill failures we couldn't use the
15 language that was in the yellow finding SDP, so it was issued
16 as a white.

17 Therefore, that unit of the cornerstone really did
18 not interact with the degraded cornerstone we had before, it
19 constituted a degraded cornerstone all of itself. Actually it
20 was a white -- excuse me, a white finding on the physical
21 protection cornerstone, so we did a supplemental inspection in
22 November of 2001, and we had a regulatory performance meeting
23 which again was a meeting between myself and the plant
24 management in December of 2001. And that has closed our book.

25 So right now Farley is back in the licensee response
26 column, and all their performance indicators are green.

27 MR. REYES: I think you're going to find out on the

1 other examples that colors were changed as a result of the
2 regulatory conference. A lot of the changes had to do more in
3 the subjective areas of how the colors are defined, so we
4 talked to the yellow security, and when we talk about another
5 one I think you'll see that there are certain processes -- if
6 it's a mitigating system it's straightforward, and then there's
7 others that are not as precise, and I think you will see more
8 color changes.

9 If you do your work up front well, you only should
10 see changes on those that are more subjective.

11 MR. ROSEN: And as you get more experienced with
12 this, and the licensees become more experienced in interaction
13 with the resident I think before the finding is even written
14 you can get the facts in line that have bearing on how you
15 judge the matter at hand so that you can probably say, okay,
16 now, these are the facts, this is what really happened, and
17 you're both shaking your head yeah, that's what really
18 happened. Now, given that, that fits over here, right? and you
19 can say yeah, I think it does, and you can jointly agree having
20 agreed on the facts that this is where it fits and it's a
21 yellow, or it's a white, or it's a green.

22 So I think it's all a matter of learning how to use
23 the system, and I'm very encouraged by what I see.

24 In fact, I think there's another use for it all that
25 seems apparent to me and that you've thought of already is this
26 concept of coming in and out of findings, in and out of white.
27 At the moment you're doing that, you see a finding of white,

1 and you look up and down the column and across the matrix and
2 see if there's anything else so you can put it in the right
3 place on the action matrix.

4 But in retrospect as you build more and more of this
5 record you can look back and see for a given plant it's been in
6 and out of white a lot of times, you can do a calculation of
7 what percentage of the time it's had the white, or two whites,
8 or whatever, you can look back at the track record that even a
9 plant that's doing a lot of that should be of some more concern
10 than one that maybe had an isolated case, or one that's always
11 coming in and out of white in the various areas you've got to
12 start drawing some conclusions there.

13 MR. REYES: We do that.

14 MR. CAHILL: I forgot to mention when it was up there
15 before, we had planned do to a follow-up OSRE after we issued
16 the white finding in August 2001, we had an OSRE scheduled for
17 September 2001. That got canceled for obvious reasons, it was
18 scheduled the week of September 11th. We were going to do our
19 supplemental, and the scope of that was going to be determined
20 on the results of that OSRE, and since we didn't do the OSRE we
21 went in and did a broad-scope supplemental inspection just to
22 verify how they had addressed the performance issues associated
23 with the white finding.

24 MR. LANDIS: My name is Kerry Landis, I'm the branch
25 chief for Branch 5 which is the Virginia power plants and V.C.
26 Summer Plant.

27 I'm going to shift my comments a little bit to

1 address the focus that you identified of why the changing
2 color, and also the lessons learned from that.

3 We had at V.C. Summer a fairly straightforward event
4 where operators failed to follow surveillance, failed to open a
5 discharge valve to the emergency feed water system, the
6 turbine-driven emergency feedwater box feed water, and locked
7 it in the closed position thinking that it was open, and the
8 independent verifier came through and did not verify that the
9 valve was open. Did verify that it was locked, of course.

10 So that condition existed for 48 days, and the NRC
11 did a Phase 3 SDP calculation using the ask-human-error work
12 sheet which is pretty much the static human error conditioners,
13 and came up with a yellow, and we issued the letter, choice
14 letter for that.

15 The licensee came in, and right before they came in
16 we understood that they were going to use a more dynamic human
17 error rate predictor model THERP, and we didn't have really the
18 expertise to be able to go through that in detail prior to the
19 regulatory conference.

20 We did listen to it, and subsequent to the conference
21 we did take their full calculation, THERP calculation, had an
22 independent review of that, and agreed with them that it did
23 more accurately reflect the dynamic ability of operators to be
24 able to recognize the condition and to recover emergency feed
25 water.

26 That ended up lowering the probability almost in
27 half, which dropped it right down into the white zone.

1 MR. REYES: And that's the point I was trying to
2 make. If you calculated just for the out-of-service time for
3 the turbine-driven auxiliary water pump you would have come
4 into yellow, and all that made it change back to white was how
5 do you model the recovery, how early it was corrected and have
6 recovery, and I personally walked down this system and this
7 valve.

8 We probably have half and half of the staff agreeing
9 that we should give them as much credit as we did or not, but
10 the point being is that you are going to get to a regulatory
11 conference with a color on these subjective areas and these
12 areas where you have to make an estimate, your best estimate of
13 how quickly can they identify the parameter, how quickly they
14 actually reach the component, find it, which is labeled good
15 lighting, inaccessible and recoverable.

16 MR. ROSEN: Good lighting in the station blackout
17 condition for this pump; right? Was this pump turbine driven
18 off feed, it's intended for cases where you have no off-site
19 power and no on-site power.

20 MR. REYES: This valve is --

21 MR. ROSEN: Because the lights are going to be out in
22 this case, so you could have --

23 MR. REYES: I walked, I climbed, and I touched this
24 valve, and it's not as easy, and I did it personally I know
25 what you're talking about, I took my time and went down there.

26 But my only point is, and I'm not arguing if the
27 model is right on recovery or not, is that you are going to get

1 the situations where you get yellow, and when you model the
2 recovery you may come down to white, gives them more credit
3 than you originally did. So I'm not sure we'll ever get out of
4 the situation where we go to a reg conference and we don't
5 change the color.

6 MR. ROSEN: No, I don't think you will, but I think
7 in this case the lesson learned might be that in a case like
8 this you really ought to use THERP right out of the box, not
9 use simplified model if you suspect that the operator's dynamic
10 responses will change the result dramatically.

11 MR. REYES: I think we both learned, the licensee and
12 us we both learned.

13 MR. LANDIS: What do we now, Walt? He did the
14 analysis.

15 MR. ROGERS: Well, we don't just use the THERP right
16 out of the box. We use whatever given the model that we're
17 using to develop the risk impact problem, we will use that
18 methodology.

19 The V.C. Summer case was an excellent case because it
20 essentially established how we do business. We went in using
21 the ASP. However, coming out there we said if we used the
22 licensee's full-stroke model then we'll use the same
23 methodology that they used that worked on modeling other
24 operator actions, recovery actions which in their case is
25 THERP. So we'll draw the THERP, we'll do that. We use the
26 SPAR model as the model that we're using, then we would use the
27 SPAR and the work sheets to develop, so now we have a level of

1 consistency.

2 That's what V.C. Summer produced is our methodology
3 that we would use to go into the regulatory conference.

4 MR. ROSEN: I'm not sure we're communicating just
5 yet, and I think it's important that we do.

6 What I'm saying is that you have a circumstance like
7 this where it's the outcome -- an important document like the
8 color on it is going to depend on how well you model something
9 like a human recovery action.

10 Then you ought to know that pretty early on, and you
11 ought to say we can fill out the ASP work sheets, but it's not
12 the right answer for this. We really ought to be -- And we'll
13 do that, but we're not going to base -- we shouldn't base our
14 determination on that, we should say after the determination to
15 use ASP, but if you use a more accurate model or a model that
16 takes into account both factors you get this answer, and then
17 let you make the decision which one do you want to use.

18 I don't think you should be blind to that, you
19 shouldn't be in any kind of rote mode. You should be using the
20 best tools available is what I'm suggesting.

21 Do we not agree or --? I mean it's okay not to
22 agree.

23 MR. ROGERS: I think you've got to look at what all
24 you're using to draw your insight and apply the appropriate
25 knowledge.

26 If you look at the two HEP work sheets it pretty much
27 uses the same factors.

1 MR. ROSEN: The same performance shape.

2 MR. ROGERS: They have them, they may have them on a
3 different set of weightings and how they're done, and when you
4 -- I mean we knew going in that this would be the -- and this
5 was our test case on the protocol that we would use from here
6 on, and if we were to go to V.C. Summer and have another
7 performance deficiency that we have to analyze and we're going
8 to analyze the human recovery action we'll know where to start.

9 MR. REYES: And I think -- I understand your point,
10 and what we have seen is we have seen more and more responses
11 to the choice letter saying no, we agree with you, Regulator,
12 it's white or whatever, and we don't think it will be fruitful
13 to have the meeting because we share with them here's your
14 calculation or assumptions on how we got to it, and we see more
15 and more of that, and it's the up-front work -- I agree, is
16 this the right thing to do.

17 MR. ROSEN: It seems to me it's the right thing to do
18 is to do more work up front to get it right, and that's models
19 that you can agree on, and rather than it's a false positive or
20 a false negative.

21 MR. MALLETT: But regardless of what color you come
22 out with, it's also important what we said earlier today is
23 that we deal with the issue and get it fixed.

24 MR. ROSEN: Oh, yes.

25 MR. MALLETT: I don't want to give you the impression
26 that we were waiting on that.

27 MR. ROSEN: No.

1 MR. CHRISTIANSON: Walt Rogers is one of our region's
2 senior rep analysts.

3 MR. LANDIS: You really hit the lesson learned and
4 captured both of these that I'll go into for the next event
5 here also, but the lesson learned is any time you have
6 variations in the application of the risk modeling we need to
7 understand that it will either have the same risk model THERP
8 or we're going to get into a varying condition on core damage
9 probability calculation here at Surrey we need to do the same
10 thing as the licensee, or at least understand the difference
11 and what impact it has.

12 DR. SHACK: I certainly don't agree that you have to
13 do the same thing as the licensee. I mean I think you have to
14 understand what the licensee did and how the modeling
15 assumptions affect the outcome, and then you make a decision.

16 I mean I would hate to see a procedure that said,
17 okay, the licensee did it this way so we've got to do it this
18 way.

19 MR. REYES: No, we don't, but we try to make sure
20 that they understand how we did it, and we ask them how do you
21 do it and what assumptions you use. It's important that we
22 come up with an answer which is the right answer, and the
23 dialogue is always helpful. I think you'll find out we do a
24 lot of that up front.

25 I think somebody did a review of the different
26 regions and the final determinations versus the preliminary,
27 and we were closer than most.

1 DR. SHACK: Especially in something that's affected
2 by human error modeling there is no right answer.

3 MR. REYES: That was my point.

4 MR. ROSEN: But in some models don't they take into
5 account the safety factors quite as well as others, and things
6 like operator stress and --

7 DR. SHACK: I think it's very important to understand
8 that the outcome is very conditional on your understanding of
9 human error probability without declaring that this model is --
10 you know, because we'll bring George here and we can -- How
11 many days do you want to debate the issue?

12 MR. ROSEN: I want to find out what his problem is.

13 MR. PLISCO: Walt is very good at briefing us on -- I
14 mean I think this case came, it was right on the line, it was
15 right ont yellow/white line, and he told us ahead of time is is
16 what's going to make the difference in the call on this.

17 And there's other cases where it doesn't matter, it's
18 in the middle, and even if you argue about it it doesn't
19 matter.

20 MR. REYES: This is a good point. Coming to this
21 meeting, going through the meeting we knew exactly what the
22 discussion was going to center on, and what the decision was
23 based on, and so it was not -- we knew it could go either way.

24 MR. ROSEN: That's why you get the big bucks to make
25 that decision.

26 MR. REYES: They do the heavy lifting, I get the
27 credit for it, but Walt and the technical staff and managers

1 did a very good job.

2 I knew before we entered the meeting exactly, Boss,
3 this is why and this is the zone where we're going to have to
4 make the agreement on. They called me in the meeting tried to
5 get that.

6 DR. POWERS: They're doing a good job of making you
7 look good is what you're saying.

8 MR. REYES: Yeah. And we want to keep it that way.

9 [Laughter.]

10 DR. POWERS: Let me ask you a question a little bit
11 philosophically. Just the point you made, you know, you have
12 these findings come out of Phase 2 and they go into Phase 3 and
13 maybe we'll get a change in color. Are you very concerned
14 about that? I mean it doesn't -- somehow it just doesn't
15 bother me very much, because I kind of expect things to change
16 colors, especially on the front end of things, but maybe you
17 have more experience on that.

18 MR. REYES: My experience is not like the other
19 regions', so I'll speak from my experience.

20 We have a small number of situations where the color
21 changed, and they all have been in the yellow and white zone.
22 So the outside, the concerns with the public perception that
23 you go to red, and then you go to white, and those kinds of
24 things, we haven't experienced that.

25 In the cases that we have gone to a regulatory
26 conference to try to discuss one of those, we ahead of time
27 know that the answer is going to be based on which assumptions

1 and which areas are being debated, and I personally don't have
2 a concern in having a small number of the situations have to be
3 changed because of final --

4 DR. POWERS: If you feel like you're coming into
5 these conferences with a good understanding of how it's going,
6 it could go either way especially when you're close, I mean I
7 think it can change color all it wants to. That's what I
8 wanted to hear.

9 MR. REYES: And we see more and more lately, and I
10 think we're just better at it, both the licensee and us, more
11 and more agreement up front and deciding we won't go to the
12 meeting, there's nothing else to do, we agree on the color of
13 the risk significance, and so we see more and more of that.
14 I think it's going to get better.

15 MR. PLISCO: We have an example coming when George
16 talks on Harris. We just had a reg conference a couple weeks
17 ago. They agreed with the violation, they agreed with where we
18 were, and that wasn't even a point of discussion. They just
19 wanted to tell us what they did for corrective action.

20 DR. POWERS: Yeah, and as the process matures swings
21 are not going to be so wide.

22 MR. REYES: Other regions don't have the same
23 experience, they have had relatively significant variations on
24 all that.

25 MR. ROSEN: I think Region III has had some. I think
26 we were told that yesterday at Watts Bar, they did a study.

27 MR. REYES: Yeah.

1 MR. MALLETT: But part of that is what we talked
2 about earlier, this change we're trying to incorporate is how
3 much time do you spend, how much effort do you use. You have
4 to be careful that you don't trim it too short that all your
5 answers are going to change.

6 DR. POWERS: I mean I really like where you're coming
7 from. You're saying if I understand specific colors really
8 don't matter, and as long as I understand where I am I think
9 that's far more important.

10 MR. LANDIS: The next was a white finding at Surrey,
11 and in April of 2000 the Number 3 EDG lubricating oil silver
12 concentration began to increase indicating that the piston pin
13 bearing surface had excessive wear -- well, that it was having
14 wear. They didn't know that it was excessive until later.

15 After successfully completing monthly two-hour full-
16 load surveillance runs in April of 2001 the Number 3 EDG was
17 inspected, and the piston pin bearing surfaces were found
18 severely degraded in seven of the twenty pistons.

19 Now, in March of 2000 just prior to April here they
20 had switched in all three EDGs, and for a two-unit facility
21 they've got three EDGs, Number 3 is the swing EDG, and they had
22 switched the engine oil from an Amoco oil product to a Chevron
23 oil product, and when they did that they didn't know, and the
24 industry was not informed that there was modification in the
25 chemistry to remove a chlorinated compound that would allow it
26 to be more cohesive to the metal, to stay on there longer.

27 The reason it was removed was more for hazardous

1 waste reasons. So they didn't understand that impact, and so
2 right after that silver concentration began to increase, and
3 there is a normal increase in silver concentration as normal
4 wear occurs.

5 The vendor had indicated that they could go up to 1
6 ppm of silver concentrate --

7 MR. ROSEN: Which vendor was that, by the way?

8 MR. LANDIS: This was --

9 MR. ROSEN: This was which diesel manufacturer? I
10 assume that's what you meant by that.

11 MR. LANDIS: Yes. It's the diesel, and Fairbanks.

12 MR. MALLETT: General Motors, wasn't it.

13 MR. LANDIS: No, no. EMB. We were comparing two
14 different -- Fairbanks Morris is at North Anna, and EMD is at
15 Surrey, and we were trying to compare the two all along, so
16 it's EMD these were.

17 MR. REYES: Correct.

18 MR. LANDIS: Now, the vendor recommended that they
19 only had to watch it above 1 ppm, so above 2 ppm silver they
20 needed to take some action, but it wasn't imperative, it wasn't
21 an urgent thing you had to shut down the diesel.

22 Well, they did, they reached above 2 ppm late in
23 2000, and in the next few oil samples in early 2001 it
24 confirmed that it was above 2 ppm.

25 So they took it down, and took a look at it, and it
26 was pretty devastating damage to the piston wrist pins area.
27 It had --

1 DR. BONACA: What about the other diesels?

2 MR. LANDIS: The other diesels, they then went in and
3 checked those, and there was some minor damage on one of them,
4 a little wear on the other, so it was a common mode issue and
5 that factored into the PRA calculations.

6 They ended up replacing all 20 power packs in all
7 three diesels, and changed out the oil to a different oil.

8 As it turns out, that oil, the new oil doesn't have
9 the chlorinated compound either, but they think that it will
10 have better cohesion characteristics.

11 DR. BONACA: So the change risk was very small, but
12 what if they had run those three diesels for an extended period
13 of time?

14 MR. LANDIS: That's where -- you're getting to the
15 very point that was the difference in the calculation. We
16 issued a yellow finding, a preliminary yellow finding, and that
17 was based upon the fact that the diesel factored, Number 3
18 was considered not to be able to carry out its intended safety
19 function for the full 24-hour mission time. And there was
20 really no disagreement with the licensee on how that
21 calculation was arrived at.

22 Then very late in the game just prior to the
23 regulatory conference they proposed taking advantage of --
24 total probability is the sum of the probability of initiating
25 event of loss of off-site power for less than two hours plus
26 the probability of core damage for initiating events where the
27 loss of off-site power lasts for longer than two hours.

1 Now, the reason for the two hours was every month
2 they had been testing these diesels and, frankly, we were
3 absolutely amazed that the amount of damage that was on Number
4 3 EDG it had just passed a surveillance and ran full load for
5 two hours. So when they --

6 MR. REYES: The length of the mission was the only
7 question, could you survive --

8 MR. LANDIS: They separated the 24 hours into two
9 hours, and then the remaining 22, and so they took advantage of
10 the fact that there are much lower number of loss of off-site
11 power events where you cannot recover in a two-hour time frame.
12 And that ended up lowering it down to a white finding, and we
13 concurred in that.

14 MR. ROSEN: This process is so much more robust than
15 what we used to do, and we actually get down to talking about
16 the real type of issues, in that sense it's much more robust.

17 MR. REYES: Instead of the amount of money of a
18 penalty in the meeting you talk about --

19 MR. ROSEN: You talk about this. This is the way it
20 should be done.

21 MR. LANDIS: And we clearly agreed with them that
22 this calculation more accurately reflected the real core damage
23 problem.

24 MR. MALLETT: And because they didn't want to get
25 into this it also forced them to look at how do they change
26 their detection methods, change the threshold look so they
27 don't get into this risk issue in the future, which is the

1 right thing to do.

2 MR. ROSEN: Your point about the consequences of
3 managing risk rather than managing indicators, it may look like
4 they're managing indicators, but if you pick the indicators
5 they right they're managing risk.

6 MR. REYES: Now the old analysis and the fresh ones
7 are different.

8 MR. ROSEN: Right.

9 DR. RANSOM: A curious point on that, though. You
10 would think that there are applications where these diesels
11 were running constantly and there would be experience with
12 oils, and so why did they change an oil like that without
13 verification that an oil change for that kind of oil would be
14 satisfactory?

15 MR. LANDIS: All of them it turned out were
16 independent, all of these oils, all three, and they changed to
17 a Mobil oil after this. All three of them were recommended by
18 all the vendors, and were determined that they were okay. It
19 just turns out that the EMD because it doesn't have forced-flow
20 oil at the start is a little more critical to oil cohering to
21 the bearing surfaces.

22 MR. REYES: Some designs of engines have pressurized
23 oil injection at the start, and others don't, so the wear at a
24 dry start, a drive path start is more in some diesels engines
25 than others, and EMD this particular vintage does not have the
26 pressurized oil injection for start.

27 MR. ROSEN: Is this worthy of an information notice?

1 MR. PLISCO: In fact, it's imminent to be issued,
2 exactly. We review the final draft.

3 MR. REYES: Is that kind of finding an issue that it
4 gets spread throughout the NRC?

5 MR. REYES: The whole industry. We will send a
6 notice out to the whole industry.

7 MR. LANDIS: The report was issued days afterwards
8 which has the details in it.

9 MR. REYES: Now, the utilities are faster than we
10 are. We draft it, we have to go to headquarters and all that.
11 They are ready, the licensee already send this on what they
12 call note pad through INPO, so it's already out. We're going
13 to issue it.

14 DR. BONACA: Something equal to the question that Dr.
15 Ransom was asking, this disturbs me somewhat over the past ten
16 years, I mean how many troubles have been in diesel generations
17 resulting from use of new gaskets or -- If you go back to
18 review what happened and you look there are many diesels that
19 these issues would potentially come across failure associated
20 with this, so that's a good point anyway that you're raising.

21 MR. ROSEN: We get common cause of failure there
22 very, very rarely, but it has an impact. It should have an
23 impact on a lot of people's PRAs because as they go through the
24 update they're going to have to start thinking about the common
25 cause of failure of diesels on the basis of these events,
26 that's right.

27 DR. POWERS: I'm not worried about their PRAs, I just

1 want their generators to work.

2 MR. PLISCO: Charlie is liking this, because it's
3 eating up his time on fire detection.

4 MR. REYES: And now he's going to bring us back to
5 schedule.

6 MR. DESAI: Good morning. I am Binoy Desai, I am the
7 acting branch chief for Branch 1 which covers Duke Power
8 plants, and when I'm not acting I'm the senior resident at
9 Robinson.

10 Oconee had two white findings. Basically the first
11 issue was failure to adequately consider design inputs to
12 assure the design basis was translated into specifications,
13 drawings, procedures, and instructions.

14 What happened specifically was that the high pressure
15 injection pump could not be relied upon to operate using the
16 spent-fuel-pool-backup-operated water supply following a
17 Category F-3, F-4, or F-5 tornado.

18 The key here is that the spent fuel pool is the
19 backup, it's not your first line of defense which is the water
20 storage tank, and it's also not a tech spec system.

21 The second issue was failure to promptly correct
22 tornado mitigation procedures to ensure the station aux service
23 water pump could be aligned in 40 minutes following a design
24 basis tornado.

25 And this also is a second line of defense, it is not
26 the primary aux feed water pump that you would rely upon.

27 Both of these are non tech spec systems, two white

1 findings. There was initially a supplemental inspection 95001.
2 Following the second finding there was a supplemental
3 inspection 95002, and the key thought that I want to leave you
4 with here is that the supplemental inspection concluded that
5 the licensee tornado mitigation strategy was deficient as
6 opposed to just individual issues related to the two violations
7 if you will.

8 Licensee corrective actions both planned and
9 completed include a combination of procedural as well as
10 hardware changes that are forthcoming.

11 MR. PLISCO: One of the unique issues about the
12 second finding. The issue was really their corrective action
13 program. They had identified this issue and put it in their
14 corrective action system.

15 The technical issue had some risk significance, and
16 they did correct it. This was kind of unique because we found
17 this in one of the problem identification and resolution
18 inspections and their backlog of corrective action issues.

19 MR. ROSEN: I have been thinking a lot about Davis
20 Bessie these days, and thinking about corrective actions that
21 didn't get corrected and have been there for a long time as
22 being things that are paid more attention now.

23 MR. LANDIS: All right. Thank you.

24 MR. MacDONALD: I am George MacDonald, the acting
25 branch chief this week for Branch 4, the CP&L plants, and one
26 of our sites, Harris, has had some white findings, we've had
27 three.

1 The first one regarding the charging/safety injection
2 pumps, they have a three-pump design, and this particular
3 failed bearing was the swing pump and the charlie pump which
4 can act as either the alpha or bravo pump at any one time.

5 There was concern there which was identified during
6 oil sampling that they had a failed thrust bearing as they do
7 recognize, and when they finally completed the risk analysis
8 this item turned out to be white. The color did not change in
9 the evaluation process.

10 And this was NRC-identified by the residents, and it
11 led to a tech spec violation.

12 The second item is a fire protection finding as
13 identified by DRS during their team inspection. Basically
14 we're talking about thermo-lag being used as a boundary wall in
15 the bravo switch gear room separating alpha and bravo train
16 circuits between the bravo switch gear room and the alpha cable
17 spread room.

18 Basically the test there was supposed to indicate
19 that this material was a three-hour barrier when in fact the
20 test did not demonstrate the full three hours.

21 When we did the evaluation for the risk this item
22 turned out to be white. It was a difficult evaluation, but
23 when we did the final color the final color did not change.

24 Our most recent finding which Luis indicated we just
25 sent out last week is an FME, or form material exclusion issue.
26 A piece of rubber, it's about five inches by twenty inches,
27 about 3/16 of an inch thick was identified during a maintenance

1 activity on one of the contain sump suction valves.

2 It's hard to tell, but this is one SI-310. This
3 represents the recirc sump suction pipe coming through two
4 valves into this header that goes into the section of the RHR
5 pump.

6 This is a normal line from the RWST here, this is the
7 normal line from the loop, so this is a dead piping that never
8 gets any flow unless you actually have to use the recirc sump.

9 They were doing body to bonnet work during the
10 refueling outage on this valve, and when they did that they
11 found a small tie wrap next to the valve, the mechanic looks in
12 and also finds a small piece of rubber, and further with an
13 inspection mirror and a flashlight they find this larger piece
14 down there by the elbow.

15 And what that wound up being, that represented a
16 piece of rubber that 60 percent of the impeller section eye.
17 It's a closed impeller, so we determined that it would not be
18 chopped up, would not flow through the pump. So with 40
19 percent of the flow available to you this thing would not
20 function for a large break locus, and some of the medium break
21 locus. Therefore we wound up with a white condition with this
22 pump.

23 So basically in the RHR pump alpha only was affected;
24 bravo did not have any material like that, and it would only be
25 in effect during the continual recirc mode, it would not have
26 any flow in that line under any other conditions.

27 When the licensee went back to do a root cause

1 analysis they concluded that it was a problem with historical
2 work practices and poor work controls and poor material
3 exclusion, but they could not find definitively when it was put
4 in there.

5 There were five different opportunities. Most
6 likely 1991 they were in there doing a pump impeller
7 replacement and pump replacement activity, and this material is
8 used as a cushioning below when you set the impeller down on
9 the floor, or parts on the floor, and that's when they think it
10 most likely introduced, but their root cause analysis team was
11 never able to fully pinpoint when it went in. That is the most
12 likely time.

13 And again this represented our second finding. The
14 first issue has already rolled off the action matrix. The
15 supplemental inspection for that issue on the charging pump is
16 completed, and that's cleared the action matrix.

17 The fire protection issue supplemental inspection is
18 ongoing now, is still open, and this issue we're doing the
19 planning process now for this.

20 DR. POWERS: Let me ask a question, how thoroughly
21 hey subsequently checked the lines.

22 MR. MacDONALD: We wound up looking at that with the
23 residents at the site. They wound up running a video camera in
24 all the piping. They very thoroughly checked that out, and
25 it's pretty well described in the LER.

26 MR. REYES: The licensee was not allowed to start up
27 until they did a thorough inspection.

1 MR. MacDONALD: If one piece is in there, they're
2 like nuns they come in pairs.

3 MR. REYES: That was the assumption, if one piece is
4 there there may be others, let's look at the whole system.

5 MR. PLISCO: They did find some other pieces here and
6 there, smaller pieces.

7 MR. MacDONALD: Right, there were some smaller pieces
8 identified. All the RHR piping was checked all the way back to
9 the sump, the USC was inspected as well. They found some tiny
10 stuff in some of the spread lines, but nothing of the magnitude
11 of this.

12 MR. PLISCO: This is the kind of thing we lose sleep
13 over, because it's a latent condition, the surveillance would
14 have never picked it up. It was just a catch, you know, the
15 mechanic just looking down the pipe is the only way it was
16 caught.

17 MR. REYES: Actually the mechanic did an outstanding
18 job. If you see what they saw at the beginning when they
19 opened the valve from the little tie wrap and the little other
20 piece, and then decide to look further into the system that
21 decision is what saved the day.

22 MR. MacDONALD: They had to get around that corner.

23 MR. REYES: So in our correspondence to the utility,
24 even though we had a white on all that stuff we acknowledged
25 the worker's behavior because that's the way you want it, and
26 it actually --

27 DR. BONACA: Why didn't surveillance give an

1 indication that it was being done --

2 MR. REYES: There's no flaw ever on this pipe unless
3 you have an accident, and you go to recirculation.

4 MR. MacDONALD: That's right, go to recirc switchover
5 So a very unique situation.

6 MR. REYES: So a very unique situation, but no
7 problem.

8 MR. LEITCH: So the exposure time in this kind of a
9 situation then goes back to 1991?

10 MR. MacDONALD: I think we used a year; right?

11 MR. PLISCO: I think we just did a year.

12 MR. MacDONALD: We just used a year, the previous
13 operating cycle.

14 DR. BONACA: That tells you something about the
15 standby systems, too, by the way.

16 MR. REYES: We're at a decision point. We have
17 another section, it's 11:37, fire protection. Do we keep on
18 going, or take lunch now and come back, whatever you prefer.

19
20 MR. CHRISTIANSON: I would like to introduce Charlie
21 Payne who's the acting branch chief for the Engineering
22 Branch 1, Division of Reactor Safety.

23 MR. ROSEN: I would like to do fifteen minutes of it,
24 and then we'll come back to the rest of it. Let's get started
25 at least.

26 MR. PAYNE: Good morning. As Chris said, I am the
27 acting chief of Engineering Branch 1 which has the

1 responsibilities for fire protection here in Region II.

2 I also happen to be the team leader for fire
3 protection which is a new position that we have here. I have
4 basically the upper side responsibility of day-to-day
5 operations for the fire protection inspection program here.

6 I would like to cover in this presentation what we
7 have done so far in Region II, successes and challenges, and
8 where we're going.

9 Our inspection teams consist of three to four
10 inspectors. We have generally one operations/mechanical
11 inspector, one electrical inspector, and one fire protection
12 engineer.

13 They're now going onto two-week on-site inspections.
14 Our first one is actually going to take place next week, we are
15 doing our preparation this week, and will do the first week
16 next week at Crystal River.

17 The intent of that is to -- well, our scope is going
18 to be the same, but we're going to spend more time following up
19 on the issues that we had and trying to resolve them on site
20 so that we don't come away with a bunch of unresolved items
21 that we have more difficulty trying to close out once we leave
22 the site.

23 MR. CHRISTIANSON: The initial year, within the last
24 two years we were doing this inspection as a one-week
25 inspection versus two weeks, and we're just shifting now to a
26 two-week inspection.

27 MR. PAYNE: That's correct.

1 And we do follow inspection procedure 71111.05T which
2 is the triennial. We do six facilities a year and rotate
3 through them, and we're just finishing up our first round this
4 year, so beginning this fall we are going to be starting to
5 look at each site for the second time.

6 Some of our successes are that the level of knowledge
7 has improved. Our inspectors are getting --

8 DR. BONACA: Excuse me. I assume do you mean a site?

9 MR. PAYNE: A site, yes.

10 DR. BONACA: So that you cover all sites in the year.

11 MR. PAYNE: Yes, sir. We have eighteen sites here in
12 Region II, so we do six of them a year.

13 As I was saying, our inspectors are getting more
14 familiar with the fire protection inspection process. Our
15 teams are getting good. We are trying to use many of the same
16 people on each inspection. We do rotate people around to
17 broaden our bench strength if you will, and also to plan for
18 the future as people come and go to make sure that we have
19 somebody qualified to handle these inspections.

20 And that's one of the reasons for my position as team
21 leader is to try to coordinate this better. It's an important
22 inspection aspect.

23 We also have been coordinating our schedules with the
24 licensees. We try and do this more in advance of our periodic
25 meeting here in the region to discuss what inspection
26 activities that we have.

27 We know that we're going to have to do six

1 inspections that year. We know which facilities are due to
2 come up for that inspection, so what we want to do is plan that
3 out up front, and then coordinate with the licensee and make
4 sure it's compatible with their schedule and their personnel
5 availability, and then we'll have a schedule pretty much fixed
6 when we're ready to go see the licensee at the beginning of the
7 next cycle and all those details are worked out.

8 MR. LEITCH: This program seems to roll along
9 routinely in a well-established program and frequency, but my
10 question is do you have enough flexibility to be responsive to
11 unusual situations. I guess I'm particularly concerned about
12 have replacements in containment have to be cut, or steam
13 generator replacements, again sometimes necessitating
14 containment openings.

15 I guess when a plan reverts into almost a
16 construction kind of an activity can you augment your
17 inspections at that time, or is that primarily the resident
18 that does that?

19 MR. REYES: We have two engineering branches here in
20 the region, and they're split by areas of expertise, so in the
21 example you brought in it would be completely different group
22 of individuals that would impact on Charlie's workload.

23 He has a certain workload to do, so let's take the
24 example of a plant replacing a steam generator vessel pad and
25 they have to cut the containment to do all that, we will use
26 the other engineering branch that has a metallurgical, the
27 structural, and civil concrete, the NDE to deal with that. It

1 would be separated under fire protection.

2 MR. LEITCH: I'm thinking about the fire protection
3 issues associated with that. In other words, are they going to
4 maintain the fire protection system in service? Is there going
5 to be some kind of an augmented fire watch rounds, things that
6 you would do at a construction site?

7 MR. REYES: Typically that would be handled by the
8 resident in terms of fire watches and things like that. If
9 it's complicated enough, we'll ask for help.

10 MR. PAYNE: That's right. Generally speaking what
11 we're looking at is the big picture of the program that they
12 have.

13 MR. ROSEN: But you have to recognize something
14 different is going on. Construction was difficult and
15 complicated, but there was no spent fuel; operations is
16 difficult and complicated, but there's no cutting into the
17 containment. This has got both. You're cutting into the
18 containment, you've got lots of construction people on the
19 site, and there's lots of transient combustibles, and you've
20 got spent fuel.

21 MR. REYES: We've done it several times because as
22 you may know a lot of steam generator replacements require
23 that. It's a big challenge, I'm not undermining it, it's big
24 challenge. It requires a lot of resources, a lot of our
25 resources.

26 MR. LEITCH: It's a challenge in a lot of ways, but I
27 just wanted to be sure that somebody is thinking about the fire

1 aspects of that challenge.

2 MR. REYES: Typically the fire headers are not out of
3 service, because the way the equipment would be brought into
4 containment even though you cut it it will be in the area where
5 the regular equipment hatch is located. They just put a
6 superstructure next to it to lift all that.

7 So you have, what you do have is you have more
8 cutting, more welding, more transient combustibles. That
9 typically the residents handle as part of the day-to-day
10 because the transient combustibles and the welding you have to
11 be there. I mean you have to be there, so the residents are
12 more into the work permits, the hot work permits, the
13 monitoring, the walking around, making sure, and then from the
14 operations point of view the unit that's not running, the unit
15 that may have this situation going on, the control room visits,
16 the first ventral cooling, et cetera, et cetera. That's more a
17 day-to-day kind of thing.

18 Now, if they get real heavy they ask for help and
19 we'll supplement it.

20 MR. ROSEN: And they're doing CAD welding again, and
21 they probably haven't done that in a long time.

22 MR. REYES: But for that we'll have somebody from the
23 region who has --

24 MR. ROSEN: Lots of the CAD welding is done properly
25 of course, but also the fire protection issue --

26 MR. REYES: Yes.

27 MR. LEITCH: The plants are very vulnerable to fire

1 when those construction activities are going on, transient
2 combustibles --

3 MR. REYES: If you look at it, most of the events
4 happen there when you have transient combustibles and a lot hot
5 work, a lot of welding and a lot of sparks.

6 MR. ROSEN: And a lot of new people, and contractor
7 organizations.

8 MR. MALLETT: But you are right, with the program
9 where we have a lot of teams planned using up a lot of
10 resources throughout the year, we do have to we find put more
11 time in the planning -- I think Charlie would agree with that
12 -- up front for these big things like steam generator tube
13 replacements, or things that we're going to -- Because
14 otherwise you get all your people used up, and wouldn't have
15 them free to look at those.

16 MR. REYES: That's a good point. Typically a project
17 in an event like that, we'll call that a project, we'll put
18 somebody in charge, we'll have a layout when all the
19 inspections are going to occur, they overlay over the licensee
20 schedule, and we decide also how many hours we're talking about
21 for all the specialties, because a scenario like you're talking
22 about covers all the specialties, concrete, NDE, fire, health
23 physics. It's an effort in itself, but we want --

24 MR. ROSEN: In an operating plant.

25 MR. REYES: And another unit running.

26 MR. ROSEN: Well, I'm not just talking about that, I'
27 talking the spent fuel pool and --

1 MR. REYES: Yeah. Well, I guess they were counting
2 two other spent fuel pools, two other reactors, and the program
3 would be cut up, and in that even if there's more cross-
4 connection -- the older units have more cross-connection, so
5 you could, your construction activity could impact the other
6 ones. The newer units are more islands in itself.

7 MR. ROSEN: It's a real challenge, I really think
8 you've got a challenge on your hands to be -- the licensee
9 obviously from a regulatory standpoint it's something new from
10 the agency.

11 MR. MALLETT: And this team leader, I make a plug for
12 that in Chris's division, and Charlie mentioned it, this
13 concept we think is helping us put more attention to that plan.

14 MR. ROSEN: Have you done steam generator
15 replacements in Region II?

16 MR. REYES: Oh, yeah.

17 MR. MALLETT: Oh, yes.

18 MR. ROSEN: Have they had to cut the containments?

19 MR. REYES: Yeah.

20 MR. ROSEN: So it's been done, you've been through
21 this before, so it isn't quite so new.

22 MR. REYES: Yeah. Our problem is not been there done
23 that, it's that the people who are very good at it are going to
24 be retiring in the next two or three years, and they have done
25 it in construction, they have done it on the first wave of
26 steam generator replacements. We think we're going to see a
27 second wave, and --

1 MR. ROSEN: And vessel head replacements which will
2 constitute a whole 'nother wave.

3 MR. REYES: Correct. So our problem is in strategic
4 workforce planning to now hire new metallurgical engineers, and
5 new structural engineers, and all that, and then train them and
6 have them follow with the more experienced people this activity
7 for the next wave.

8 MR. LEITCH: Fire is a little like safety, I guess.
9 Because you haven't had a lost-time accident doesn't mean
10 necessarily that you have a good safety program, and I guess
11 I'll just caution that because we've replaced steam generators
12 and head containments and haven't had a major fire doesn't
13 necessarily mean that you've got a good fire protection
14 program.

15 MR. REYES: We agree. We have stopped activity at
16 the site. We have inspectors coming in, and people are
17 welding, and there's solvents or something near by, and they
18 have raised it to the licensee management right away, and
19 stopped activity.

20 We agree with you, it's amazing --

21 MR. LEITCH: It's the mentality, too, sometimes of
22 the craftsmen coming in when they're on a construction activity
23 is different than the maintenance activity.

24 MR. REYES: Correct. They're only thinking of what
25 they're doing, and not what the implications it may have around
26 them.

27 It's a challenge, and I just want you to know we're

1 sensitive to it, mostly we deal with the on-site people because
2 you have to be there watching it, because just because you have
3 a hot water permit, and the person has been instructed, and
4 they gave him a blanket to hold that, that doesn't mean they're
5 going to use them, so you have to be there.

6 MR. LEITCH: Exactly.

7 MR. PAYNE: Okay. Continuing, some additional
8 successes I think so far in our program is that we have been
9 involving the resident inspectors in our program.

10 There's a twofold purpose of that. One is that
11 they're doing inspections as Luis said on a daily basis, they
12 have their own inspection procedures that they're following as
13 part of that, and we feel that involving them in our program
14 they learn a little bit more about what fire protection is, and
15 then can bring it back to the site and use it on a day-to-day
16 basis.

17 And the other thing is that it helps supplement our
18 teams to get more operation experience, allow us a little more
19 flexibility in scheduling our activities so that we can support
20 the emergent activities that might be happening.

21 MR. LEITCH: Are we still holding associated circuit
22 analysis in abeyance in these inspections?

23 MR. PAYNE: Yes, we are.

24 MR. LEITCH: Associated circuits are important.

25 MR. PAYNE: I understand we're getting close, but
26 it's still like another year.

27 MR. LEITCH: Another year.

1 MR. PAYNE: They're helping to come out with
2 something at the end of this year as far as a re guide, or a
3 new reg.

4 MR. MALLETT: When you say they, Charlie --

5 MR. PAYNE: I'm sorry. Headquarters is --

6 MR. LEITCH: Is there a task force working on that?

7 MR. PAYNE: Yes, there is, a task force, and based on
8 the last counterpart meeting that e had which is my last point
9 is that we had that week before last as a matter of fact when
10 we discussed associated circuits, and they were saying that the
11 task force plan is to have a draft guide out on the street by
12 the end of this year so it can go out for comment, then
13 implementation next year.

14 These meetings are I think very fruitful for us. It
15 allows us to get together quarterly with the other fire
16 protection engineers in the other regions, and also with
17 headquarters we do quite a bit of training, learning about
18 associated circuits, different types of fire barriers, and the
19 issues associated with each of those items, and discuss the
20 problems that each of the regions have coming up so that we,
21 one, can be aware of them and see if there's a similar type of
22 problem in our region when we do our inspections, and also to
23 share the lessons learned that we have.

24 MR. ROSEN: Do you plan on attending the NEI Fire
25 Protection Forum in Seattle in March?

26 MR. PAYNE: Yes, myself and my fire protection
27 engineer are planning to go.

1 MR. REYES: I'm glad he knew; I didn't. But I mean
2 we try, you'll find that we are pretty active in all the
3 things.

4 MR. ROSEN: I think in building a knowledge base and
5 dealing with your issue of training and knowledge preservation
6 it is an opportunity.

7 MR. REYES: In fact, we're actively looking for
8 another fire protection engineer because Jerry Weisman who is
9 sitting back here who's our expert is not as young as he used
10 to be, and also he's very knowledgeable, and down the road we
11 know that we're going to need to replace him, so our strategic
12 workforce plan has already identified that skill, and we are
13 actively going to recruit somebody so they can come on board
14 and spend some time.

15 DR. POWERS: I would recommend that you some time
16 attend one of these fire protection information forums just --
17 you know, even for a day you will find them -- just how
18 valuable they really are as a communication device in this
19 area. When the opportunity arises, don't hesitate to actually
20 -- and in a day you can get a feel for what's going on at these
21 meetings.

22 MR. ROSEN: It's a very dynamic meeting where the
23 industry, and the staff, and insurers, all can really talk
24 about what's going in fire protection.

25 DR. POWERS: I have just found them personally to be
26 well worth the time.

27 MR. REYES: Good. That's good insight for us,

1 because when we make those decisions sometimes we really don't
2 know.

3 DR. POWERS: I mean you don't have to attend every
4 time, but just to get a feel for what goes on. Then you get
5 some idea of what kind of the people from the region should be
6 attending.

7 MR. PAYNE: Okay. Next is the challenges that we
8 have, there's many of them that we are trying to address. I'm
9 trying to highlight a few of them.

10 The first one is the licensing basis for many of
11 these plants are difficult to understand. What we have been
12 finding is that when we look at the SERs that have been issued
13 in fire protection and compare that to their program they don't
14 always match.

15 We're finding that the standard license condition
16 that all the facilities have allows them to modify their fire
17 plan, or their protection program, and sometimes they modify it
18 thinking that they have that latitude when in fact they should
19 have come to us for an SER, licensing agent's change.

20 Sometimes they have submitted changes and gone ahead
21 and changed their program, and we never issued an SER that said
22 it was okay, so trying to resolve that has made it difficult
23 sometimes for us to decide where the issues are with the
24 findings that we come across in our inspections.

25 As we mentioned, too, our knowledge base in fire
26 protection resides in a few people. We are trying to expand
27 that, we're training our staff to become fire protection

1 experts. They're by no means going to be as knowledgeable as
2 Jerry is, but we want them to be able to take on some of the
3 role and responsibilities that he's doing on the inspections
4 and let Jerry be resident expert if you will to help resolve
5 the issues.

6 The SDPs are not easy to work with. I think that's
7 pretty well known. There's a lot of debate about what is right
8 as far as conditions, frequency, what a barrier is worth, how
9 much credit to give to the fire brigade, and we cannot -- we're
10 trying to come to grips with that, and I'll talk about that on
11 a future slide about what we're coming with in the SDP.

12 Nonetheless, they're not timely right now in the fire
13 protection area, and we need to work towards that.

14 MR. ROSEN: What did you say, they're not timely?

15 MR. PAYNE: They're not timely.

16 MR. ROSEN: The resolution of the fire protection
17 issues is --

18 MR. REYES: In a significant determination process.

19 MR. ROSEN: Region II's experience as well as the
20 other regions is you're not resolving these things in a timely
21 way if that meets your standards for timely --

22 MR. REYES: It doesn't, and you get into a lot of
23 argument with the licensee, internally first with the staff on
24 the assumptions, and then with the licensee, and it's --

25 DR. POWERS: Well, the thing starts off with
26 hypothesize a fire scenario, zip for guidance. What am I
27 supposed to do here.

1 MR. REYES: And that's what happens, and there's a
2 lot of subjectivity and a lot of views on it, and by the time
3 you get through the whole process it's taken a long time.

4 DR. POWERS: It's an area that really deserves a lot
5 more attention, and we've got the go-ahead to focus some
6 attention on this. When the IPEEE insights came out and showed
7 those risks -- I don't have to believe them, but that's what we
8 have -- that says the research and the NRR should be putting
9 some resources on this helping these guys out with some things
10 other than this mish-mash that they've filed right.

11 MR. ROSEN: I think I heard that they're working on
12 the SDP trying to address some of these issues.

13 MR. REYES: There was a meeting -- was it last week
14 or the week before --

15 MR. PAYNE: Our first meeting was near the end of
16 May, right after our meeting with management.

17 MR. REYES: But with the SDP itself, there was an
18 internal meeting. Is that right, Walt?

19 MR. ROGERS: Yes, and the end of May. There's
20 another one in July.

21 MR. MALLETT: We've got two people to attend that
22 meeting. That's how committed we are in this region to get the
23 better SDP.

24 MR. ROSEN: Did you say in this meeting?

25 MR. PAYNE: That wasn't -- it had nothing to do with
26 the National Institute of Standards. They just let us use
27 their facilities.

1 MR. REYES: It's a nice meeting room.

2 DR. POWERS: But what I'm concerned about is that
3 we're trying to patch this thing, and we just don't have fire
4 protection on the same kind of technical basis that we do for
5 mitigation systems and initiating events and barriers, and yet
6 in any kind of risk prioritization that you do you take IPE
7 insights and you take IPEEE insights, and this is about the
8 same. And so it just deserves more -- I mean it's not you
9 guys's problem, you're the victims, not the problem here.
10 You're trying the fix the problem and the other resources are
11 being dispersed.

12 DR. LARKINS: I think first of all I was just
13 curious, you said in some cases SEs hadn't been written where
14 the amendment had been sent down or something. Is that because
15 of a backlog issue, or is that --?

16 MR. PAYNE: That's one of the issues we're trying to
17 resolve with headquarters.

18 MR. REYES: But the licensee went ahead and made the
19 changed without the NRC giving approval.

20 DR. LARKINS: I heard that.

21 DR. POWERS: It's a big confusion in the way things
22 were done, and what we've written to the licensee about their
23 Appendix R programs, and the wording is just not clear, and so
24 the licensee takes one set of assumptions, the staff takes
25 another.

26 The big problem is nobody really knows what the
27 plant's design basis is. For the pilot programs on this

1 triennial inspection it was costing the typical licensee a
2 million bucks to sort out his design basis, and that's getting
3 ready for the inspection because it's --

4 VOICE: In fire protection.

5 DR. POWERS: Yeah, fire protection design basis
6 because it would spread all over the place, and spread over the
7 years, and the guidance comes in file cabinets, not in reg
8 guides.

9 MR. PAYNE: Some of the licensees have been taking
10 inspection reports where we say something in there and then
11 say, okay, we condone some change in their licensing basis, and
12 it's --

13 DR. POWERS: Well, that's what's happening in the
14 associated circuit analysis is they go back and look at the
15 historical record, and some guy permitted something some place,
16 and therefore you don't have to do this in the associated
17 circuit analysis.

18 MR. ROSEN: Let me ask you, you've got a couple more
19 slides and we'll be through them. We'll come back to fire
20 protection if you need to after the break.

21 MR. PAYNE: So you would like to go ahead?

22 MR. ROSEN: Yes, go ahead and finish up.

23 MR. PAYNE: Okay. The fire barriers, it's your
24 point, sir about the numbers. We don't have a good feel for
25 what some of the numbers are. They're based on old criteria
26 for determining what's like a three-hour barrier, and the
27 licensee doesn't necessarily install this barrier the way it

1 was designed and tested, and so they're taking credit for it,
2 and then later finding out that it may not last for the three
3 hours that they're intending.

4 And then when we get into the SDP trying to decide
5 whether they get any credit at all for this barrier, whether
6 it's determined or not if it's three hours or not, and as a
7 result they think they need to get some credit for that
8 barrier, and we're saying they ain't gonna get any.

9 MR. REYES: That's a big issue with the industry,
10 because -- it really makes no sense because when we give them
11 no credit it basically says the material is not there, all you
12 have is air, and they say, no, we have retardant material
13 there. It may not be in the perfect configuration that was
14 tested, so we cannot assure you it's three hours, but it's more
15 than zero; it's somewhere in between.

16 DR. POWERS: And they're right, of course.

17 MR. REYES: I happen to agree them that --

18 MR. ROSEN: Your problem is how much to give them.
19 Do you give them one minute, ten minutes or --

20 DR. POWERS: Well, you go to the other problem is the
21 regulation, when it's an Appendix R plan the regulation says
22 three hours, it doesn't say two hours and 55 minutes, it says
23 three hours, and you get hamstrung by these things.

24 The branch technical positions I think then you can
25 start talking about two hours and 55 minutes, but Appendix R
26 plans it's three hours or it's nothing.

27 MR. PAYNE: And that gets to my next point which is

1 III.G.2 and their interpretation of what's a three-hour
2 barrier. They're mixing and matching the different
3 requirements of III.G.2 which is the protection of the
4 dedicated shutdown system.

5 Sometimes they don't provide the protection of
6 suppression, but they have the one-hour barrier, the one-hour
7 barrier and 20-foot separation, but they don't actually mix
8 that way.

9 Also we're starting to see them start to substitute
10 manual operator actions for some of the criteria in III.G.2.,
11 and that's becoming more prevalent of a problem.

12 In other words, for example they determine that
13 Kaowool isn't a three-hour fire wrap, so they take off the
14 Kaowool and then say we're going to use operator actions as a
15 substitute for that. That's not something that's allowed in
16 IIII.G.2, III.G.2 doesn't talk about --

17 DR. POWERS: That's not one of options.

18 MR. PAYNE: And what they're arguing is that, well,
19 it doesn't say we can't, it just says this is what --

20 DR. POWERS: It's pretty explicit about saying you
21 have to do one of three things.

22 MR. PAYNE: That's our position.

23 DR. POWERS: It doesn't seem like one that's subject
24 to a lot of interpretation.

25 MR. PAYNE: Okay. Next, operator decisions to
26 initiate the fire procedure. The licensees are taking the
27 position that the best place to operate the plant from is the

1 control room, and we agree with that, but when things start
2 happening and you have a fire you start getting spurious
3 actuations, they don't always want to implement the fire
4 procedure because the fire procedure tells them in no uncertain
5 terms you need to go to the remote shutdown panel and start
6 taking action.

7 DR. POWERS: Don't we have a real reputation on that
8 just out of the Oconee incident? You know, why did it take
9 them so long for Oconee to shut down because the control room
10 wouldn't operate according to what we know about fires.

11 MR. PAYNE: Well, they're pointing to their IPEEEE.

12 DR. POWERS: I said Oconee, San Onofre is what I
13 meant.

14 MR. PAYNE: Oh, okay.

15 DR. POWERS: They sat around, the guys handling the
16 fire were saying we want to spray water on this, and the guys
17 in the control room were saying "Oh dear, oh dear, oh dear,"
18 and yet it's been in the innumerable information notes and
19 bulletins that say in electrical fires in nuclear power plants
20 spray some water on it, because otherwise you can't put out a
21 cabinet fire, it just reignites on you every time you let the
22 air in.

23 MR. PAYNE: Also we're starting to see some issues
24 with gaseous fire suppression systems, CO2, haylon. Primarily
25 it's not being installed the way the manufacturer designed it.

26 I mentioned the manual operator actions.

27 For the future here one of the things that we want to

1 work on is improving our skills, including the better use of
2 risk insights. We're not as proficient in that particular
3 area. We rely heavily on Walt and Rudy's abilities. We want
4 to bring that more down and at a level to our inspectors so
5 that they can do their job.

6 DR. POWERS: One thing that has helped I think is
7 this new reg guide that they put together on the fire
8 protection area.

9 You know, it used to be all this stuff is spread out
10 all over the place, and now it's all in one pretty readable
11 document.

12 MR. ROSEN: That's 1.189?

13 DR. POWERS: Right.

14 MR. PAYNE: Also again we're assigning more
15 inspectors to our fire protection inspections to increase our
16 bench strength.

17 One of the things that we are going to need to
18 address is future inspections are going to start looking at
19 areas of less risk, which by default means that the licensee is
20 not going to have as many significant issues with that, and why
21 are we inspecting something that's less risk significant.

22 And as we go through eventually we need to come to
23 grips with what are we going to do in the future when all the
24 really high-risk areas have been inspected other than looking
25 at modifications that have been made.

26 MR. ROSEN: Well, now, this is an important point.
27 Just because you've looked at high-risk areas before, now

1 you're saying we should go look at less risk significant event
2 and then sequences and areas and not pay attention to those. I
3 don't think that's a good idea.

4 MR. PAYNE: No, I'm not saying that, but I'm saying
5 that the licensee is going to say, well, you have already
6 looked at this area before, why are you looking at it again.
7 You know, we need to be intelligent about what we're doing
8 here, and it's possible that you may get into that mental
9 framework.

10 MR. ROSEN: But I think what we're dealing with here
11 is a dynamic situation. You can have it look great when you go
12 in from a fire protection standpoint, and tomorrow it could be
13 transient combustibles all over the place if somebody makes a
14 mistake.

15 So I don't think we should be thinking we've got to
16 cover all the areas. I mean you need to keep on thinking about
17 risk.

18 MR. MALLETT: I think also what Charlie -- correct me
19 if I'm wrong -- what they're looking at is they go back the
20 next time and maybe pick a smarter sample than you picked the
21 first time, it doesn't have to be as broad perhaps, you can
22 pick it smarter from what you learned before.

23 MR. ROSEN: I can give you my insight which is that
24 what counts here is as Dana Powers was saying is the risk of
25 fire to core damage frequency, and that's the issue. You're
26 not looking at equipment protection for the balance of the
27 plant so you can protect the licensee's investment, that's not

1 your job. That's their job, and they'll do it as well as they
2 can in that area.

3 What we've really got here is the protection of the
4 public health and safety, reasonable assurance of adequate
5 protection. Risk of fire core damage you can see is the issue,
6 and it's concentrated is in those risk-significant sequences
7 and areas. That should be your focus.

8 DR. POWERS: And it would be if I had great
9 confidence in the risk analyses that say, okay, here are the
10 important fire areas. I don't think I have that confidence
11 that those are so well identified, so I have something about
12 saying let's expand and use our understanding to decide what
13 areas we're going to inspect. So I think we still have a ways
14 to go before I start putting all my eggs in a PRA basket in
15 this area.

16 DR. RANSOM: Along that line when you talk about fire
17 barriers, are they applied in a deterministic fashion or a
18 probablistic fashion?

19 DR. POWERS: They are enormously deterministic.

20 DR. RANSOM: That seems to be a weakness.

21 DR. POWERS: Well, you've got some problems with
22 that. But I mean you have two kinds of things. You've got
23 barriers that have prescribed amounts of time to them, and they
24 either work for that time or they don't.

25 And then you have virtual barriers, and the typical
26 analyses fires do not propagate from one area to the next by
27 fiat in risk analyses. I mean it's just the way the risk

1 analyses is set up.

2 DR. RANSOM: I guess what I was thinking is a barrier
3 that might be deterministic for three hours obviously probably
4 has some faults in it, cracks and things like that that make it
5 propagate more relative than that.

6 DR. POWERS: And probably things that are three hours
7 will actually last longer than three hours. I mean it's -- but
8 you don't have a wealth of data here to handle things.

9 Then you've got the problem of what is your
10 combustible series, and in an FSAR world the combustible
11 wording is pretty well specified. That's usually not the
12 problem, it's usually the transient combustible that changes
13 things.

14 MR. ROSEN: It's not my favorite thing to agree with
15 Dana Powers, but I will bow to the superior knowledge in this
16 area in one respect, and that is that you can have a fire in a
17 nonrisk-significant area, it can propagate to a risk-
18 significant area under certain circumstances, and one of those
19 circumstances, the kind of circumstances I'm thinking about are
20 kinds of things that were revealed during the San Onofre,
21 unexpected connections between lines or something like that.

22 And so I want to temper my earlier remarks in looking
23 only at risk-significance sequence and risk-significant areas,
24 you've got to go beyond that to those places that could impact
25 the risk significance sequences in these areas should a fully-
26 developed fire develop in those other areas.

27 MR. PAYNE: I think that's all I had to talk about on

1 this slide.

2 MR. ROSEN: I would like to have a recess now,
3 beginning now, and be back at 1:15, and we'll pick up with any
4 issues anybody wants to talk about in the fire area. If not,
5 we'll go on to security.

6 [At 12:33 p.m. the lunch recess is taken.]

1 AFTERNOON SESSION

2 MR. ROSEN: Are there any additional questions on
3 the fire protection area? Shall we proceed with the security
4 issues?

5 DR. POWERS: I think I'll just reiterate that if you
6 can identify tools that you think should be developed out of
7 the research program -- and I think that's what Mr. Rosen is
8 particularly interested in trying to get the research program
9 directed to help address some of these issues, and so you guys
10 are on the front line so you probably have some good ideas on
11 tools that would really help, either your inspection force or
12 about the senior reactor analysts who are going to have to get
13 involved in this and have limited VRA capabilities in this
14 area. Things like that, I mean at any time they can identify,
15 and you can feed them into his -- Steve's going to prepare some
16 recommendations for the research program in fire protection.

17 MR. ROSEN: We will have a meeting in September whose
18 topic is entirely fire research.

19 DR. POWERS: So from that I think he had something to
20 contribute, and it would be really useful to get that because I
21 think there are some real practical needs right now that the
22 research program could be addressing and helping a lot.

23 MR. ROSEN: Any suggestions along those lines you can
24 send to Dana or me, or both, and it would be very helpful.

25 DR. POWERS: It looks like they've got some pretty
26 good people in those research programs, and so if we can give
27 them some idea on how to true up their activities and

1 directions are most useful to you, and I think we'll get some
2 good results out of it.

3 MR. CHRISTIANSON: Our next topic is security issues
4 in the region. Anne Boland is the branch chief for the plant
5 support branch, she has the health physics inspectors, the
6 radiation protection program, plus the security program she
7 manages.

8 DR. POWERS: Anne, did you draw a short straw at some
9 point?

10 MS. BOLAND: Some days I think so.

11 [Laughter.]

12 MS. BOLAND: I'm relatively new as the plant support
13 branch chief. However, I think I can give you some
14 perspectives on how well we've done in security, how we conduct
15 business, and where I see some of the challenges.

16 Organizationally I'm in our security function in the
17 Division of Reactor Safety, and as Chris indicated my branch is
18 the plant support branch.

19 Staff-wise we have two qualified inspectors, one
20 which is unavailable at this particular point in time. He's
21 been called up in the reserves and is in --

22 DR. POWERS: He's working security big-time now.

23 MS. BOLAND: Yes, at Dobbins Air Force Base, and he's
24 been called up for about a year, so we're really not sure --
25 he's been called up basically since right after September the
26 11th.

27 We have one inspector, upward mobility inspector in

1 training, and we recently got a contractor who was an ex-
2 security inspector for us to come back under the dual
3 compensation rule, so that's been a tremendous help for us.

4 DR. POWERS: What's an upward mobility inspector? md

5 MS. BOLAND: It's a person who -- Ken sitting right
6 back there -- he came out of our HR group, and it's a
7 developmental position basically which took a person who was a
8 nonsecurity, noninspector type and developing him. I think
9 you've been in the group, what, about a year and a half?

10 KEN: That's right.

11 MS. BOLAND: Yeah, about a year and a half developing
12 additional expertise.

13 And then we have one regional inspector who's an HP
14 inspector who's cross-training in the security area. We just
15 started that -- we just began that within the last couple of
16 weeks.

17 So that's kind of where we're at in staff.

18 Overall I think our mission is probably pretty self-
19 explanatory. We inspect the nuclear power reactors for
20 compliance with regulation in risk-significant areas on the
21 ROP, and to determine and verify that they can protect against
22 the design basis threat.

23 And I'll go through what our baseline inspections
24 program encompasses in a minute.

25 In case you're interested, there is also security
26 inspectors located in the division of nuclear material safety
27 and safeguards, or nuclear material safety.

1 They are responsible for inspecting the fuel
2 facility, Cap 1 facilities and Cap 3 facilities. That is not
3 within our division, that is in another division, but we
4 coordinate with them pretty much on a regular basis on security
5 issues.

6 We also manage and implement the security plan with
7 respect to the control of safeguards information. That is
8 pretty much done totally within our group. We developed the
9 security plan, we audited against it, and we assure material is
10 properly controlled up here in the region and at the resident
11 sites.

12 A significant effort these days is supporting
13 headquarters in program development activities. As I'm sure
14 you're aware, there's a lot of actions going on with respect to
15 top-to-bottom reviews of the security program, regulations,
16 order development, et cetera, and we to the extent that we can
17 will resource standpoint. We think it's not only beneficial,
18 but we really need to be a participant in that process with our
19 field experience.

20 Implement post-9/11 activities. This also takes a
21 substantial amount of time of mine and my staff's efforts, and
22 I'll talk to this a little bit more, but there's a number of
23 activities that are ongoing just from a daily activity
24 standpoint on monitoring what licensees are doing, looking at
25 potential threat and suspicious activity assessments and
26 reports that we get from licensees.

27 And then the last one along those same lines is

1 information assessment team participation. Chris is a member,
2 I'm member, and we have one other member of my staff who
3 participates on the IAT, which is the threat assessment
4 component of the NRC. I don't know if you know of Burt Warren
5 and that group in NSIR, but we work closely with them basically
6 evaluating incoming information from the licensees on
7 suspicious activities, et cetera, to determine what kind of
8 follow-up might be required from the agency, and whether that
9 information constitutes any kind of credible threat.

10 We look to licensees to make that initial
11 determination, but we do also take a look at that information.

12 MR. LEITCH: We've heard some information in the
13 public press and the media about a threat to nuclear plants
14 around the July 4th holiday. Is there any substance to that?
15 I mean is there such a warning that's gone out to the plants or
16 anything like that?

17 MS. BOLAND: We did issue an advisory to our plants,
18 and basically what we indicated is that the NRC did not have
19 any information to support those news reports.

20 MR. REYES: We actually issued an advisory to clarify
21 all the noise that we have heard. We have no specific credible
22 information that will say July the 4th a nuclear power plant is
23 of concern.

24 July the 4th nationwide is of concern, but we
25 specifically have issued an advisory because there was a lot of
26 news media information, and the licensees really needed
27 clarification.

1 MS. BOLAND: I think we did that in the neighborhood
2 of about three weeks ago, three or four weeks ago.

3 The baseline inspection program, I have outlined
4 essentially the procedures that we use under the ROP for the
5 baseline inspection program. They include behavioral
6 observation, escort responsibilities, detecting individuals who
7 are having aberrant behavior, substance abuse, mental kinds of
8 aberrant behavior issues.

9 Access control, this procedure primarily focuses on
10 personnel search requirements, access requirements into the
11 plant for people and biometrics, and then also vehicle
12 searches.

13 MR. REYES: Hopefully you saw some of that yesterday
14 at Watts Bar.

15 MR. ROSEN: Yes. It was very encouraging.

16 DR. POWERS: You know, they have an active control
17 program, they have lots of gates and guards.

18 The issue still comes down to insiders during
19 shutdown operations.

20 MR. REYES: The commission right now is wrestling
21 with the policy -- I think you're talking about access during
22 outages prior to getting your thorough background search -- I
23 think you're going to see a change in the policy.

24 I can't predict, but I have talked to enough
25 commissioners that I think you're going to see a significant
26 shift on that and that policy. How it's going to be
27 implemented I don't know. It's clearly a big change for the

1 industry, the industry is going to have to change the way they
2 do business, so I don't know the timing, but it's clear to me
3 the commissioners are gearing up to make one of the changes.

4 DR. POWERS: The outages could be interesting is what
5 you're saying.

6 MS. BOLAND: And the temporary access issue has been
7 around a while, and I think in the near term we're going to be
8 dealing with that.

9 DR. POWERS: You said you didn't know the timing, you
10 said this fallout is going to be interesting. Are we talking
11 about that kind of immanency?

12 MR. REYES: Yes, short-term.

13 MS. BOLAND: Very short term.

14 MR. REYES: Very short term.

15 MS. BOLAND: Access control searches, I mentioned
16 that. The first two are annual inspection requirements.

17 The third procedure is response to contingencies.
18 That's a triennial inspection procedure which basically
19 involves assessing a licensee's strategy for actually
20 responding to an event, looking at the target set analysis,
21 looking at weapons demonstrations and weapons qualification
22 training, training of the guard force, et cetera, and that's an
23 every-three-year requirement.

24 Also we have a requirement to review all the physical
25 security plan changes that come in to determine whether the
26 licensees are allowed to make certain changes to their plan
27 without coming to the commission for approval, as long as those

1 changes don't decrease the effectiveness of the plan, kind of a
2 5059 sort of thing. We do an evaluation of those changes to
3 determine if in fact they decrease the effectiveness.

4 The ISFSI facilities, we have a second inspection
5 procedure for that. If an ISFSI is located inside the
6 protected area it's assessed consistent with the site security
7 plan. This procedure applies only to those ISFSIs which are
8 not located within the primary protected area.

9 Of course the OSRE inspections, and then performance
10 indicator program, we do the verification there. We have three
11 performance indicators in security, one related to equipment,
12 one related to fitness for duty on personnel reliability, and
13 one related to access authorization. So we do that on an
14 annual basis as well.

15 MR. LEITCH: One thing that I notice that's kind of
16 uneven as you go from site to site is procedures for getting
17 into the protected area are pretty standardized, but the
18 procedures for getting into let's say the owner-controlled
19 area, particularly parking lot areas and things of that nature
20 are very, very uneven.

21 We were down into Watts Bar yesterday, and at the
22 perimeter point the bus was searched, but yet there are other
23 sites where it seems like it's a wave and you drive into the
24 parking lot.

25 I guess one thing that concerns me is even though I
26 know that the protected area perimeter is far enough out that
27 like a truck bomb or something like that couldn't, you know,

1 based on the present design basis could not damage vital
2 equipment, a great deal of harm could be done to the industry
3 from a public relations viewpoint if someone was to, you know,
4 get some kind of an explosive device in the parking lot of a
5 power plant.

6 Are we planning to do anything at the owner-
7 controlled area perimeter?

8 MS. BOLAND: I can't give you for safeguard reasons
9 the details, but the answer is yes. I think the ICMS, the
10 inner compensatory measures that were implemented or imposed on
11 licensees via order will do some of that, and there are various
12 stages of implementation.

13 MR. REYES: The easiest way to answer is the review
14 on the DVT will get to the point you're making, without getting
15 into detail will get to the point you're making.

16 MR. LEITCH: I understand.

17 DR. BONACA: These procedures are pretty much the
18 same procedures that you had before September 11th; right?

19 MS. BOLAND: Not in the owner-controlled area.

20 MR. REYES: Not in the owner-controlled, exactly.

21 MS. BOLAND: That is correct, and I'm going to talk
22 to you about what's coming up. But, yes, these are procedures
23 that were in place prior to September 11.

24 MR. REYES: That's everything we always had.

25 MS. BOLAND: You're going to see -- kind of trailing
26 in on the question there, you're going to see some variability
27 in OCAs --

1 MR. REYES: Owner-controlled areas.

2 MS. BOLAND: -- owner-controlled areas also having to
3 do with the configuration of the licensee's site.

4 MR. REYES: Sure, yeah.

5 MS. BOLAND: And, you know, their determinations on
6 where they need to make certain searches and things like that,
7 so you're going to see a little bit of that potentially.

8 But I think that we continue the reassessment and the
9 order implementation will bring some consistency to that,
10 hopefully some increased consistency.

11 The baseline inspection program, immediately
12 following September the 11th it was suspended. From a security
13 standpoint we were focusing on the post-9/11 response
14 activities, dedicating most of our staff to that effort, and
15 they did suspend the program until March 1st of 2002.

16 And at this point with respect to the baseline
17 inspection program only the expectation is that we will
18 complete 60 to 80 percent of those procedures that I just
19 discussed by the end of the cycle.

20 And then this -- I have annotated the record over
21 here. This last bullet is incorrect, and you may want to --
22 basically the OSRE program certainly was in effect prior to
23 September the 11th. It was suspended following September 11th,
24 and the reason for that was really because of that high-threat
25 environment, and the determination of whether it was really
26 appropriate in that environment to be dedicating those
27 resources to a drill activity. So if you wouldn't mind, please

1 annotate your slide, and I apologize for that.

2 MS. WESTON: What is the increase in the resources
3 that needs to be dedicated to this after September the 11th?

4 MS. BOLAND: We are in the process of -- well,
5 headquarters has given us a temporary instruction, a draft, to
6 tell us what the inspection effort is, and so I don't have
7 refinements for you on exactly how many people that's going to
8 take to do that.

9 MR. REYES: Let's explain that a little bit.

10 Since September 11th the agency has changed its
11 processes, and we had to dedicate our staff to that versus the
12 routine program, and it included now we have direct reports
13 from the licensees on suspicious activities, and they get
14 processed all the way through Anne and to me; I get now reports
15 that I never got before for obvious reasons.

16 The increasing workload we can't size it now because
17 the new procedures, you were asking about the follow-up on the
18 orders are not finished yet, so we can't tell what that
19 workload is going to be.

20 What we had in the past was a delta, and that delta
21 because nothing had taken off complete we have the baseline
22 program we're going to establish again that we always did, plus
23 the post-9/11 orders implementation review, and that still is
24 being sized, that's still being prepared.

25 MS. BOLAND: We're still evaluating exactly what we
26 want to look at and follow up, and exactly what resource is
27 going to be needed to do that.

1 MR. CHRISTIANSON: Prior to September 11th our
2 baseline program was roughly about 2 to 2 1/2 FTE.

3 MR. REYES: For this region.

4 MR. CHRISTIANSON: For the region, right. And we're
5 still figuring that out.

6 MR. REYES: It will be more than that.

7 DR. POWERS: It's a good bet that it's going to be
8 more than that.

9 MS. BOLAND: Yeah, it is, and we're trying to plan
10 for that.

11 MR. REYES: We're trying to size that, and the other
12 thing is you don't need the same skills for every inspection
13 activity we talked about here. Access control, review of
14 records, and all that, you don't need the same skill as you do
15 with strategic mockup attack on the plant, et cetera, et
16 cetera, so not only is the volume an issue, the volume FTE
17 meaning of resources, but the skills profile of what we're
18 going to do in the future versus now. So we don't have a good
19 grasp of that yet.

20 MS. BOLAND: And some of that probably won't come out
21 of the security group, there's an emergency planning component
22 to that follow-up, and also an operational component to that
23 follow-up, so it will be an integrated effort. We don't have
24 the full picture yet on exactly how it's going to work.

25 I think Loren touched on a couple of these issues
26 this morning. Just to kind of give you an idea without talking
27 specific sites of the kinds of issues that we have identified

1 about last year, I think the first one Loren did talk about in
2 detail this morning was a white finding having to do with OSRE
3 performance at one of our sites, so unless you have a specific
4 question I won't go into that any further.

5 We have identified a potential generic issue which we
6 have discussed with headquarters and are looking at drafting
7 generic communication on involving for-cause testing, and
8 specifically this has to do with whether or not licensees are
9 requiring mandatory testing of employees who are involved, have
10 a human performance issue that results in an accident that
11 causes a personnel injury.

12 The regulations are pretty clear in that regard, but
13 I think we've seen some different interpretations about some
14 our licensees, and so we have initiated the process to try and
15 get that communicated, and I think they are factoring it into
16 future rulemaking.

17 We have had some issues, again without going into
18 specifics, some historical issues on intrusion detection system
19 coverage, and in fact two of those issues recently went through
20 our backfit process, which was an experience for me having only
21 gone through that twice, those two times, but it was an
22 interesting process, but both of them involved IDS and whether
23 or not they were in compliance with their physical security
24 plan.

25 DR. POWERS: You said your backfit procedures --

26 MS. BOLAND: The agency's backfit procedures.

27 DR. POWERS: So you do a regulatory analysis, and --

1 MS. BOLAND: Actually it went through the Region II
2 backfit panel, we made a decision it, and it did not have to go
3 to a regulatory analysis.

4 MR. REYES: We have internal procedures.

5 DR. POWERS: You provided staff.

6 MS. BOLAND: Yes.

7 Control of safeguards information, we have been
8 extremely -- not that we weren't before, but extremely
9 sensitive to this whole area post-9/11, and we have had at
10 least an issue at one site involving control of safeguards
11 information.

12 Personnel searches, these were issues that were
13 actually identified pre-9/11 on having to do with the adequacy
14 of searches of individuals coming into the protected area, and
15 then also the last one was an inadequate compensatory measure
16 for out-of-service equipment which was identified pre-9/11. So
17 the majority of these issues are pre-9/11 issues.

18 DR. POWERS: Let's talk about compensatory measures.
19 An incident at a plant, it happened not to be in this region,
20 if I can remember correctly detection equipment at the boundary
21 failed Saturday night. The plant manager says, oh, well, I'll
22 post a guard there and then on Monday I'll call the guy that
23 fixes these things and he'll come and fix it. He still gets a
24 finding on this, puts it in one of the corners. But should he?

25 He's installed a compensatory measure here, he's had
26 an equipment failure -- a diode went out or something like
27 that. Should that count against him since he's --

1 MS. BOLAND: It gets rolled into the PI.

2 DR. POWERS: Yeah, I know,

3 MS. BOLAND: Upon identification if they take
4 adequate compensatory measures the only implication there is
5 it's factored into the PI.

6 DR. POWERS: That's not an only, that's a
7 significant, though. Should it?

8 MR. REYES: If their equipment is out of service for
9 so many hours there is a significance to it. I don't know --

10 DR. POWERS: Yeah, but they know it went out like
11 immediately, it just went out, so there was no time in which
12 they were vulnerable.

13 MS. BOLAND: Right.

14 DR. POWERS: Okay. And they instituted a
15 compensatory measure very quickly. I mean it was an obvious
16 compensatory measure, they put a guy there to watch it instead
17 of a camera there to watch it. Should that count against them?
18 I mean I will admit if it had been out for five hours, no
19 question.

20 The argument putting it on there is something did
21 fail with this. It happened to not be something with
22 maintenance where one of these electronic things that just dies
23 on you and no one actually knows why they die, they just die.
24 But the question here is one of fairness in clicking that
25 performance indicator.

26 MS. BOLAND: Well, I think one of the principal
27 purpose of the performance indicator is you monitor the

1 equipment reliability, and we look for trends on, you know, are
2 they seeing similar kinds of failures, is there some issue here
3 that needs to potentially be addressed.

4 So it's giving us more of a heads-up so to speak on
5 ensuring that that equipment is being reliably maintained and
6 functioning. I don't know if that is --

7 MR. REYES: I don't know if it's fair or not, but
8 I'll tell you the next time on Saturday he's going to call the
9 mechanic to fix it.

10 DR. POWERS: Yeah, as a matter of fact he's going to,
11 but he's irritated at having to do that.

12 MR. REYES: I know, and the agency -- I'm not saying
13 it's fair, but the agency takes that position. The agency
14 right or wrong takes that position that this number of hours is
15 significant, and we know there may be occasions where it's not
16 fair.

17 DR. POWERS: It's expensive. It strikes me as this
18 is more a financial decision than it is one of security because
19 he had done everything. He was never vulnerable, he
20 compensated. Now at this point if he wants to make a financial
21 decision I can pay this repair technician \$5,000 to come out
22 Saturday night, or I can pay him \$200 to come out Monday
23 morning, it seems like we ought to let him manage the machine
24 that way.

25 MR. ROSEN: It's not as simple as that, though,
26 because now the guard is tied up watching this.

27 DR. POWERS: No, brought in an extra guard. There

1 was not a guard there.

2 MR. REYES: Yeah, because by the security plan he's
3 responsible for it.

4 DR. POWERS: Yeah, he had to bring in an extra guard,
5 and that he can do very quickly; it's cheap.

6 MR. REYES: They're on call, and actually they
7 usually have more than they need.

8 DR. POWERS: Yeah.

9 MR. REYES: I don't know, we do some things that are
10 not fair.

11 MR. ROSEN: Nobody said it was going to be fair.

12

13 DR. POWERS: Well, we ought to move in that
14 direction.

15 MR. ROSEN: I agree.

16 DR. POWERS: No, I don't have an answer to this. I
17 was just interested in how to view these sorts of things.

18 MS. BOLAND: Post-September 11th activities, I have
19 already alluded to some of this:

20 Provided 24-hour security coverage in our IRC, and we
21 were basically there thinking -- I don't remember the exact
22 date, but well into December on 24-hour coverage.

23 DR. POWERS: You're going to have to remind me what
24 IRC stands for.

25 MS. BOLAND: Instance response.

26 MR. REYES: Our emergency center. If you have some
27 time, we have a very good one here.

1 MS. BOLAND: Manned with one manager and -- well,
2 there wasn't the increased response immediately following
3 September 11th, but in the long term we have 24 hours a manager
4 and one member of the security staff to handle ongoing issues.

5 Some of the things that we were doing in the center
6 involved coordination with licensees on how they were
7 responding to advisories, we had input to advisory development,
8 responding to incoming information from licensees, and
9 monitoring what they were doing as well.

10 Conducted and coordinated Phase I, II, and III
11 audits. I think this maybe follows onto one of the questions
12 about, well, if your baseline inspection program was exactly
13 like what you were doing pre-9/11, one thing that has been
14 added onto that is as the advisories came out, particularly the
15 October 6th advisory, we did what we called audits against
16 those advisories, and they're called Phase I, II, and III
17 audits depending upon what component of the audit we were
18 looking at -- prompt actions or additional actions.

19 And essentially the security staff, the resident
20 staff, or the project engineers went out and looked at how
21 licensees were implementing the advisories, and to also
22 identify whether we had any concerns in how they were
23 responding to those advisories.

24 IAT event reporting and follow-up. I have already
25 mentioned that to you. That's taking a substantial amount of
26 effort on our part at this time because we have asked the
27 licensees under the advisories to basically report any

1 suspicious activity to us.

2 We are getting a wide variety of reports of, you
3 know, public citizens seeing someone that they didn't think
4 looked like they should be there, or taking a picture, or doing
5 something of that nature, and we're basically getting involved
6 in making our management aware, assessing it to see if we need
7 to do anything in the immediate term, and making sure that the
8 appropriate groups in NRC are informed of that.

9 MR. REYES: In addition to that we're adding to that
10 intelligence, our intelligence such as is that also happening
11 at conventional power plants, are you seeing people approaching
12 and taking pictures and asking this question at a conventional
13 power plant and we have another situation very similar at a
14 nuclear power plant.

15 So there's a lot of more tracking of issues that's
16 taking our time that didn't exist there before.

17 MS. BOLAND: There really is.

18 DR. POWERS: We got several reports from Watts Bar
19 about a suspicious group in there yesterday.

20 MS. BOLAND: Yesterday?

21 DR. POWERS: You might get several.

22 MR. ROSEN: But not really threatening because
23 they're aged.

24 DR. POWERS: And they were mechanized.

25 [Laughter.]

26 MS. BOLAND: We're also responsible for interface of
27 work with law enforcement. My staff who are the three guys

1 back there, on the back row back there, do follow-up work with
2 local law enforcement, and our office of investigations works
3 with the FBI, so we work with them to information on things
4 that are going on and responding to sites.

5 Again, this is just another bullet, but it has taken
6 a substantial of regional effort is to support the headquarters
7 programmatic initiatives.

8 I'm sure you're aware of top-to-bottom review of a
9 program that's underway which includes a lot of components to
10 it. You know, you're looking at regulatory changes, order
11 development, inspection procedure development on how to inspect
12 against the orders, et cetera, et cetera. So we devote a fair
13 amount of time to that.

14 DR. POWERS: Let me ask you a question on that. We
15 have handled a lot of cornerstones, your being one of them.

16 MS. BOLAND: Uh-huh.

17 DR. POWERS: In all these other cornerstones -- or
18 not all of them, but many of the other cornerstones you see
19 this drive toward analysis, quantitative analysis,
20 confrontational tools and whatnot.

21 This cornerstone persists in being a largely manpower
22 subjective intuition and experiential-based analysis. What do
23 you think about that?

24 MS. BOLAND: You're talking SDP?

25 DR. POWERS: I'm thinking about just the way they go
26 about analyzing things. I mean twenty years ago we did fire
27 protection all based on experience and judgment.

1 Now we actually do something called fire risk
2 assessment, certainly fire hazards analysis, much more
3 computational work, fire propagation modeling, and things like
4 that.

5 Here you're still largely working based on
6 experience, standards, intuition and whatnot. Is that a good
7 thing, or is that a bad thing?

8 MS. BOLAND: Well, from the standpoint -- we are --
9 we don't have models, we don't have sophisticated modeling and
10 things of that nature, but as far as we are pulling in the
11 reactor analysts to help us in making our decisions like for
12 what scenarios we run during an OSRE.

13 DR. POWERS: Yeah, you do your vital site five-point
14 analysis, primary analysis.

15 MS. BOLAND: Right. So we are pulling in that kind
16 of insights into how we are trying to evaluate the licensee's
17 strategy.

18 As far as long-term what the plans are going to -- I
19 think I'm interpreting your question more upon to performance
20 evaluation as opposed to how you inspect against behavioral
21 observation access control kind of things.

22 DR. POWERS: Even in your own observational technique
23 you're depending on a guy looking at something and saying this
24 is out of the norm of what I would expect from this individual,
25 you know, something is wrong here, and that's based on judgment
26 and whatnot, and then those are often very delicate tools to
27 analyze things.

1 On the other hand, it's very subjective, and maybe
2 someone's performance is actually just as aberrant, but he's
3 real careful not to do it in front of anybody that's watching
4 him.

5 MR. REYES: And that's why my answer is we wish we
6 had a model that would tell us, but if you taken up security
7 what you're protecting against you're protecting against
8 aberrant behavior, abnormal behavior, whether it's an insider
9 or an outsider. None of the scenarios we dream up a normal
10 human being will do, so you're now working with abnormal,
11 you're protecting against abnormal behavior from an individual
12 or group of individuals with a choice of weapons and explosives
13 and all that, and I'm not sophisticated enough to come up with
14 some ideas on how to model that, and I think that's the problem
15 it comes into, and I think how you really do it is by defining
16 the design basis threat and saying the most likely you're going
17 to have is --

18 DR. POWERS: The problem I have with -- I mean my
19 main reaction to this design basis threat since we're
20 reexamining design basis threats now is I say, gee, design
21 basis has been so wonderful for us in the reactor safety arena
22 by all means we should continue it here.

23 I mean TMI was a positive demonstration that design
24 basis accidents really are a very, very restrictive sort of
25 view on the world, and what you try to do is -- I mean once you
26 have design basis threat you're really good at protecting
27 against that threat which you will never see, because there

1 will never be a design basis attack on you, an exactly design
2 basis attack on a facility.

3 And your vulnerability when you focus on a design
4 basis threat of course is you have no capacity to respond to
5 the small deviations from that, or even large deviations from
6 it.

7 So maybe the whole concept of design basis threat
8 needs to be abandoned in the security area just as we've had to
9 essentially abandon it in the reactor safety area.

10 I mean it seems to me that we were thinking about it
11 before we got hold of something that did not serve us very well
12 in the reactor safety.

13 MS. BOLAND: I don't know what form we're going to
14 end up with, whether it's characteristics, whether it's --

15 DR. POWERS: Whether they use their ideas to pursue.
16 One of the things I do know is that when we analyze Air Force
17 facilities for integrate attach, which is much like your OSRE
18 exercises we don't have design basis attacks, and we do do
19 quantitative analysis of it.

20 MS. BOLAND: While I can't really get into the design
21 basis of even the current one as to what it includes, but --

22 MR. REYES: We've got a briefing on that.

23 MS. BOLAND: Okay. Clearly licensees have
24 complained int past with the OSREs on the variability and
25 expectations, and I think it's fair to say you have to define
26 what the parameters are, whatever form that takes, and then
27 ensure that the licensees can adequately protect that.

1 Now, what form that takes and how you do that but,
2 you know, licensees call it OSRE creep, they believe we weren't
3 holding them to a consistent standard. The standard has got to
4 be the right standard.

5 MR. LEITCH: There's also a dividing line I think
6 which the agency is still trying to grapple with, a dividing
7 line between what's the responsibility of the licensee and
8 what's the responsibility of the agency.

9 MS. BOLAND: You may have a design base threat, and
10 that may not --

11 MR. LEITCH: And that's where it's really happening.

12 DR. POWERS: That's made well above my pay grade,
13 I'll tell you that. That's a political decision. That's why
14 we pay the commissioners big bucks to decide that.

15 I mean the challenge in the OSREs it seems to me are
16 twofold. One is is the evaluation subjective, and then since
17 it's a high rate of failure the guy makes some amendments
18 whether those modifications and changes have in fact addressed
19 the problem and made it so that he would succeed if reran the
20 exercise is also subjective.

21 It's a highly-subjective area, and the question is
22 should it continue to be a highly-subjective area, and I don't
23 know the answer to that.

24 I think I'm like you, I haven't got a clue how to do
25 it any other way. But I think it's worth asking the question.

26 MS. BOLAND: The second to last bullet here, one of
27 the ongoing things is we're monitoring licensees' deployment of

1 resources on a weekly basis.

2 DR. LARKINS: Is there a limit on the number of hours
3 security people can be on shift? because I've heard that
4 they're working 72/6 since 9/11, and it seems like that would
5 have a potential impact on their ability to perform.

6 MS. BOLAND: Right now there's no regulatory
7 requirements that cover security with respect to overtime.
8 They're not typically -- and I'll say typically because every
9 tech spec is different -- but typically they are not covered by
10 the technical specification on overtime.

11 I know that there are some initiatives --

12 MR. REYES: In Region II I can tell you, I won't say
13 all, but most licensees have recruited additional guards
14 because they realize that what appeared to be a temporary
15 situation is going to become a permanent situation, and it
16 takes a while to train these individuals, and I won't come up
17 with a number, but there is a number I can share with you in
18 private about how many guards have been added to each station,
19 and it's substantial, because of the long hours and
20 compensatory time.

21 DR. POWERS: We got some numbers from Watts Bar.

22 MR. REYES: Okay. You got that. Okay. In Region II
23 almost every plant has added about that number in addition to
24 what they had before because of that issue.

25 DR. LARKINS: It seems like it ought to be something
26 that's looked at in terms of reliability or --

27 MR. ROSEN: Absolutely. We have to think about what

1 we're expecting these people to do.

2 MR. REYES: It's in the plate.

3 MS. BOLAND: And we have our residents have their
4 eyes and ears open for any issues along those lines that arise
5 that they see, and they get back to us.

6 MR. REYES: We had some feedback after September 11,
7 not immediately, it wasn't long those issues did surface.

8 MS. BOLAND: And I think our licensees are actively
9 trying to --

10 DR. POWERS: Figure out how they can afford all this.

11 MR. LEITCH: My impression is that there's -- as we
12 speak there's almost immediate relief. In other words, some of
13 the people that were hired are just beginning to come out of
14 the training pipeline now, and I was talking to a licensee last
15 week who by July 1st really expects some significant relief to
16 this problem, which admittedly has been a difficult issue for
17 several months, but it should be coming to an end.

18 MS. BOLAND: Several of our licensees I know in our
19 routine interactions with them I've heard June, July, you know,
20 making changes, having additional people. I've heard the same
21 thing from a couple of folks.

22 Lastly, and I may not have characterized that exactly
23 right, I said rise in allegations. I would say a rise in
24 issues raised by public citizens relating to security. Some of
25 them don't meet the definition of an allegation, but we still
26 answer that person, respond to that person, but we have post
27 9/11 -- I think it's kind of tailing off a little bit now -- we

1 had a marked increase in people calling in with various things,
2 some more generic in nature that we would send up to
3 headquarters to have them incorporate into their review, some
4 that were very site-specific.

5 And it's a challenge -- Excuse me.

6 MR. ROSEN: Of course without telling us anything you
7 can't tell us, to me that set of words means something about
8 the plant staff itself saying that there's something wrong.

9 And you used some words that led me to believe we're
10 dealing with external, these are outside the plant, not
11 internal. I'd like you to clarify that.

12 MS. BOLAND: Yeah. We saw the -- I would say we saw
13 a rise in things coming from members of the public. We have a
14 fairly consistent workload in the security arena anyway in the
15 allegations area.

16 But we did get some concerns, you know, without
17 getting into the specifics of the sites and everything from
18 members of the plant staff asking many of the same questions
19 that members of the public were asking, or -- and we saw a
20 little bit of this post order -- because of the order being
21 safeguards and the provisions of the order people didn't quite
22 understand totally what's going on, so they'll say "Oh, I saw
23 this change, and it doesn't make sense to me," or "Am I sure
24 that it's, is it okay." They don't understand what all is
25 going on and why. But we still follow up on that.

26 And it's limited in the answer we can give them. All
27 we can say is --

1 MR. REYES: We have the same problem, we can't give
2 them the specific answer.

3 MS. BOLAND: Right.

4 MR. REYES: But we will say this is in compliance
5 with the NRC order, it is a change that is endorsed and
6 required by the NRC.

7 MR. ROSEN: And you tell them that while we want to
8 answer your question we can't give you the full details.

9 MS. BOLAND: And we try to explain that to them.

10 MR. ROSEN: Yeah.

11 MR. REYES: Most of them understand.

12 MR. ROSEN: Most of them understand that.

13 MS. BOLAND: So it's a mess.

14 DR. POWERS: I would say that generally a member of
15 the public thinks more things should be secret than what really
16 are. I mean I think they think more things are classified than
17 what are really classified, as a general rule.

18 MS. BOLAND: Future challenges. I think we've pretty
19 much touched on some of these.

20 Inspection follow-up on orders. We're still working
21 on that trying to also determine what resources it's going to
22 take to do that in total, how we need to do it.

23 Participation in the agency policy decision-making.
24 Vulnerability assessments. A lot of this has not been
25 finalized, but we have been discussing with the industry, going
26 out and doing table-top exercises force on force, the kinds of
27 drills in the long term --

1 DR. POWERS: Let me ask you about table-top
2 exercises. There has been criticism of table-top exercises in
3 just about every place that they're used.

4 MS. BOLAND: Right.

5 DR. POWERS: What do we have for a quantitative
6 demonstration that table-top exercises are in fact a useful
7 exercise, yield meaningful results.

8 MS. BOLAND: Quantitative?

9 DR. POWERS: Yeah.

10 MS. BOLAND: I don't have that answer, if there is
11 one.

12 You know, it's a tool that we utilize in the
13 inspection process.

14 DR. POWERS: And when we do that, and we do it in a
15 lot of areas. I mean it's not just in the security area.
16 Table-top exercises are used for emergency planning and things
17 like that.

18 But the question is since it has been heavily
19 criticized, not only individual table-top exercises but
20 globally the whole strategy, what theoretical or experimental
21 foundation do we have for thinking that it's any useful tool?

22 MR. REYES: Let me give you my view from observing
23 them.

24 DR. POWERS: Okay.

25 MR. REYES: And I don't know if this is a sufficient
26 good answer, but in my view what they do is they actually
27 engage the security workforce and the licensee, because it

1 includes the operations department and all that stuff, when you
2 sit down across the table and you have a mockup of the
3 facility, and you simulate, and you say you have so many
4 intruders this way, and so many intruders that way, how would
5 you strategize to stop this particular attack, it makes you
6 think through what you will do in that particular situation, so
7 if you ever encountered that at least you would have been
8 walked through and thought through.

9 Where I think licensees have the problem with is when
10 we end up grading them, or saying, oh, we added three more
11 ninjas over here, you know, and I understand that there's
12 subjectivity in the lack of perhaps defined rules of
13 engagement, but the exercise in itself I think it has a
14 positive effect in that you have thought through this, and at
15 least the ones that I observed my view was a success. I'm not
16 sure the licensee would agree with that, but it was a success
17 from the point of view that you have now security and
18 operations working through the mental process of if you are in
19 this situation how will you terminate or minimize the impact on
20 the station.

21 That particular exercise to me has a value. Whether
22 it's worth all the --

23 DR. POWERS: It's like I was sent off to management
24 training school they said, eh, the class itself is not as
25 terribly important that you have time to think about something
26 about this job of management, or this job of security, or this
27 job of emergency preparedness, whatever it happens to be is

1 where the real value is coming, and that's what you're saying.

2 MR. REYES: Yeah.

3 DR. POWERS: It gives everybody a chance to think
4 about it.

5 MS. BOLAND: And they're fairly -- I mean they get
6 down to times, seconds. You know, it allows you to get a big
7 picture view of their strategy.

8 And then many times during our OSRE programs we use
9 the information we gathered from the table-tops to look at the
10 actual response in the demonstration.

11 MR. REYES: We basically say show me.

12 MS. BOLAND: Yeah.

13 MR. REYES: And we actually execute it.

14 DR. POWERS: This is an interesting one to put in our
15 research pallet to prove what the value of these things are.

16 MR. ROSEN: Not a fire protection.

17 DR. POWERS: Lots of things aren't fire protection,
18 Steve.

19 MR. ROSEN: I know, but those are the things we're
20 here to talk about.

21 DR. POWERS: No, it's not, not exclusively.

22 MR. REYES: I have to apologize. I have a call that
23 I cannot skip, and I'll be right back.

24 MR. ROSEN: All right. We're going to take a break
25 anyway whenever you're done.

26 MS. BOLAND: I'm really done. The last one was
27 developing, retaining, and obtaining staff, and that's really a

1 function -- we've had some losses in our group. You have the
2 reserves, retirement, go into the utility --

3 DR. POWERS: If you weren't to mean to them --

4 MS. BOLAND: Yeah. That was before I came.

5 [Laughter.]

6 MR. LEITCH: I have a question about the authority of
7 the guard force, and I guess I'm under the impression, I don't
8 know if it's correct or incorrect, but there's variability from
9 state to state as to what the authority of the guards -- Well,
10 let me explain by example.

11 Suppose you're at the protected area boundary and
12 someone shows up ready to smuggle in a hand grenade or
13 something, and you detect that. Do you just send the person
14 away and say I'm sorry, you're not allowed in with your hand
15 grenade, and in the meantime call the local police and hope
16 they get there in time, or can you physically restrain that
17 person, and does that action vary from state to state, and
18 should it? Is there some federal action required in that area?

19 MS. BOLAND: I think the issue is the use of deadly
20 force varies from state to state, whether they can use deadly
21 force to protect the property.

22 Certainly if their being is being threatened they can
23 use -- if that's the real question, that varies from state to
24 state is the use of deadly force. And I know that that's on
25 the table with headquarters and they're looking at trying to
26 have regulatory action to try to --

27 DR. POWERS: It's a Senate bill.

1 MS. BOLAND: Yeah, and I know NER is developing a
2 white paper, I heard that a couple of weeks ago, on their
3 position on it, but it's going to take federal legislation.

4 MR. LEITCH: Okay. I just wasn't sure, and it just
5 recently came to my attention, and I'm glad other folks are
6 aware of it.

7 MR. ROSEN: How does your response answer this
8 question? You answered on deadly force.

9 MS. BOLAND: Yeah.

10 MR. ROSEN: Would it take deadly force? I don't
11 think so. It could, but it wouldn't necessarily. Essentially
12 the guard needs to say please sit down here, and emphasize the
13 word please, and --

14 MR. LEITCH: And if the guy with the hand grenade
15 says I'm out of here --

16 MS. BOLAND: I think as far as their constraints it
17 only is the use of deadly force constraints, to my knowledge.

18 MR. ROSEN: So you can do anything except shoot the
19 guy.

20 MR. CHRISTIANSON: Unless he's protecting himself.

21 MR. ROSEN: Unless he's protecting himself.

22 MS. BOLAND: Yeah. If he's protecting himself he can
23 use deadly force.

24 MR. ROSEN: You can handcuff the guy, for example.

25 MS. BOLAND: I believe so.

26 MR. CHRISTIANSON: I'm not sure that that's the case
27 in every state.

1 MS. BOLAND: I believe so. I don't know. I can try
2 to get you an answer there. I don't believe that there are --
3 you know, when you start talking about the owner-controlled
4 area versus challenging the PA there may be some issues there
5 as well as to what they could really do like out at the edge of
6 the owner-controlled area, then the threat to the plant is not
7 as increased.

8 But certainly they have the capability to respond. I
9 can get you an answer.

10 MR. LEITCH: You've answered me enough that I know
11 that the issue is on the table --

12 MS. BOLAND: It is on the table.

13 MR. LEITCH: -- and that further action is under
14 consideration.

15 DR. BONACA: Right now they carry a weapon.

16 MS. BOLAND: Yes.

17 DR. BONACA: So they must have procedures of the
18 conditions under which they can use the weapon. Is it only in
19 self defense?

20 MS. BOLAND: Their ability to use deadly force -- and
21 I want to stick to what I can really answer -- has variability
22 from state to state. But they do have response weapons that
23 can be used.

24 DR. BONACA: Sure.

25 MR. LEITCH: Once you're inside the protected area,
26 but the --

27 MS. BOLAND: The real issue is outside.

1 MR. LEITCH: The real issue is to repel them, you're
2 rejected from the protected area.

3 MS. BOLAND: And we do talk to the security staff
4 about the use of deadly force when we do our inspections.

5 I can get you a further answer on that if you need
6 it. But it is on the table.

7 Anything else?

8 DR. LARKINS: In your last bullet there, are you
9 looking for journeymen security experts, or do you bring in
10 younger folks and train them in this area?

11 MS. BOLAND: We most recently brought in a contractor
12 who clearly is experienced, came out of the Air Force, and then
13 multiple years with the NRC.

14 But at this point any hiring I would be looking for
15 would be an experienced security person, because we're already
16 looking at cross-training someone else from another discipline,
17 so I would be looking toward security experience.

18 DR. LARKINS: The reason I was asking is I was
19 recruiting for the agency, and several of the universities have
20 programs with people in security enforcement.

21 MS. BOLAND: Really the area that I see as being the
22 greatest area of need is someone who has experience with
23 strategy, vulnerability assessment, you know, somebody who's
24 done that for a living.

25 Do you know anybody? Just kidding.

26 MR. CHRISTIANSON: That concludes the security
27 issues.

1 On our schedule we're scheduled for a 15-minute
2 break.

3 MR. ROSEN: I wanted to ask about that. Do any of
4 the members feel they want to have one right now? If not, I'm
5 fine to go on. You can take them one at a time if you want to.

6
7 MR. CHRISTIANSON: Do you want a short break, like a
8 ten-minute break?

9 MR. ROSEN: We'll continue. Recognizing that a lot
10 of the members have to leave at four, I think what we'll do is
11 just keep on going.

12 MR. CHRISTIANSON: Okay. The next section will be
13 the Reactor Oversight Process Roundtable. Let's have the
14 participants sit at the table here.

15 [Participants are seated.]

16 What we envisioned for this roundtable is that we
17 have assembled a collection of a regional inspector, two
18 resident inspectors, a senior reactor analyst, basically two
19 branch chiefs, and then a division director, and what we wanted
20 to talk about is their personal views of the revised oversight,
21 reactor oversight process. And this is not necessarily the
22 agency's views, this is more their views of how they see the
23 process.

24 DR. POWERS: Do you want to take this one off the
25 transcription?

26 [Laughter.]

27 MR. CHRISTIANSON: I just wanted to make that clear.

1 Let me introduce everybody for you.

2 Steve Cahill, he's a branch chief from reactor
3 projects;

4 Binoy Desai who was here earlier, he's an acting
5 branch chief, and he's here as a senior resident for this
6 discussion;

7 Chuck Ogle is a branch chief, he's also the acting
8 deputy division director of the DRS right now;

9 Bob Schin is a senior inspector in DRS;

10 Scott Freeman is a resident inspector; and

11 Rudy Bernhard is a senior reactor analyst.

12 Do you want to go first, Bob.

13 MR. SCHIN: Good afternoon. As I was introduced, I'm
14 Bob Schin, I'm a senior reactor inspector, division of reactor
15 safety.

16 I have been a regional inspector with the NRC out of
17 the Atlanta office for fifteen years, and my experience is
18 primarily inspecting operations, engineering, and occasionally
19 other types of inspections.

20 Currently I'm primarily doing SSDI and fire
21 protection inspections, and occasionally half a dozen other
22 types thrown in. So that's basically what my experience is.

23 I want to give you a little disclaimer in that
24 preparing for this the way the ROP works is that my inspection
25 schedule is made out like a year in advance, and it's one
26 inspection right after another, so I had very little time to
27 prepare for this, and so that's why I spent very little time.

1 I didn't go check with all the other inspectors and
2 see what they thought; I didn't check with these other guys at
3 all to see what they were going to say. It will be a surprise
4 to me today what they say.

5 MR. ROSEN: You're doing exactly what we wanted.

6 MR. SCHIN: I'm glad that's what you wanted.

7 DR. POWERS: Your off-the-top-of-the-head comments
8 are probably the most valuable to us.

9 MR. SCHIN: Okay. Good.

10 MR. PLISCO: What's scary is you had the least time,
11 but you have the most slides.

12 MR. SCHIN: That's right.

13 [Laughter.]

14 MR. SCHIN: Anyway, first off I wanted to start out
15 with the new program, and I'm just going to explain it as seen
16 from my perspective as an inspector, not the overview numbers
17 or what anybody else is looking at, but as a traveling
18 inspector out of the region I see some benefits to the ROP.

19 First, it can improve public safety by allowing
20 findings for issues that might be very important to safety, but
21 not clearly required by a licensing basis. In other words, we
22 can have findings without violations. We're not limited to
23 show me the requirement as before.

24 MR. ROSEN: You just have to be making common sense.

25 MR. SCHIN: Right, and you have to show that there's
26 safety importance.

27 In other words, the regulations that we have and the

1 licensing basis are not perfect at these sites, there's holes
2 in them, and this allows us to get at those holes. Where
3 there's a public safety issue we can address it.

4 The second thing is that it encourages inspectors to
5 focus on more safety-significant issues by providing a
6 rationale and a method for just walking away from issues that
7 are not so important, that have minor safety significance. So
8 I think that's important.

9 Next I have some challenges, and of course the list
10 of challenges is more than what I said I saw for benefits, but
11 let me put it in perspective.

12 Whenever you start a new program, a big program it's
13 not going to be smooth. There will be bumps in the road, and
14 there will be glitches, and we had some, and we still have some
15 out there.

16 So some things I think were done reasonably well with
17 this program. We had a trial period, we got most of the big
18 bumps out of the way, but we didn't get them all out of the
19 way, and there are still some out there, and I would like to
20 focus on those.

21 First I noticed that the ROP creates a backlog of
22 unresolved items that get untimely resolution. We have -- when
23 we come up with an issue it can be unresolved now for both
24 licensing basis issues which we had before, and additionally
25 for safety significance questions, which is new. So we have
26 twice as many reasons to have something become unresolved, and
27 sometimes particularly with safety significance since we

1 haven't ironed out exactly how to handle that well. It takes a
2 long time sometimes to resolve some of these issues. So that's
3 a problem. We're working on it. Maybe over time it will get
4 better, hopefully.

5 Another thing is that I notice that findings can
6 present a potential negative impact on inspectors. There is a
7 lack of guidance and time allowance for resolution of issues
8 once you have an issue.

9 We tend to make these inspections schedules a year in
10 advance, and we're scheduled for one inspection after another,
11 and that timing works out fine if there's no findings. But if
12 you have a finding that times comes out of your hide, you've
13 got to address it, and it's hard, particularly if there's a
14 finding that could be potentially more than green, or that's a
15 contentious issue, and you now have more reasons to have
16 contentious issues with the safety significance as well as for
17 the licensing basis, the criteria.

18 So that's one problem. Sometimes you can feel as an
19 inspector like, gee, I've got so many issues on my plate, such
20 a backlog, and people are nagging me about what are you going
21 to do about this one, and why is this one getting overdue, and
22 in the meanwhile you're out on inspections, and you kind of
23 think, gee, I can't afford to have any more findings.

24 MR. ROSEN: It's a very, very bad thing.

25 DR. LARKINS: The URI is the same as your open I
26 inspection in the past?

27 MR. SCHIN: Right.

1 MR. LEITCH: And so now you just categorize it as
2 different.

3 MR. CHRISTIANSON: In the past unresolved items were,
4 they were unresolved because we had to determine what the
5 enforcement requirements of the issue were, or we had other
6 issues that we had to get additional information to make a
7 regulatory determination.

8 These can be unresolved, aside from being an
9 enforcement issue can be unresolved based on what the
10 significance of the issue is. They're basically the same.

11 MR. SCHIN: Any other questions on that?

12 Okay. I notice that the ROP is more difficult for
13 inspectors. You get challenged from the licensee first on
14 what's the requirement, and then second what's the safety
15 significance, and the safety significance part is something
16 new, and people don't have enough training or understanding of
17 it. We need probably better guidance training, examples, and
18 encouragement in that area.

19 And then underneath that there's a lack of sharing of
20 good findings, inspection report writeups and SDP analysis.

21 One problem is when you get into a new program
22 generally to have things -- it's always going to be bumpy, but
23 to have things run as smoothly as you can you need a lot more
24 communication back and forth, up and down the chain, and we're
25 lacking in some of that.

26 We don't see out in the field good examples of
27 inspection report writeups on findings of how the SDP Phase 2

1 was worked through, and all of that stuff.

2 DR. POWERS: One of the suggestions to address that,
3 you know, what's the experience -- what's the good experience
4 that other people had if we had an inspectors convention in
5 which inspectors from the regions would all get together,
6 various regions would get together for three or four days maybe
7 in which they would essentially share what they thought were
8 good findings, and difficulties, and challenges, and things
9 like that.

10 DR. LARKINS: They used to do that semiannually,
11 something like that, and it would go from region to region, and
12 all the resident inspectors and seniors would get together and
13 share experiences. Is that not --

14 MR. PLISCO: We still do that, we do it twice a year.

15 DR. POWERS: But that's within the region?

16 MR. PLISCO: Within the region. There's only ever
17 been one nationwide meeting.

18 DR. POWERS: Yeah, this would be a nationwide thing.
19 I mean it would be everybody because the problem is it's a
20 small sample problem that you've got within any one region.

21 MR. SCHIN: One thing that we don't have that we
22 could have is if there are good findings and writeups and
23 inspection reports where you have to basically explain how you
24 went through the SDP Phase 2, Phase 3, everything related to it
25 now with this new manual Chapter 0612, you know, somebody could
26 review those, there are findings out there, and pick some good
27 ones and send them out to everybody and say here are some

1 examples of some good ones and types of things. We don't do
2 that.

3 One thing that's notable is in our manual Chapter
4 0610, 0610*, and 0612 there are no examples, no inspection
5 report writeups. I mean every inspector when you give him
6 something new to do the first thing he says is show me an
7 example. We haven't done that, we don't do that.

8 DR. POWERS: It's the same way with everybody on
9 something new.

10 DR. LARKINS: Let me ask another question. then.

11 There used to be a group called the TAG, training
12 advisory group for training for residents, and base inspectors,
13 and requalification. Is that still happening? because that was
14 the group that would take comments from regions about modifying
15 the courses, making the courses more friendly, inspector-
16 friendly, and also consistent with the needs.

17 MR. CHRISTIANSON: The training advisory committee
18 has been suspended. What we just implemented in the last month
19 or two months is that you have a brand new inspection training
20 program, 1245, and that program has a built-in process to
21 provide feedback to routinely evaluate the program, update it,
22 and we just implemented that program basically in the middle of
23 April.

24 And so we're in the first phases of that new program,
25 which is hopefully going to address some of these issues.

26 DR. LARKINS: I used to be on the TAC, that's why I'm

27 --

1 MR. SCHIN: Another thing I noticed was I went
2 through the advanced PRA training, the training courses that
3 all the senior reactor analysts go through during the last
4 couple of years, and I noticed that it's not inspector
5 friendly.

6 The first course is P102, probability and statistics
7 for PR, and that one is notorious I guess, and my comment is --

8 DR. POWERS: It's not ACRS friendly either.

9 [Laughter.]

10 MR. SCHIN: You went to it?

11 DR. POWERS: I went to the syllabus on the thing.

12 [Laughter.]

13 MR. SCHIN: I commented to the instructors there, you
14 know, this is terribly disorganized, you have different terms
15 of different places, it's taught by guys who are good in math
16 and they get lost in the middle of a big equation on the board,
17 and so -- and it's not all, it doesn't follow the formula of --
18 the TTC does a good job of organizing training, and they have a
19 certain format, but this is totally opposite, different from
20 that.

21 So I asked them what -- you know, and the instructors
22 acknowledged that, yeah, this is not good, so I said "Well, why
23 don't you fix it?" and they said "Well, we need to get money
24 from the NRC before we can fix it," so I guess there's a holdup
25 there.

26 One thing that they've done is made it instead of
27 being a one-week course they've extended into a two-week

1 course, but still the training materials are the same.

2 MS. WESTON: Is this a contractor-taught course?

3 MR. SCHIN: Yes.

4 MS. WESTON: Okay, because we have one in-house also.

5 MR. ROSEN: If the utility tried to do what you've
6 described in their training program the National Academy for
7 Nuclear Training could lift their certification.

8 MR. SCHIN: I'm sure you got feedback from people up
9 at headquarters that go to the course, or I don't know if any
10 of you have sat in on it, but it's a good example of a bad
11 course.

12 And one problem is that it's the first course, you
13 have to take that before all the rest, it's a prerequisite, and
14 it kind of inhibits people, discourages people.

15 DR. POWERS: Well, on top of that I mean the problem
16 is one of motivation, that you take this chaos and probability
17 of statistics, there isn't a clue what you're going to do with
18 it later, so you don't know what parts are important.

19 MR. SCHIN: Right.

20 DR. POWERS: Then you take the other part, but you
21 were so confused on the other thing you can't figure out what
22 in the world they're doing with the numbers here.

23 I mean it should appear as, okay, we've done some of
24 the simple things now, we're going to do more complicated
25 things, and in order to do more complicated things we've got to
26 understand probability and statistics in more detail, and tie
27 it more to where it's going to be used, because otherwise I

1 mean it really was somebody trying to synopsise one of the
2 classic texts on probability and statistics rather than
3 thinking about what it was actually going to be used for.

4 MR. SCHIN: Right. You could probably take half the
5 stuff in that course, throw it out, focus on the other what's
6 important, and lay it out in an organized manner --

7 DR. POWERS: No more than half.

8 MR. SCHIN: -- make it easier. You take a somewhat
9 difficult subject for some people and we just made it ten times
10 as difficult with that course. It doesn't need to be that way.

11 And I think the way we're headed we're planning to
12 use that course a lot more, you know, send a lot more people
13 through it.

14 The next item is that I noticed that inspectors don't
15 seem to get feedback on ROP self-assessments. There is
16 something described in the manual chapter that there are
17 periodic self-assessments, and we don't get much feedback on
18 what's going on with the program, what improvements are being
19 made, that type of thing on a routine basis.

20 DR. POWERS: They produced a pretty nice report on
21 that.

22 MR. SCHIN: Is that on a Web site or something?

23 DR. POWERS: Executive paper. It's actually a pretty
24 nice report. It's not half bad. We should just mention to
25 them to get out to the inspectors, they would like to see it.

26 And there's another one coming out. So I mean that's
27 why we're here, we're gearing up for our input.

1 Just giving everyone the report doesn't sound like an
2 enormous chore to me.

3 MR. PLISCO: It's about this thick [indicating].

4 DR. POWERS: Yeah, but there's an executive summary
5 on it that's five pages long that's pretty good.

6 MR. PLISCO: Bruce is listening, he's taking notes
7 back there.

8 MR. SCHIN: The next bullet I have is that I notice
9 that licensee PRAs lack standards and quality. They contain
10 more errors than the FSARs.

11 On some of these SSDI inspections I picked out -- you
12 know, we'd go on an inspection and we'd look at PRA as well as
13 the FSAR, tech specs, design basis documents, et cetera, and I
14 actually found a number of errors in the PRAs, and that's not
15 surprising considering the lack of requirements and the lack of
16 review that they've had.

17 But we seem to be basing more and more on these PRAs,
18 and I notice that our inspection program does not include
19 inspector review of PRAs for accuracy, and this is some
20 opportunities to improve the PRAs.

21 In other words, if we included it as one bullet in
22 the SSDI inspection procedure to check the PRA and is it
23 consistent with the plant design, and does it have errors in
24 it, the licensee -- my original feedback from the licensee
25 where I looked at their PRA, they were a little upset, why am I
26 looking at this, there's no requirements to have it, you know,
27 and I said, well, if I find an error it won't be a violation

1 then. So I give you that information for whatever you want.

2 MR. ROSEN: You told the licensee here's the error,
3 and you pointed it out to their person who was responsible.
4 And what did that person say other than why are you looking at
5 this?

6 MR. SCHIN: No, no, they gave me feedback on it, they
7 handled it very well. They wrote a form, their own type of
8 corrective action form. It doesn't go in the official
9 corrective action program because there's no requirement to
10 have it, so it's not a condition adverse to quality. But they
11 have their separate program and forms for the PRA and for
12 errors that are found.

13 MR. ROSEN: Conditions not adverse to quality go in
14 some corrective action program.

15 MR. SCHIN: Right, but --

16 MR. ROSEN: It didn't go in there?

17 MR. SCHIN: No, the plant did put them in their
18 regular corrective action program.

19 MR. ROSEN: Putting things in your corrective action
20 system that are found by whatever source that are not up to
21 your standards is the way to improve your circumstance, and the
22 best plants do that.

23 Yes, Dana.

24 DR. POWERS: I'm just going to remind you here
25 there's quality, and then thee's PRA.

26 [Laughter.]

27 MR. ROSEN: For the record since we're off the record

1 I'm going to say that most PRAs have all the documents, and the
2 ones that are not as good as the others are being peer
3 reviewed, and the peer review process is quite robust, and that
4 process is improving PRAs around the country.

5 So even though Dr. Powers is joking about it, I don't
6 think he means the exact phrase he used.

7 DR. POWERS: Well, what Dr. Powers is definitely is
8 suspicious of is that the peer review process does not address
9 the issue raised here, which is how does the peer review
10 ascertain that the document called a PRA in fact reflects the
11 plant as built and as operated. It's just not happening.

12 MR. ROSEN: I would not agree with that judgment.

13 Let's go on to the next one.

14 DR. BONACA: One thing that comes back to me is from
15 the previous slide, inspectors get no feedback from ROP self-
16 assessment. We need to wonder how can we have the ROP self-
17 assessment without interest from --

18 DR. POWERS: It seems to me the self-assessment has
19 got to come from these guys from now on.

20 DR. BONACA: That really strikes me as something that
21 we have to be careful. I mean your feedback here is critical
22 of self-assessment. These are important observations, and some
23 are struck by the fact that there is this --

24 DR. POWERS: Well, I mean the senior reactor analysts
25 and the inspectors are the guys that are going to be able to
26 give the best assessment.

27 DR. BONACA: Right.

1 DR. POWERS: Maybe not this first time around. You
2 know, I grant this first time around, the first assessment they
3 had to do it within the community that had been working on it
4 and things like that, but in the future --

5 DR. BONACA: You already have two.

6 DR. POWERS: Yeah, but after this the future one -- I
7 mean the guys at headquarters that put together the ROP
8 shouldn't be involved in the assessment any more, it's the guys
9 that live and die on the thing it seems to me.

10 MR. PLISCO: A couple points too I want to make. A
11 lot of the data comes from the region, we provide it.

12 DR. POWERS: Sure. Of course.

13 MR. PLISCO: We collect it, our inspectors collect it
14 and we provide it. The branches do a quarterly collection of
15 the data, and we send it. So a lot of the data they use to
16 analyze we give them.

17 And as I said, we did have a meeting last year. Mike
18 Johnson who was the current at the time came and gave a two-
19 hour presentation on where they were on the self-assessment,
20 and what the results were at that point, because it is a moving
21 target.

22 DR. POWERS: Well, I think that's all appropriate,
23 but we're getting to the point where we've gone through a lot
24 of development effort. Now we're heading for a steady state,
25 and I think this small cadre doing the self-assessment is not
26 the right way to go any more. The guys that have to live with
27 it should be doing the self-assessment.

1 MR. CHRISTIANSON: In the inspection process the
2 procedures themselves are often providing feedback on the
3 specific procedures, and they get fed into the process, and the
4 procedure will get changed or modified based on what those
5 issues are, and we have seen that happen. Those things come
6 back responsive to it.

7 DR. POWERS: This is a subject we should definitely
8 should bring up with the commission on this, you know, as part
9 of our reporting to them. And, you know, this is important
10 stuff, and the way we go about it --

11 MR. MALLETT: I would add to that, though, that the
12 division of reactor projects along with the Chris
13 Christianson's division of reactor safety, they hold meetings
14 you bring in your senior residents and resident inspectors --
15 Is it twice a year?

16 MR. CHRISTIANSON: Twice a year.

17 MR. MALLETT: -- to not the routine resident
18 inspector meeting, but a special meeting to talk about what are
19 the lessons learned from the oversight process, what do we need
20 to fix, and how do we do that.

21 I thin, Bob, you all submitted that one time so far,
22 and I don't know what your plans are for doing it again.

23 So there are other self-assessments besides this
24 overall self-assessment. I wanted to make sure you have an
25 understanding of that.

26 MR. SCHIN: But one thing is, you know, in any week
27 half the inspectors aren't here, so when we have a meeting a

1 lot of people miss it. It's good to have something like on a
2 Web site where you could take a look at it.

3 What we do when we have the monthly regional
4 administrator meetings, put out information, then we put a
5 summary on the Web site.

6 MR. MALLETT: Bob is right, we are sending that
7 feedback back to the inspectors.

8 MR. ROSEN: Go on.

9 MR. SCHIN: Okay. Let me continue. One thing that I
10 noticed early in this inspection program, the ROP -- this is
11 back in 2000 and 2001 -- is that when I was leading different
12 inspection teams licensees were coming to me, and obviously
13 they didn't understand what we were doing different, and they
14 were concerned about what are we doing, what's this ROP, what's
15 going on here, we don't know, and so I put together a little
16 presentation that I gave at some of the sites to try to fill in
17 the communication gap.

18 We also were trying to promote better communication
19 with licensees, with the public, et cetera, so I thought okay
20 maybe this will help, and I drew some simple thing up and
21 reviewed it with my branch chief and division director, and
22 then I presented this at some of the sites, and was surprised
23 at how much interest that I got. I mean I got a room full of
24 people that were interested in listening to this. Even a site
25 vice president came to one of them. They were just really
26 wanting information on what in the world are we doing.

27 But basically I said, okay, on these engineering-type

1 inspections, the SSBI, and fire protection inspections, first
2 we look at the design of the plant in the office, we prepare
3 for at least a week in the office and we're looking at risk,
4 and the PRA, the IPEEE. In fact, we're looking more at risk
5 than what we used to as far as selecting what we're looking at,
6 how we're going to look at it. We look at the FAS, our tech
7 spec design basis documents, SERs, fire hazards analysis, et
8 cetera, all these things in the office.

9 Then the second week we go to the site, and when we
10 get at the site we look at actual conditions that we can find
11 there, the installations in the plant, walk it down, look at
12 drawings, calculations, test completed surveillance,
13 maintenance history, corrective actions, all these type of
14 things.

15 One feedback that I got from this one site vice
16 president, he says, you know, you guys come here to the site to
17 see everything you're looking at it and it looks exactly as
18 before, I don't see anything different. This is what you used
19 to look at before. And that was true, that part is true. I
20 said yeah, you're right, we look at risk more on the front end
21 and you don't see that because that's before we get here.

22 And then on the back end as we come up with potential
23 issues or differences between the FSAR, or the SERs and what we
24 see in the plant, the calculations, and the drawings, et
25 cetera, then we have to evaluate that, and this is where risk
26 comes in.

27 MR. ROSEN: You're two slides back. You jumped

1 ahead.

2 MR. SCHIN: There it is. Okay.

3 This is where risk comes in again, and we look at to
4 see if there's performance issues based on risk, or
5 noncompliances based on requirements. Now, the noncompliances
6 are the same as what we did before, but the risk part is
7 relatively new, and then we said, well, what's a performance
8 issue. They were very interested in that.

9 So we made up a definition. This was, you know, like
10 a year and a half ago, and in fact the NRC had no official
11 definition until a few months ago when we came out with that
12 Chapter 0612.

13 MR. ROSEN: Does it look anything like the one you've
14 got there?

15 MR. SCHIN: Actually it does, it's not much
16 different. The words are a little different, but the meaning
17 is about the same.

18 MR. ROSEN: That's not a bad definition.

19 MR. SCHIN: Well, what we said was a performance
20 issue is where the licensee did something that they should not
21 have done, or that they failed to do something that they should
22 have done that resulted in an increase in risk, that that was a
23 CDF.

24 MR. ROSEN: Or it doesn't work.

25 MR. SCHIN: Right, or it doesn't work.

26 But in other words clearly if there wasn't a
27 requirement, there was some basis for determining that they

1 should have done something, they got an operating experience, a
2 feedback that they should have responded to, or there's some
3 industry standards that they should have adhered to, that they
4 should have known better type of thing.

5 MR. ROSEN: The only thing I would add to that
6 definition that if the licensee did something that they
7 shouldn't have done, or failed to do something that they should
8 have done that resulted in an increase in risk delta CDF alert,
9 or increased an uncertainty.

10 VOICE: Yeah, that's a good point.

11 MR. ROSEN: And made where they are in Bruce's place
12 less certain by failing to do something, but that's another
13 dimension you might want to think about.

14 VOICE: We haven't got there yet. We have a hard
15 time handling a change in the CDFs.

16 MR. SCHIN: At this point we might have a hard time
17 discussing that with the licensees without something, some kind
18 of guidance that we can show them.

19 DR. POWERS: There you've got no help at all to give
20 the licensees who typically do an uncertainty analysis as part
21 of their PRA, and certainly none of the other documents that
22 you're looking at today really address the issues of
23 uncertainty.

24 MR. SCHIN: Right. So that's all I have.

25 MR. ROSEN: Bob, I think that's great stuff, Bob, I
26 really congratulate you on doing that. I'm sure your manager
27 is listening.

1 DR. POWERS: He would have overwhelmed us if we had
2 given him a week to think about this, wouldn't he.

3 MR. CHRISTIANSON: Scott.

4 MR. FREEMAN: I'm Scott Freeman, and I'm as he said a
5 resident inspector. I'm at the Oconee site which I guess you
6 all talked a little bit about this morning.

7 I have three different screens listed up there. I
8 want to start with the second one, the inspector procedures
9 allow good planning time. What I see as the program is set up
10 to do is go through the modules, and it gives you a chance to
11 prepare for each individual inspection as you go through.

12 And by that I mean you can pick out the items you
13 want to look at by going to the daily meetings, reading the
14 corrective action documents, touring the plant.

15 It's also said to give you a chance to review
16 procedures and drawings to be able to compare, and so when
17 you're out there looking you know what you're looking at. That
18 part I like.

19 Also I like the quarterly reports. They free up a
20 lot of time to be allowed to inspect, whereas when we were
21 doing the six-week inspection period before we spent a large
22 chunk of the inspection period writing the report from the
23 previous one, so I think this quarterly report is a good thing.

24 Also the top bullet there, the process is geared for
25 looking at items that are important to your coordinators. Bob
26 talked a little bit about that. Okay.

27 The challenges I want to talk about were related to

1 the planning part. A of things can interrupt the planning
2 time, takes you away from research into the drawings and
3 procedures and all, and what happens when that goes on is that
4 I think the inspections aren't as thorough, because you still
5 have to get a certain number of samples done. What happens is
6 you either have to look at a corrective action document and
7 follow it, something that happened at the plant and follow up
8 on it, and there can be some value added there if you look at
9 something different than what the licensee had, like if the
10 licensee responds to a problem and the inspector doesn't agree
11 with it he can get some value there.

12 But what's missing from that is it's taking away from
13 the concept of looking where they don't. When you can look
14 ahead and plan by reviewing procedures and drawings you can
15 actually look at things the licensee doesn't want you to look
16 at. I think there's a lot of value in that.

17 And the other thing that can happen is you get up
18 against a crunch where you still have to get the samples done,
19 and you haven't had enough time to really compare, you just
20 kind of go out and look at something that you picked up from
21 the morning meeting almost just to get it done. I don't know
22 if there's a lot of value in that, so that's a concern I had on
23 challenges.

24 Things that affect the planning time, I've got six up
25 there, but it's really two blocks. It's travel and then all
26 the other things.

27 Now, the travel has increased because staff

1 reductions are going on. Less mean means more travel because
2 the inspectors still have to support the other yearly
3 inspections like the SSDIs that Bob mentioned and those kind of
4 things.

5 Travel is often needed to help inspectors develop and
6 maintain objectivity. What that does is it takes time away
7 from research and inspection planning, because even when you
8 get back you have you have administrative-type things you have
9 to do to get back in the flow of it. So that was one comment.

10 The other items there, these yearly inspections,
11 allegations, Phase III SOP support data, and supporting the
12 risk analysis takes a lot of time, especially if you get into a
13 complex issue.

14 Assessments, management visits. Now, those things
15 are all necessary, and I understand that they do have an impact
16 on our planning.

17 So that was my challenge there.

18 DR. POWERS: There's a fundamental rule that no
19 problem is so bad that it can't be made worse by a little
20 management attention.

21 [Laughter.]

22 MR. FREEMAN: This one up here, maintenance rule
23 inspections are a little different to me than the others
24 because they are geared at looking at failures and trying to
25 find out how the licensee categorizes them, and from my
26 experience there's a long time lag in between there, so it
27 requires keeping track of them as they happen so that you can

1 come back and look at them later. That's what that means.
2 That's a planning challenge.

3 That's all I had to present.

4 MR. ROSEN: Okay.

5 MR. MALLETT: I did want to add on the management
6 visits, not as a defense but just to let you know, we embarked
7 on this program to make sure that the managers -- we have
8 always had branch chiefs go out on the site visit, and we have
9 also embarked on senior managers going to the site, and that is
10 an impact, something we have to review, but we believe that
11 putting more emphasis on going to the exit meetings for this
12 new program to make sure we have direct insight as to what the
13 issues are. That's paid off for us a lot.

14 We don't have as much interaction as we used to have
15 before the SOP program. One of the things it did was give us
16 interaction with the licensee managers and residents, so now
17 this is a way of forcing us to have those interactions.

18 It's an impact, but I think it was a necessary one.

19 MR. FREEMAN: They're beneficial, but they are an
20 impact, a balancing act we maintain.

21 DR. LARKINS: Are there any issues that have come up
22 in implementing the maintenance rule, or is it now things like
23 configuration assessment maybe more than a particular piece of
24 equipment out at a time. There's a section in the -- I don't
25 recall exactly, but in a maintenance report that --

26 VOICE: A-4.

27 DR. LARKINS: Yeah, A-4.

1 MR. DESAI: If I may, there is something called the
2 risk meter that I think a lot of licensees have gone to that
3 manages on a day-to-day basis based on -- you know, they have
4 plan for Train A, Train B, this week it's Train A, and the risk
5 is managed by planning it out such that all attempts are made
6 to not take out equipment simultaneously.

7 MR. ROSEN: That's based on the PRA model.

8 MR. DESAI: Based on the PRA model. And then if you
9 have things that come up that were not planned then put into
10 that risk meter and the risk meter chart is recalculated and
11 visibly posted at least at the site that I'm at, and also I'm
12 finding out at Duke sites that that is discussed quite
13 frequently. So that is part of the planning process.

14 MR. CAHILL: There's also a contrarian view, I mean
15 there's a wide spectrum.

16 It really depends on the licensee's I guess buy into
17 the concept of this. We have some licensees that were like
18 that before A-4 even came into effect and was a requirement
19 they were doing this essentially anyway because it was just
20 good management practice to do it.

21 And we have other licensees that have never liked the
22 maintenance rule from day one, don't believe in it, and have
23 been reluctant to implement any parts of it, waiting until the
24 last possible minute.

25 And we have licensees that, you know, that lay out a
26 schedule for the week, but it's very rudimentary, and when
27 things change or they change the times or something they don't

1 really robustly go back and look at it and, you know, they
2 don't let the operators mess with it. They say it's a
3 distraction, the operator says we'll allow some other group to
4 do it which is not real time.

5 So there's a still wide spectrum of how licensees
6 handle that.

7 DR. BONACA: There is an explanation. There's a
8 requirement that you take more than a certain member of the
9 point of the service there are risks associated with that.

10 And also looking at the risk of not managing the
11 risk, especially for the reason to further criterion about how
12 much you can allow your CDF to up, but certainly many utilities
13 have been using certain criteria self-imposed to assure that
14 there is some rule that they follow. You're telling me that
15 this is not really truly accepted?

16 MR. CAHILL: Yes. There are certain licensees that
17 made an investment in good tools for their people that can do
18 this online real-time and the right people -- when I say the
19 right people the operators because they're the ones that take
20 the equipment in and out of service -- have access to it.

21 There's other licensees that don't have this
22 computerized, they still rely on a matrix.

23 There's other licensees that are not really doing
24 this real-time, they lay out a schedule for the risk report and
25 they evaluate that like three weeks ahead of time, and then
26 they don't really --

27 VOICE: Isn't there a requirement in 5065A-4 to

1 assess the management program maintenance --

2 MR. CAHILL: We have had numerous findings in the
3 area, but they very often screen out as minor because there's
4 no consequence to them. I mean very often the licensee does
5 not factor in that this pump broke on Tuesday when they weren't
6 planning that, and they don't evaluate that, but when you look
7 into it usually the significance is if it breaks --

8 MR. ROSEN: There will be a time when it's just the
9 wrong combination when you'll be able to --

10 MR. CAHILL: Many of us have been giving licensees
11 the message that you got away with this one this time, you
12 know, there was no consequence --

13 MR. ROSEN: The boss that didn't hit you.

14 MR. CAHILL: -- but the framework you've set up could
15 allow a big one to violate A-4, and then --

16 DR. BONACA: That notification am I to assume was
17 something very specifically placed in as an expectation, and
18 maintenance rule particularly on the fact that, you know,
19 they're fooling around with --

20 MR. CAHILL: It's like any rule you have, there's
21 certain degrees of compliance. You can have minimal
22 compliance, you can have full embracement of it, up and beyond.
23 That's what I'm trying to point out.

24 MR. ROSEN: Can you give me a characterization in
25 Region II of whether you think half of the plants have fully
26 embraced the modern techniques, or a third, or 10 percent, or
27 what's it like?

1 MR. CAHILL: I would guess the majority. As I said,
2 there's --

3 MR. ROSEN: When I asked that question at Watts Bar
4 yesterday I didn't get a particularly enthusiastic response I
5 thought.

6 MR. CAHILL: I used to be a resident inspector at
7 Watts Bar.

8 MR. ROSEN: Can I get an answer to my question? I
9 asked the question about what do you think characterized the
10 region in terms of are half of them or more doing modern risk
11 model?

12 MR. CAHILL: I would say greater than half.

13 MR. MALLETT: It would be greater than half just
14 based on my perceptions. One of the problems we have with the
15 TVA facilities is the risk model they use to develop their IPE
16 is not real conducive to doing ten-minute evaluations as far as
17 -- you know, south Texas has the same kind of model, but they
18 ran 10,000 iterations to come up with a solution, whereas TVA
19 can run it in three days, so they don't embrace it to the
20 extent that another utility who has a model that's easier to
21 use embraces it, and they are more the exception in Region II.

22 The TVA facilities in their initial iteration were
23 using the risk matrix as opposed to using any sort of
24 calculation tool.

25 DR. BONACA: The issue to me is very important
26 because it is truly certainly significant because they're
27 changing the configuration of the plant. You are taking the

1 liberty to do it, you know, at will just because they have a
2 need for pulling out equipment which really was not supposed to
3 be through that. Those plants were not designed to do on-line
4 maintenance.

5 And this is really important, this is an issue that
6 has potential for having true problems because of the way
7 they're pulling out equipment without understanding what
8 they're doing.

9 And so I still worry about, you know, compliance and
10 your opinion with A-4 in emergency planning, and I'm not saying
11 it's not important, but it's more like, you know, do you do
12 what you said you will do. You are not getting there on a risk
13 significance, and I think that really troubles me.

14 You know, I have an insight a little bit from past
15 experience, I thought Region II had some examples of this in
16 place, and you're telling me that they haven't.

17 MR. ROSEN: No, they do. Some of the plants are
18 doing well.

19 MR. MALLETT: We have a whole gamut of plants and
20 using risk to take equipment out of service for maintenance or
21 whatever, and some of them are very good, the latest model, and
22 some of them are still down in this manual mode I guess we're
23 considering them, but they all have some tool.

24 I don't want to leave you with the impression that we
25 have plants that don't have a tool. They all have some tool
26 for considering risk.

27 MR. ROSEN: Well, they have to meet A-4, but the

1 question is what are your standards for not writing a finding
2 against A-4, and you need to look in the mirror and decide
3 whether you might not have high enough standards.

4 I say that collectively for the whole Region II.

5 MR. PLISCO: And the tools in it too, we have plans
6 that have elected to not even go into A-4. You know, the
7 exception about you don't have to do the analysis if you want
8 to take out one train, they have decided we're never going to
9 do that, we're not going to even go there. It's a simplistic
10 approach, but it's conservative. Some have elected to do that.

11

12 MR. ROSEN: If they can stay open doing that, more
13 power to them.

14 MR. MALLETT: We raise it with them. It's just a
15 question of whether you should raise it as a finding.

16 DR. BONACA: You mean within the meanings of tech
17 specs?

18 MR. PLISCO: Yeah, there's a statement in A-4, I
19 forget what the words are, sort of when you get to go do the
20 analysis if you only take one train it's with in the AOT, you
21 don't need to -- and some have elected that that's as far as
22 we're ever going to go, we're not going to -- you know, unless
23 something -- I mean sometimes things break, but as far as for
24 planning purposes --

25 MR. ROSEN: What do they do then when they've taken
26 one thing out and another train, the same train, then they're
27 in 303. Right? I mean they have to shut down possibly,

1 depending on the tech spec, and they have no argument for, you
2 know, coming in and saying they haven't changed their tech
3 specs with an allowed outage time because they don't know
4 anything about risk, they haven't come and asked the NRR to
5 change, give them a new set of tech specs that will recognize
6 this risk.

7 So they're sitting there with two things out of
8 service. The only conclusion is get that thing back within
9 whatever is allowed by the tech spec, they're prepared to go to
10 mode 3 or whatever the tech spec requires.

11 MR. DESAI: See, a lot of times it doesn't have to be
12 the redundant component that's raised causes the risk go up.
13 It could be something that you really didn't even think of.

14 MR. MALLETT: Also I don't want to leave the ACRS
15 with the impression that we're not addressing this issue with
16 these licensees. We do, it's just that the leverage we use may
17 not be an enforcement letter or noncomply. We do address it
18 with them, and hopefully they'll take the message and go back
19 to management and in some cases they'll keep delivering that
20 message to them.

21 MR. ROSEN: You said greater than half?

22 MR. MALLETT: From my perspective greater than half.
23 I mean I have the outliers in there for the most part.

24 DR. POWERS: I used to be maintenance branch chief
25 for the baseline inspection programs, and it's probably
26 adequate to say that more than half of the sites here in Region
27 II comply with the intent of the maintenance rule in the sense

1 they integrated their maintenance rule into the regular design
2 change process for the maintenance processes, whereas the ones
3 we have -- so these people are later, and that's okay, legally
4 okay.

5 Those people have not gotten the bang for their buck,
6 probably haven't gotten the value out of it, but it's legal to
7 do it that way, and that's a big thing I think with the
8 maintenance rule today because the performance RA. Like Steve
9 mentioned you can have an evaluation that is not very good, but
10 it doesn't cause something from an enforcement space, our
11 space, and there's very little we can do. So right now the
12 main control itself because it's performance based they can
13 have these procedures, we may not follow their procedures, but
14 it doesn't violate the rule itself. There's very little we can
15 do except talking about it, so today the maintenance rule
16 itself is not the easiest rule to enforce on those sites that
17 won't take the intent of it, they need to let it alone, the
18 intent is very difficult to get those people to meet the
19 intent.

20 MR. MALLETT: I would add that all of what is in
21 Region II based on our inspections comply with the maintenance
22 rule. We just believe they're walking a fine line in doing it.
23 That would be my experience.

24 And you're right, we do need to keep our eyes on the
25 ones that are walking that fine line.

26 MR. CHRISTIANSON: Binoy Desai is the next senior
27 resident to talk about his perspective of the ROP.

1 MR. DESAI: I guess I want to just take that part of
2 managing risk a little bit forward.

3 My resident asked me one day if they should, or
4 rather we should be inspecting a risk like we inspect ALARA,
5 which is as low as reasonably achievable, and I don't know the
6 answer to that. Anyway, I don't know whether we're going there
7 some day or not.

8 With regard to risk, I guess something --

9 DR. POWERS: I raise an interesting question. That
10 is an issue, are we going as low as reasonably achievable in
11 risk basis as a direction.

12 MR. ROSEN: Is that a question for me?

13 DR. POWERS: You understand these risk things, you
14 understand Risk 102.

15 MR. ROSEN: I think the answer to your question is
16 that management has to manage many things, including ALARA, but
17 it also has to manage risk, and so it finds a level of risk
18 that's comfortable.

19 And there's two kinds, at least two kinds of risk.
20 One is financial and the other is nuclear safety, safety risk
21 to the public health and safety as well as to its own safety.
22 In many cases those are the same people, the people who work at
23 the plant are the same people who live around the plant.

24 So management finds a level of risk that it is
25 comfortable with, and manages to that level, and I think that's
26 sometimes is -- it's not exactly in the ALARA concept, it's a
27 level of risk that management is willing to accept.

1 It's clearly way below what's required, what's
2 allowed by the tech specs, much lower than that.

3 DR. POWERS: Recognizing that it's lower, it's
4 reasonably achievable. ALARA is achievable.

5 MR. ROSEN: I don't think the concepts are exactly
6 analogous.

7 MR. DESAI: You see, the way we look at risk is it's
8 not just planning, but even if their high risk item is planned
9 or a combination, there are certain precautions that go with
10 working on that particular pump that the maintenance crew has
11 to have a certain brief, make sure have double verification
12 before they touch that fuse, or that, you know, whatever it may
13 be. And that's what managing risk is to me, not just planning
14 that you don't take these two components out, but if you have
15 to the planning associated with the job has to be much more
16 robust and so forth.

17 The other impression I get, and it's a little bit
18 hard, is sometimes I feel that it's more risk-based as opposed
19 to risk-informed. In other words, we find ourselves in a box
20 most of the time, especially in processing SDPs or resolving
21 issues that it's really not risk-informed, there is no
22 management or any reliance on your visceral feelings about an
23 issue because this is what the risk computer is giving us, and
24 this is what we have to live by. So it's more risk-based as
25 opposed to risk-informed.

26 I think I have similar thoughts that my colleagues
27 have shared here. The ROP forces inspectors to focus on

1 safety, so it gives us a little more credibility.

2 Findings are safety-emphasized over compliance.

3 It has allowed or enabled inspectors to get involved
4 in areas that we potentially could not have looked in the past,
5 such as flooding.

6 There was an issue of manholes at Brunswick, and
7 there was some safety-related cables within the manholes that
8 were found to be damaged, and it required substantial
9 corrective actions on the part of the licensee.

10 MR. ROSEN: Why you wouldn't have been able to get
11 into that before? damage to safety-related equipment.

12 MR. DESAI: This is more in terms of the ROP. The
13 attachment or the inspection procedures specifically asks us to
14 do that.

15 The PI program has, you know, it obligates the
16 licensee to report quarterly, I think has shifted some load
17 from the inspector to the licensee, so I think that subtle
18 aspect as well in terms of our time.

19 Provision for filtering out minor violations, they're
20 not documented, no licensee response required, so I think it
21 has worked well for us as well as the licensee.

22 On the negative side the same things, issues higher
23 than green taking excessive time to resolve, or for that matter
24 issues that were thought to be higher than green which may turn
25 out to be green later on are also taking in fact more time to
26 resolve.

27 Time limits on inspection hours that are charged

1 associated with an attachment, but there does not appear to be
2 any time limit on a post-identification. You know, once your
3 inspection is done you've got tons and tons of hours to ad
4 nauseam dissect the issue, but you only have this much time to
5 inspect the issue.

6 I think Bob Schin mentioned the nonstandard PSA, you
7 know, Ocone versus Robinson. You know, we may not be counting
8 similarly.

9 And then the preliminary SDP that the inspectors do
10 may not be the best way to handle it, and I don't know if any
11 of you have gone through the manual Phase 2 SDP evaluation that
12 the inspectors are required to do, so if you haven't it may be
13 just for humor's sake maybe worthwhile to do it.

14 I don't know what it would take for us to have a
15 simple program that we could use.

16 DR. LARKINS: I thought we heard earlier today that
17 this preliminary screening, that the inspection was to help
18 separate out the wheat from the chaff early on and provide some
19 prioritization of those things to focus on. So you're saying
20 that this is not a worthwhile effort?

21 MR. DESAI: No, it is a worthwhile effort. The
22 outcome is worthwhile, but the process that we go through is
23 cumbersome I guess is what I'm saying.

24 MR. ROSEN: If you can't push this thing through that
25 number two screen, you try a couple of times here, try here,
26 and here, turn it sideways and try to push it through and it
27 won't go through, and you just say that's too hard, put it over

1 there, and then go the SRA. I think that was really the
2 intent, wasn't it?

3 MR. MALLETT: That's not the way it works.

4 DR. LARKINS: The SRA is overloaded with stuff. He
5 won't accept something unless he has it on a piece of paper.

6 MR. DESAI: There's a way around it which is through
7 hook or crook make the issue yellow, and they will jump to it
8 right away and --

9 [Laughter.]

10 DR. POWERS: This is called safety culture; there's a
11 way things are supposed to be done, and then there's the way
12 you get business done.

13 DR. BONACA: I have a question. What happens -- it
14 looks at each issue as an SOL event, so for example you may
15 have an issue that is significant, but assume that it is the
16 third or fourth time that the same kind of condition happens,
17 the corrective action problem of the plant that identified it
18 as very significant would cause evaluation from the stand why
19 does the failure progress that continual issue. But the
20 significant identification process would say you should, you
21 know, we don't melt the plant, we're not killing anyone, and so
22 it's nothing. How do you feel about that? I mean how do you
23 deal with it? I mean you clearly have a way to -- how do you
24 feel about that?

25 MR. DESAI: Well, let me take a shot at it. What
26 that would perhaps imply, and this is what inspectors do, is
27 that we're no longer dealing with that issue now, we're looking

1 at licensees' overall corrective action process, and that does
2 not give us a lot of faith in licensees' corrective action
3 robustness to solve a real issue that may come up. That's how
4 -- that's one approach to handling that, and perhaps having
5 some leverage over the licensee.

6 MR. SCHIN: Let me try to also -- there's a lot of
7 situations where there may be repetitive issues or multiple
8 issues that all could affect the same mitigation strategy or
9 event or something.

10 And the truth is we don't, the process doesn't tie
11 all those together, we don't -- if we have multiple issues that
12 rise to more than green, however the action matrix does tie
13 them together -- I mean it counts multiple whites as if it were
14 an entire level, so that's one place where they do get tied
15 together anyway.

16 But the answer is, and even if we have an issue
17 that's repetitive we look at, we tend to look at -- my
18 understanding is we look at the safety significance of the
19 issue separate from that they failed to correct it, and you can
20 run that through the SDP.

21 The significance, the lack of corrective action
22 doesn't -- at least in the past didn't go through the SDP.
23 That was one of those noncolor findings, and they struggled
24 with that.

25 DR. BONACA: But for example assume that that they
26 are the bottom of the line, and they go through the process of
27 you find that there's no safety significance, but another

1 misalignments, if you have a number of events like that then
2 one of them will be most significant, it keep your CPF very
3 high, or look very high. See, that's not any more are we
4 talking about a corrective action program, something about the
5 fact that there was misalignment can be in fact very
6 significant, and if you have a facility that repeatedly falls
7 into that kind of situation we see some of it because our
8 procedural issues, alternative issues are suddenly you've got -
9 - you know, that's the problem there about the fact that we're
10 not capturing that.

11 And the last question I have is if you have your
12 choice would you put that personal direction in significant
13 process or not, or would you handle it outside of that?

14 MR. SCHIN: You're right. Right now if we have ten
15 valve misalignments and none of them is significant it doesn't
16 become a significant issue.

17 MR. REYES: Let me add to that. We have a plant just
18 like that. That's where I get involved because it becomes a
19 management issue.

20 We have a vice president here telling me about how
21 the trend is going, the root cause analysis, what are the
22 contributing factors, and all that, so in this country you know
23 not like other countries we do not have rules on management
24 like the United Kingdom has, the French, and others, but that's
25 what happens that it becomes -- I agree with you, it becomes
26 beyond the risk examples, it becomes a high-level issue for
27 management.

1 DR. POWERS: Luis, you recognize that when you have
2 the vice president in here for coffee and you talk about
3 positioning that has an impact.

4 MR. REYES: It's not for coffee.

5 DR. POWERS: It has an impact. It's regulation.

6 MR. REYES: And that's exactly how you have to deal
7 with it when it comes to this consistent --

8 DR. BONACA: But even from a peeristic [?]
9 perspective there much more frequency event, you know, what
10 happens of misalignments they would be effectively in the
11 peeristic assessment if you have a higher CDF.

12 So if you look at it as an outside event the PRA is
13 telling you it's not significant. If you look at it as a
14 frequently-repeated event you could model that in PRA and say,
15 ah, because it is in fact something that this facility happens
16 on a high frequency there is a CFF frequency is higher. Right
17 now the significance, of course it doesn't do that, it doesn't
18 take into account that.

19 MR. REYES: We are being questioned by the commission
20 what does the sea of green mean, and it gets to your point that
21 if you have a lot of green findings is that, what is that
22 telling us, and that question is on the table right now. I
23 can't tell you what the answer is going to be from the program
24 point, but it has been raised how do we deal with a sea of
25 green, how do we deal with a lot of --

26 DR. POWERS: Can you live with success, or is it
27 fooling you and it's not really success? In the area of

1 findings green is not synonymous with good.

2 MR. REYES: That's right.

3 DR. POWERS: In the translation, and it's something
4 that gets forgotten all the time, and when you're colorblind
5 you really hate colors, because green is no good in the area of
6 findings.

7 MR. CAHILL: One aspect of the ROP to go back to your
8 original question, if you get individual findings that are
9 greater than green level you could basically aggregate those to
10 a cross-cutting issue. It's not the most effective mechanism
11 because it doesn't have much teeth with it, but if you had the
12 example you talked about, and we've had similar ones and
13 started down that path, the misalignments for example if it's a
14 human performance root cause for each one of those that's not
15 being addressed that is one of the predetermined cross-cutting
16 issues that could affect multiple cornerstones, and if you have
17 individual findings of greater than green then you can take
18 those at assessment time and roll them together and develop a
19 cross-cutting issue to more facilitate what Luis was getting at
20 to tackle that head-on and manage it.

21 It doesn't address, it doesn't put it back into the
22 SDP and calculate a change in numbers, but -- I'm sorry.

23 MR. BERNARD: There is an inspection we perform also
24 where we take a look at how well the utility has handled the
25 corrective action on all the green findings, so we go into the
26 problem identification resolution, it gives us an opportunity
27 to identify the things we're talking about also.

1 DR. BONACA: When you do the evaluation you do an
2 analysis of the facility --

3 MR. BERNARD: When we're looking at findings, we have
4 the opportunity to bring up things like the performance when
5 we're evaluating the findings, we put that in the report, and
6 than at assessment time those get looked at like we talked
7 about.

8 MR. CAHILL: And another point, though, the way the
9 ROP deals with that it has prevented a lot of abuses because
10 having been an inspector in both processes I know in the old
11 days when we had things that repeated inspectors were very,
12 very prone to roll those up and bump them up to a much higher
13 level, so we had stuff that truly even if you could do the risk
14 numbers like you would like to do still would not be risk
15 significance if they happened every day at the plant, but we
16 could make a mountain out of that molehill, and so the current
17 threshold doesn't really address that, it has reduced the
18 abuses.

19 DR. BONACA: Now, the licensees today that take those
20 events and put them into the corrective action program, do you
21 track for example what they recognize repeat events? Do you
22 look at that corrective action and how they're dealing with
23 that, and their closing these issues? It's not easy for you
24 to --

25 MR. CAHILL: If there is a license, an LER, a
26 licensee report, or if it was related to a finding that we had,
27 or even if it was a license finding those would be in our

1 system, and in the inspection that Rudy alluded to we would
2 look at how they addressed all these, we would roll it up then
3 and see.

4 MR. ROSEN: A place where your resident could go find
5 out what's going on in repetitive stuff is to go to what they
6 call in some places a management review committee, or it's
7 called a condition review group where three or four of five key
8 department managers sit there and look at today's condition
9 reports, the ones that came in, and get a sense of what they
10 are worried about in that corrective action program.

11 I mean that's right at the heart of the beast. If
12 you go in there and the resident spends some time at those
13 meetings I think that would be very productive.

14 MR. MALLETT: Our resident inspectors do that. In
15 fact, they also will have through some system a way of saving
16 some of those issues for the problem identification resolution
17 inspection to be looked at, to follow up on.

18 MR. ROSEN: You don't want to remind them of that
19 corrective action system, but you do need to --

20 MR. MALLETT: That's a way of polling the system.

21 MR. ROSEN: -- -- to be monitoring, that's your job,
22 and that's a good place to be, get the big bang for your
23 inspection hour buck.

24 MR. FREEMAN: That was my point earlier about
25 planning. You need to be, the resident needs to be there every
26 morning looking at the corrective action documents. We could
27 have an independent look at them and going to the meeting, and

1 if you don't do those in a routine manner then you can track
2 these things and --

3 MR. ROSEN: Keep your finger on the pulse, and you
4 start seeing the same things they're seeing.

5 MR. FREEMAN: That's what I was saying planning is
6 important.

7 MR. CHRISTIANSON: I would like to have Rudy Bernhard
8 talk about the SRA's perspective.

9 MR. REYES: You've told us you want to go to four
10 o'clock, so we have 45 minutes for two topics, so at your
11 pleasure we can go ahead.

12 MR. ROSEN: Forty minutes for Rudy, and five minutes
13 for you.

14 [Laughter.]

15 MR. REYES: I have been talking all day long.

16 MR. ROSEN: Why don't we go ahead and move on, and
17 then we'll come back and ask for comments.

18 MR. BERNARD: I passed out a little comedy relief.
19 It's interesting, I only had to insert one word in this. I
20 just put the word "risk" in front of informed. Everything else
21 was already the same way. But there's a lot of wisdom here.

22 Once again, this topic is my perceptions. I'm one of
23 the original SRAs that the agency made, and there was a comment
24 earlier that let's get some comments back from the regional
25 guys because they weren't part of putting together the program,
26 but I was up with Dr. Mallett helping to structure the original
27 ROP, so I do have some idea of from whence it came.

1 And to me risk informed really is meaning that risk
2 is another input into the management process and the decisions
3 that are made, and it should be a tool that's used to make sure
4 correct decisions are made in a consistent manner, but it is
5 just a tool.

6 Inconsistencies and a lack of trust in the tool can
7 result from misapplication of the tools. I have already heard
8 some talk earlier today addressing some of my pet peeves with
9 tools, so we'll get to those in a few minutes.

10 Right now we've got a tool that's shown itself to
11 work fairly well on internal event models where the deficiency
12 results from the loss of function for a well-defined period.
13 You've got a pump that's out there that's broke for fourteen
14 days and six hours; we can do that risk analysis provided you
15 want to know what the effect is on internal CDF.

16 If you want to start looking at the external models
17 then you've got some problems because there's inconsistencies
18 in how it was developed from site to site.

19 But fortunately about 80 percent of the SDPs we look
20 at -- and it's not the ones that are out there for a year
21 waiting to get solved -- 80 percent of the ones we looked at
22 were franking out in maybe four hours or five hours, sometimes
23 fifteen or twenty minutes if we could just use a simple risk
24 achievement in order to get the answer.

25 But it's not that 80 percent that gets solved while
26 we're on the phone that get the attention, it's the ones that
27 get extended over a year. So from a positive side the way

1 we're doing SDP works pretty well 80 percent of the time.

2 It doesn't work as well for some of the other cases
3 with less well-defined boundary conditions, and those are the
4 cases where, gee, was the diesel really functional or non-
5 functional.

6 We have indications that, you know, the bearing might
7 be going bad and they didn't take the right action, and then in
8 hindsight it did go bad later, but what is the real performance
9 deficiency that we're analyzing, is there actually a guarantee
10 that this thing is going to go to failure, or is there a just a
11 likelihood this thing is going to go to failure, and if there's
12 a likelihood what percentage do you want to assign to it.

13 I used -- fire comes to mind as an example. We pump
14 all kinds of assumptions into our fire analyses, to assign a
15 probability to the initiating event frequency of a fire, what's
16 the likelihood of getting a hot short, gee, I've got an
17 analysis that says if you get a hot short within three to
18 fourteen minutes it's going to go hard ground.

19 Well, that's a change of condition, it might have
20 made the valve go closed, and maybe when the ground valve goes
21 back open you've got all these changes of states you're looking
22 at.

23 What percent of the room is involved in the fire?
24 How effective is the fire brigade? What circuits are involved?
25 I've got some analyses I've done where we have to assume that
26 the fire is engulfed in flame to the extent that they have to
27 go remotely and turn on fire sprinklers, but the next

1 assumption is this circuit over here doesn't get burned up,
2 because what I want to do is I want to get to a point where I
3 damaged that in another way because that was a performance
4 deficiency. It wasn't a fire, it was something as a result of
5 the actions of fighting the fire.

6 Another thing that drives me nuts is what human
7 actions do you assign to the human error probabilities in a
8 fire brigade. I mean you've got HRA stuff with the guy in the
9 control room running the procedure. What's gonna happen when
10 this guy is out in a room that's getting testy and there's
11 smoke everywhere, how likely is he to follow all those actions.
12 We don't have any guidance on that at all.

13 So really what you've got is you don't have any of
14 these things very well defined with respect to calculation of
15 actual risk.

16 What we have is we've got a lot of fire studies that
17 have put bounty values on these, or best guesstimates on these
18 things, but when you're trying to determine with conservative
19 being as close to reality as you can get as far as risk space,
20 not assuming the worst -- you know, conservative and PRA
21 spaces, how close to reality can you get, and I've got to go
22 ahead and take a base case and subtract that from some
23 deficient condition I come up with this delta, and I've got
24 these huge uncertainties frequently what I'm doing is I'm
25 coming up with point estimates where the uncertainty band is up
26 to two orders of magnitude higher than the number I'm
27 delivering to management for them to make a decision on. Okay.

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And this is the nature of the process we have. So these are kind of some of the things that are -- well, when you start going and trying to find those assumptions that's where the time comes in. You're going to spend a good while trying to get all the state of the art data out on what these numbers are and try to apply them in models. And that's where, you know, whether we're looking at what the likelihood of a nonseismic pipe breaking in a seismic event at the plant that was never designed to, and we have some output from it, those numbers aren't readily available. So we spend a good bit of time trying to research that, and we end up developing backlogs on things that are approaching state of the art in the calculations.

And that's where we're running into problems. 80 percent of the time we're knocking these things out in good time. The rest of the time it's tough.

And then once again the other point, we're only passing point estimates, we are not doing the uncertainty analyses associated with them.

And so one way to do that would be instead of telling everybody to calculate the uncertainty the other way to look at it would be to say, gee, if I have a CDF number and I subtract it from another CDF number, and then I go ahead and I drive that through to come up with a LERF process the uncertainties associated with LERF are going to be higher than the CDF. When I subtract the two my agency goals are on the order of

1 magnitude less than they were for CDF, I'm dealing with either
2 the minus 6 threshold on CDF, my work was either the minus 7, I
3 know my uncertainties are going to be even higher, so I'm
4 dealing with -- I'm looking for 1 either to the minus 7 and
5 I've got a plus or minus either to the minus 4 on my
6 uncertainty terms, and Engineering 101 tells me you should not
7 be using that number to base decisions on.

8 So if you combine that with the thoughts we had
9 earlier on the model tendencies, the uncertainty associated
10 with the different models and the assumptions that the utility
11 uses for their models with 1200 to 3500 basic events, or the
12 internal NRC models with 650 basic events with the SDP with 35
13 basic events, and you end up finding the uncertainties can
14 frequently drive the answer, and the assumption can drive the
15 answer.

16 There is also a perception that has come up recently
17 where the Phase 2 SDP sheets, people are expecting those things
18 to come up with the real answer, and back when this system was
19 put together those were supposed to be a screening tool to
20 eliminate a whole bunch of stuff coming to the SRAs because you
21 can't look at every deficiency.

22 MR. ROSEN: We really don't know the answer is plus
23 or minus a factor of 10,000. It may be 10,000.

24 MR. BERNARD: What we were trying to do was just use
25 that as a screening tool, but now there's people that seem to
26 want to use that to come up with --

27 MR. ROSEN: You're asking too much of the Phase 2

1 sheets.

2 MR. BERNARD: Once again, look at the limitations of
3 the tools, and if the tool is not precise enough to give you a
4 numerical answer we can still come up with some great insights.

5 You know, you look at the fire analyses, they've
6 still got some good insights that tell you where to go tighten
7 up, where to go look at stuff. If you want to go look for
8 LERC, we can come up with insights that tell you certain
9 components are real important, and if you go out you ought to
10 be concerned.

11 But if you're not appropriately using the tool and
12 looking at the limitations of the tool when you set your
13 criteria and thresholds I think there's danger.

14 So let me sum up real quickly. I think I've really
15 basically said it that if the air bands are too high use risk
16 insight, not the risk numbers, and depend on other input into
17 the management process.

18 And the other word of warning is I heard something
19 earlier that indicated steady state in the process, and my
20 thought there is that small incremental changes are a lot
21 better than step changes, and then a period of stagnation until
22 another step change is required.

23 So the caution would be is that we should not be
24 looking for steady stake, we should be looking for a process of
25 continuing improvement on this, and its tools are developed
26 that have lower uncertainties, and you can find application for
27 them go ahead and incorporate the use, don't be afraid to make

1 changes.

2 That's all I have to say.

3 MR. ROSEN: I think this panel has been very, very
4 useful. I'm just delighted to hear what you guys are thinking.

5 MR. REYES: I'm not sure we're done yet.

6 MR. ROSEN: Luis, you're up, or your --

7 MR. REYES: We have a little bit of management view
8 of this.

9 MR. ROSEN: We'll get the rebuttal.

10 [Laughter.]

11 MR. REYES: I think you're going to find that I agree
12 with them.

13 MR. OGLE: I'm Chuck Ogle, I'm a branch chief in DRS,
14 and Steve Cahill who's the branch chief and Warren are going to
15 add some comments, too.

16 But I think you will find that management generally
17 has, or shares some of the same feelings that inspectors do.

18 If you'll look at the slides on the positive we have
19 talked a lot about risk significance, looking at the right
20 things.

21 To build on something Binoy says, it's better as a
22 manager to be in a position, it increases your credibility with
23 the licensee, with the public and the inspectors if you're
24 arguing that, hey, we're looking at something that's important.

25 One of the other products that I've seen come out of
26 the ROP, and Scott did a good job talking about this, is
27 planning. We're doing a lot better job planning for

1 inspections, we're doing the up-front work. It was a conscious
2 decision as part of the ROP. As part of the roll-out of the
3 ROP we expect the inspectors to do a lot better job planning,
4 and I think it leads to better inspections.

5 I don't think we're where we want to be yet, we still
6 have a lot of distractions, but I think it's good. We know, or
7 the inspectors should know that they're being held accountable
8 to accomplish what's in the monthly inspection procedures, and
9 they have to plan that, plan ahead to get these things done.

10 One of the things that has not been discussed by the
11 inspectors is that there's now an emphasis that is different
12 than before on sticking to the inspection procedure.

13 On the ROP, part of the roll-out for that was, hey,
14 we expect the inspectors to accomplish what's in the inspection
15 procedure.

16 Before what we had in the old inspection procedure,
17 or the old inspection process I think was a lot looser in terms
18 of what inspectors did and what they were charged to do.

19 Now there's more, they need to do these various
20 inspection procedures, they need to do a sample size of three
21 of these, and six of these, and four of these, whereas before
22 when I was an inspector you went out and you looked at
23 something and you sort of figured out, well, what was the
24 closest thing that you could charge your time to.

25 And I think that gives management some comfort that
26 at least to some degree that there is some consistency in the
27 inspection program as it's applied across the different

1 utilities in the region.

2 You know, there are obviously different capabilities
3 in inspectors, different interests, different curiosity levels,
4 but I think now knowing that we have at least some baseline and
5 that we're sticking to the procedures that we feel better that
6 the things that we think are getting done are getting done.

7 MR. PLISCO: We used to say we met the intent of the
8 procedure, and that could mean a lot of things. And now
9 there's a lot more rigor to it.

10 MR. ROSEN: Any utility that told you that, you would
11 have a lot of questions for them.

12 MR. PLISCO: Yes.

13 MR. OGLE: And the final point I would like to cover
14 on the positive is dealing with the findings, and the
15 inspectors talked about that, and I think that the NRC always
16 has done a good job, at least this region has done a good job
17 on the big deal.

18 If a big deal comes along we had a process, you know,
19 we knew how to proceed from A to B to C, and we did a real good
20 job of it.

21 I always when I was an inspector felt very
22 uncomfortable with the things that were not a big deal, and I
23 think the ROP, one of the major strengths of the ROP is that it
24 gives you a method to look at it, any item that comes up, or
25 most items that come up, and say okay, this is why it's not
26 important, or this is why we should proceed this way.

27 So I think it should for inspectors give them a

1 little more comfort that, hey, there's some process that they
2 decided not to follow up on, and a year from now, or a year and
3 a half from now they're not going to get a big inquisition as
4 to why they didn't make a big deal out of it. So I think
5 that's a real strength.

6 MR. CAHILL: It makes it easier for us as a branch
7 chief dealing with inspectors that there's a clear criteria.
8 Before it was find something that was a violation of some
9 requirement, but the message you're really trying to send was
10 somewhere else. You got the violation to hang your hat on, but
11 you can go with some other aspect.

12 Now it's you've got to look at the regulatory aspect,
13 you've got to look at the risk aspect, they are two well-
14 defined arenas, and if you can't force somebody to do that then
15 we drop it. It makes it a lot easier for those things that,
16 you know, was the inspector's pet peeve in the past that he
17 could make some regulatory tie to it, but there was obviously
18 no risk whatsoever.

19 Now we can say it, there is no risk, that this is
20 minor, we're not going to pursue it. It makes it a lot easier
21 for the management/inspector interface to come to a final
22 conclusion that everybody agrees with.

23 MR. ROSEN: Just getting through the day.

24 MR. OGLE: Okay. On the concerns of the areas that
25 are not so rosy, we talked about this -- Rudy warmed up to this
26 -- all the SDP tools were not ready and still aren't, and I'll
27 say no more than the fire protection SDP was not. I've had

1 personal involvement in that, that's more than enough.

2 The feedback process. part of the ROP was a feedback
3 process. Hey, inspectors, you go out, you do these inspection
4 procedures, you see something that doesn't look right, write up
5 this form, send it in, and we'll put it in the process and
6 we'll make things better.

7 Well, inspectors are very good. If we tell
8 inspectors to bring us a rock they will bring us a rock,
9 they're very good at that. And if we want a blue rock they're
10 very good at blue rocks.

11 And they went out, and they brought --

12 DR. POWERS: If you can define it that way.

13 MR. OGLE: Well, that's management's problem.

14 But they wrote a lot of feedback forms, and they went
15 into the process, and they didn't come out right away, and I
16 think we lost some credibility with the inspector. You know,
17 we promised something the we didn't deliver.

18 You know, there's a lot of other things that were
19 going on at the time, but I think we lost a lot of credibility
20 with the inspectors writing these things up, and I think they
21 became somewhat cynical and said, hey, you know, why bother
22 trying to get these things changed, it's not happening. But
23 we're starting to see that moving through the process a little
24 better.

25 I have had the distinct advantage of being both I'm
26 projects and DRS here in the region during the ROP, and my
27 observation is that the inspectors in DRS are not as well

1 prepared, or were not as well prepared as the DRT inspectors
2 were for the implementation of the ROP, and I don't know why.
3 I don't know if it's the amount of inspections, I don't know if
4 it was the focus, I don't know who was involved, but I think
5 we're catching up, I think we're doing more in DRS to do a
6 better job, but I think there's definitely a dichotomy that
7 exists.

8 Another concern I have is processing -- Rudy again
9 talked about this, and it was talked a little bit about during
10 the fire protection thing -- are these models correct when
11 we're making these decisions. Is it green, it is white, is it
12 yellow, is it 10 to the minus 7, is it 10 to the minus 5th.

13 You know, there's assumptions, we've not verified
14 these things, there's large uncertainties and, you know, we get
15 in these discussions about powers of 10 and it's like what's
16 the foundation for all this, do we know that it's true. And
17 it's somewhat discomfoting at times.

18 We talked a few minutes ago about what about things
19 that don't fit into the risk management, things that happen
20 over again. Every inspector that's sitting in this room can
21 tell you about things they have seen that don't look right, and
22 that bother them, but if you try to put them in the ROP they
23 may not fit. What do we do with those? Right now we don't do
24 a whole heck of a lot with them unless they rise to some level
25 that we're really concerned about.

26 I talked about the benefits of sticking to the
27 inspection procedure. One of the downsides of sticking to the

1 inspection procedure is inspector initiative.

2 It used to be that it was a very prominent of the
3 inspection program to go out and follow your nose. If
4 something didn't look right, you went out and you looked at it.

5
6 And now we have a more prescriptive process. We have
7 a safety culture here, we believe in it, you know, we emphasize
8 it with our inspectors, but I have a question in my mind what
9 do we give up when we have a very prescriptive process that
10 says give me three of these and six of these, and what does
11 that do for individual inspector initiative.

12 We've shifted from a mode of go out and inspect, and
13 bring us back issues, and tell us what's going on to, okay,
14 accomplish this and then bring us back issues. So there's a
15 subtlety there that I'm not sure what we're getting for.

16 And we have already talked a little bit about the --
17 Bob did a good job talking about the documentation guides. We
18 have procedures on how to run inspection reports, but if
19 somebody wants to go copy what's it supposed to look like.
20 It's frustrating.

21 Do you guys have anything else you wanted to add?

22 MR. CAHILL: Just two things I wanted to add.

23 One is a point I didn't make clear when I was talking
24 about Farley before, but one of the successes of the ROP is it
25 allows us to engage on the docket as the regulator in areas
26 that we really couldn't before based on the licensee's
27 performance.

1 Remember the first three points I talked about with
2 Farley were all performance indicators, they all got those
3 white performance indicators based on their own performance,
4 and it allowed us to engage them on the docket, have public
5 meetings, and I think effect some valuable changes at that
6 site.

7 And I didn't make clear in my presentation before,
8 but one of the common themes that linked all of those
9 performance indicators was Farley's philosophy on maintenance
10 rule implementation and system engineers.

11 System engineers is the simple point to talk about.
12 Their previous vice president did not believe in system
13 engineers, he thought they were a waste of overhead, that
14 design work should be done by design guys, and operators were
15 the system engineers.

16 Consequently, there was not anybody that owned the
17 systems like a traditional system engineering role, and nobody
18 was on top of these things. Hence the cooling tower collapse
19 problems. There was nobody that was really on top of those
20 things waving the flag that these things are really in bad
21 shape, we need to do something.

22 And those other issues were all, that thread was
23 through all of those. Now Farley has system engineers for
24 virtually all their systems, they actually hired a lot of new
25 folks, and I guess didn't readily admit it, but saw the mistake
26 that they had made in the past.

27 But that was an issue we had known for years before

1 the ROP. We knew that Farley didn't like system engineers, and
2 they would assign people as system engineers basically paying
3 lip service to it, but not really meeting the intent of it.

4 So this allowed us to actually take something we knew
5 was not quite right, but really could never do anything in
6 regulatory specs with it before, now we got to do something
7 about it.

8 MR. ROSEN: It was revealed through performance
9 issues, their performance.

10 MR. CAHILL: Yes, got them right there. I mean they
11 dumped it in our lap.

12 One negative thing that I see with the ROP, and we
13 touched on it a little bit before talking with Dr. Bonaca, it
14 has taken away the ability to take a broad programmatic look at
15 things, you know, looking at these repetitive issues, or you
16 get a lot of different data points, and it more alludes to what
17 Chuck was talking to before about inspector initiative.

18 You know something is not quite right, you've got a
19 lot of different data points and it spreads across the board,
20 but you don't have something that's truly risk significant.

21 In the past we used to lump those together and make
22 something out of those, and sometimes that was warranted, but
23 we don't really have that ability -- we sort of do now if
24 things rise to a certain threshold as we mentioned before about
25 cross-cutting issues, but we don't really have that ability to
26 take that broad swath and put things together until they rise
27 to a certain threshold.

1 But on the flip side like I mentioned before that was
2 also pretty abused in the past.

3 MR. ROSEN: Yeah, I think it might have been, but I
4 think you do have that ability, but you haven't seen it yet
5 because it's too early in the implementation for the region,
6 for the whole country.

7 But I think at some point when you get six, eight,
8 ten quarters then if something smells like a duck, looks like a
9 duck, waddles, you can go in to Luis and say this is a duck,
10 and here's why, and he has the ability to put things together
11 on a management level even though no two things hook together
12 just exactly right.

13 In other words, I'm saying built into this process
14 over time, longer time scales than they're talking about here,
15 you will begin to develop an ability to make those kinds of
16 connections and take actions with them. I hope.

17 MR. CAHILL: In the past you could do it more out in
18 the open on the docket. That goes on quite frequently, and we
19 do exercise that now, but it's a difference in the way it was
20 done.

21 MR. ROSEN: I take your point.

22 MR. PLISCO: The only comment I wanted to add is it
23 helped our communications process with the public and with the
24 licensees, because I think our communications are clear because
25 of the risk focus. It's easier for us to describe why we're
26 involved in an issue, why it's important to us and our
27 documentation. I think that's helped us in communicating the

1 issues.

2 One side benefit we've seen, and a lot of this I got
3 from feedback from the resident inspectors, is when we changed
4 the documentation threshold of what's in the report and then
5 the filters that we have now for issues that get raised up in
6 our inspection reports one of the things we didn't anticipate
7 was a lot of licensees now are much more receptive of the
8 lower-level issues and the feedback they get from the resident
9 inspectors because they now no longer have to fight about
10 whether it's going to be in the report or not, or what the
11 agency is going to do with it.

12 Now that we have this well-defined threshold many of
13 the resident inspectors have told me that when they go to the
14 licensee and there's a lower-level issue, something we call
15 minor that's not in the report, the utilities are actually more
16 receptive with those issues and put them in their corrective
17 action programs and address them because they don't have to
18 deal with all the peripheral stuff that used to happen in the
19 process.

20 MR. ROSEN: And they don't have to deal with
21 licensing implications. They've just got another solid input
22 about something they can correct in their plan. That's a good
23 thing.

24 MR. PLISCO: But that was something we didn't
25 anticipate, but that's been a side benefit.

26 MR. ROSEN: I would say more than a side benefit, a
27 singular benefit.

1 Anything else anybody else wants to say? No?

2 Luis.

3 MR. REYES: I just want to close here on schedule. I
4 hope that the presentation by the staff was to your
5 satisfaction. We made sure that none of these individuals are
6 shy, and they bring to you a unique perspective.

7 Let me just give you a perspective. I've been doing
8 inspections for the NRC for the last 25 years, so I can give a
9 view.

10 The revised oversight program is the best inspection
11 program that I have been involved with. It's not perfect, and
12 we still have some challenges. We talked this morning or
13 through the day of the significance determination process.
14 Especially we have put a lot of work in security that seems to
15 be much improved. Fire is still a challenge we need to work
16 out.

17 I think the staff presented to you some issues that
18 still need to be addressed. Some if it is tool limitation.
19 Some of the tools we have right now the technology is not there
20 yet, but in terms of overall I think this is the best
21 inspection program I have worked with going back 25 years. It
22 has allowed us to do some certain things that we just couldn't
23 do before.

24 Now, I think it's working this well because the
25 performance of the facilities also in those 25 years I have
26 seen a big change in the performance of the facilities, and I
27 just don't think we could have had this process twenty years

1 ago.

2 But the timing is right, I think the performance is
3 there, the tools are there. I think our sophistication of
4 dealing with issues has improved.

5 We do have some room to grow, we're still sending
6 people to school, and sometimes we have difficulty talking with
7 Rudy and getting every word of it, but it is going in the right
8 direction and overall is a very good program.

9 Now, you heard today all the room for improvement we
10 have, and we will continue to do that.

11 I guess in terms of closing I hope the meeting was
12 informative and your visit yesterday. I want to invite you
13 again. I would like you to visit some of the other plants, or
14 come here to the region. We like the exchange. We actually
15 took back some feedback from you. We have quite a few things
16 that were very beneficial; it was very beneficial to us that
17 you came here to visit.

18 For those of you who would like to see our emergency
19 center afterwards if you have time, we will be glad to show you
20 that facility. We use it on occasion; we used it a lot after
21 September 11th. We do use it a lot during the summer season of
22 because hurricanes, we have a lot of coastal facilities, so we
23 spend a lot of week ends there monitoring the situation, but we
24 would like to invite you to see that.

25 MR. ROSEN: Luis, could I ask some questions? not
26 just for you, but for the whole staff, overview kinds of things
27 about the ROP.

1 The first one is do you think that it will continue
2 to improve performance of the fleet of plants in the region?
3 Could you address that in terms of the best plants, and maybe
4 the not-so-best plants.

5 MR. REYES: I think overall it will for a couple of
6 reasons, and I'll speak for the Region II plants. These
7 comments are based on my one-on-one interface with the
8 utilities we deal with; I can't tell you nationwide.

9 But the utilities we deal with are in this business
10 for the long term, and they understand that their actions,
11 decisions, implications are for the long term.

12 I think a good example is that most of the plants
13 that have licenses renewed or are in the license renewal
14 process are in this region. I think that speaks for itself.

15 The ROP I think is a perfect program for plants that
16 are performing very well and the licensees are willing to look
17 at things for the long term, and what it allows us to do is not
18 only do the routine program, but for those issues that we
19 talked about where management has to get involved, when I have
20 to get involved, it's much, much easier for me to convey the
21 regulator's concern, our perspective on the issues, and I think
22 the answer to your question is I believe yes, that the plants
23 will continue to improve, and this program allows us to do
24 that.

25 A couple of things that happened early on in the
26 program, and it was a plus to the licensee and to us to some
27 extent, but we have had white findings on issues that are not

1 covered by the regulations, and the licensees have taken action
2 to improve their situation at the plant on a white finding that
3 we couldn't issue a violation on because you couldn't have a
4 nexus through to the violation, so it was a situation where we
5 have identified risk-significant issues that resulted in
6 hardware identification or changes in the processes at the
7 plant that under the regular traditional process we couldn't
8 even touch them.

9 MR. ROSEN: You couldn't connect it to compliance.

10 MR. REYES: Correct.

11 So based on those experiences I think this will
12 continue to help us improve.

13 MR. ROSEN: Do you think that goes for the best
14 plants and the not-so-best plants?

15 MR. REYES: I think so because what turns out to be
16 is that quickly you find out when the plants that are not
17 performing as high start getting white findings, performance
18 indicators that are white and it's very visible, very visible
19 not only to the public, to the financial community, to the
20 company executives, and it gives a prominence that was not
21 there before, and it forces individuals who become outliers to
22 move further.

23 Now, you have to have a company that is in business
24 for the long term and has that kind of vision to get that drive
25 through, and for the Region II plants I will say that that's
26 been our experience that we have quickly seen plants that we
27 showed to you through the day who have had white findings and

1 white performance indicators rather aggressively move into
2 resolve the risk issue and resolve the performance.

3 We have had a positive experience here. I don't know
4 what all my colleagues will tel you about that, but for this
5 subset of plants, about a third of the plants in the United
6 States, I think it will be very positive.

7 MR. LEITCH: Luis, let me add one thing. I think
8 also a key we talked about at times today, and the key is to
9 not be stagnant but to always review are we doing the right
10 thing, and that's a key thing we're doing in this ROP that we
11 were not always doing in the old program, we're evaluating
12 continuously are we looking at the right thing, what do we need
13 to change. You have to keep that in the process to deal with
14 the changing environment.

15 MR. REYES: A good point. And we get a lot of
16 feedback from the staff, you heard some of it today, and we
17 take it back and try to address those areas that need fine
18 tuning. No question with such a massive program, a change
19 it's not going to be perfect out of the starting block, and we
20 still have some issues to work with.

21 But I think the staff has been very good in giving us
22 feedback where we need to change, and the program office for
23 that matter, I think most every place we have engaged them they
24 have been responsive. We would all like to have it done
25 tomorrow, but the reality is that you can only work on so many
26 things, but we have had a positive response from them on our
27 suggestions. We have seen some changes in the program from the

1 beginning.

2 We are working on some pilots to make more changes in
3 the program. We didn't have time today to talk about the
4 consolidated radiation protection inspection, but felt that
5 that was an area where we made the switch we were still making
6 too many inspections for radiation protection, they were not
7 well coordinated, et cetera, et cetera. We have devised -- as
8 permission from NRR to try to do something else. We have put a
9 program together, a pilot in about six plants, and we're
10 getting ready to provide our results to the program office to
11 consider some changes in that direction, so think Bruce has a
12 good point that we always need to continue to work in making
13 this better.

14 MR. ROSEN: Could I ask one last question. This is
15 really the last, and it's the hardest.

16 You know we all are struggling with the Davis Bessie
17 situation, and we don't have the full facts in yet, and there's
18 a number of staff efforts and other efforts to look into what
19 really went on there.

20 The worry we have, or I have is that it will
21 continue, the ROP and other processes will in fact continue to
22 improve performance in general across the board, and I think
23 that was your answer to my question.

24 We worry that it's not suited for identifying really
25 declining performance in every case. Somehow this Davis Bessie
26 situation alarms us that something is wrong with the ROP.
27 Something happened up there, but we don't know what it is, that

1 all the indicators didn't go red or yellow long before this
2 happened, and there wasn't an effort to head it off, and so we
3 got into a situation we don't ever want to repeat.

4 So I know this is not a fair question because you
5 don't have all the information, so how can address -- can you
6 even try to address -- and I'll accept an answer, I'll take
7 your answer that you don't know yet and we'll come back to
8 that, but I'm really worried that the ROP is not the place to
9 identify really declining performance where a plant for some
10 reason gets off into the ditch and doesn't even know it.

11 MR. REYES: We have always through the years, through
12 the 25 years I've been doing this worried about that, and in
13 fact through history we have had some oversights, and I don't
14 know -- there's five or six different reviews ongoing by
15 different groups on Davis Bessie from Congress to our own
16 processes, so I think we need to wait to learn a little bit
17 about that.

18 But I'm not quick to condemn the ROP. I think there
19 are some elements in the Davis Bessie situation that how we
20 implemented it, and I'm talking to you from 23 years ago I was
21 a resident inspector at Davis Bessie, the first one ever, so I
22 have seen this vessel head in its early stages of operation
23 when it was brand new.

24 But I think we need to take a hard look at how we
25 implemented it. I'll give you a good example of something that
26 it dawned on me there's a change, and I'm not sure we have
27 conveyed that to the staff real well.

1 For example, the performance -- and this is one of
2 those unintended consequences -- the performance of the plants
3 have improved so much, and I'll speak for the plants in this
4 region, we have plants in this region that either load fuel for
5 18 months or 24 months, and they actually breaker to breaker,
6 and we have no access to a lot of components, a lot of parts of
7 the plant, and then they go down for three weeks and they come
8 back up, and again run for a year and a half or two years.

9 MR. ROSEN: This is good.

10 MR. REYES: Yeah, this is good, and that's an
11 unintended consequence. It's one of those things that we need
12 to reflect on, we need to reflect on this for the three weeks
13 in question do we give enough direction and access to the staff
14 to concentrate on those components that will not be available
15 for the next two years for example.

16 So I think they're going to have a lot of lessons
17 learned out of Davis Bessie, but I wouldn't throw the program
18 away because through the years I have been through things like
19 that where we needed to strengthen or reinforce how we execute
20 the program.

21 But I think the program has a lot of good, a lot of
22 good, and those things that need reinforcing I think we need to
23 work on.

24 But the example I just gave you on only two or three
25 weeks for the staff to go and get to places they couldn't go,
26 if we don't allow that, if we don't make the program do that
27 there's something there you could miss.

1 DR. BONACA: One thing we discussed this morning was
2 V.C. Summer, and then we talked about Oconee. The way I see it
3 is for 25 years we've focused on active components, it has been
4 the heart and soul because we have the failures there, we have
5 the misalignments, we have learned in the past 25 years, 30
6 years, and now we begin to see a different kind of stuff coming
7 up, you know, and Davis Bessie is another one, and that's
8 really more tied to the quality of the inspection, and the fact
9 is these plants are getting older. And so I think the question
10 that Steve is asking is very important in the sense that I
11 think the program as we have it is valid. The question is is
12 there some element missing there that should focus also on
13 something new that is happening in the industry now because the
14 plants are getting older, and should there be some PIs that are
15 focusing on long-lived passive components that we are now
16 certifying to operate for 60 years on license renewal.

17 MR. REYES: You just reminded me of something. In
18 the Summer case the actual thru-leak, the best analysis is that
19 it started very early on in the cycle. It was not there when
20 they started up officially. The flaw obviously had progressed
21 to at least two and a quarter inches, but it happened early on
22 in the outage and it was not until the next refueling outage
23 when they could visually inspect it. So I agree with you, and
24 I think the program is real good, and we need to take a hard
25 look at things such as Davis Bessie and aging materials, short
26 windows of time for access to components by the inspectors,
27 things like that where we can strengthen the program and --

1 DR. BONACA: I understand. What we have to remember
2 now, Davis Bessie came close to be a nuclear accident, it was
3 for us an awaking call on active components, a valve stuck
4 open. The fact was the equipment was behaving so predictably
5 in every fifty actuation on that PRB had one stuck open. Boy,
6 can you be more precise than that.

7 And we woke up and we did something, and now Davis
8 Bessie could have been a new type of accident that we did not
9 expect was coming.

10 MR. REYES: I think that the program has a lot of
11 good attributes, and we just need to fix little things that
12 perhaps we're not strong at.

13 MR. ROSEN: I would like to thank you all very much
14 for your hospitality and for the very valuable and useful
15 presentations.

16 MS. WESTON: Steve, I have a question before you shut
17 down for the day.

18 Luis, you indicated that the color findings had a
19 prominence that had a positive impact. What are your thoughts
20 about the possibility of the elimination of the red and yellow
21 colors in the performance indicators because the thresholds are
22 so high that you would take regulatory action before you got to
23 those.

24 MR. REYES: If you go back to the formation of the
25 program early on in the stages we didn't have a red, but we had
26 very strong feedback from public interest groups that they felt
27 that was necessary that we show them. We may never use them,

1 but that we had, that the program show that at a given point in
2 time the regulator will take such action as shutting down the
3 plant, and we said yeah. I mean we understand, we know we can
4 take the action, we have taken it, I know I have authority in
5 things like that that we could issue the orders and do that,
6 but from the public interest groups' point of view they wanted
7 unacceptable region I guess you want to call it in the reds,
8 and very strong feedback, and that's how we got into it,
9 basically stakeholders.

10 But I don't feel I need it to take action because
11 I'll take action way before the red, but that's not the
12 perception on the outside of the agency, and therefore I think
13 it's needed if only for that feedback.

14 MS. WESTON: Even if you kept the red and yellow in
15 the SDPs and on the action matrix and eliminated the
16 performance indicators --

17 MR. REYES: I think you need to keep them.

18 MR. CHRISTIANSON: A point on that. Regardless of
19 whether you have one color, three colors, four colors, you're
20 always going to evaluate as we talked about earlier today this
21 prioritization of the risk. You're always going to have that
22 in your mind of how significant is this, regardless of whether
23 you have a color to match it up with. So you still would have
24 that in your bailiwick to go forward and decide what action and
25 how soon you should take that action.

26 MR. REYES: Public interest groups are very
27 interested in this right-hand side of the yellow and the red to

1 be there visibly, and we can understand that.

2 MR. ROSEN: Okay. Any further questions, comments?

3 DR. POWERS: One question, Luis. First of all, this
4 has been tremendous, far beyond my wildest dreams.

5 Second of all, I think maybe in the future we would
6 like to come back. Up to now we've been picking the plants
7 based on our understanding. If we were to come back, would it
8 be fair to call you up and say what plant do you think we
9 should visit?

10 MR. REYES: I'll be glad, and then I'll ask you what
11 specifically you want to see. Do you want to see a particular
12 area well executed, a particular area not so well executed? and
13 I'll be glad to give you my insights on that.

14 DR. POWERS: I think we would want to see the plant
15 that you would want us to see, and to see the things that you
16 want us to see so that we can have this kind of more collegial
17 discussion in the future rather than just stock presentations,
18 because this is unbelievable.

19 MR. REYES: Okay. It was our intent for you to get
20 the unedited version of the staff perception, and I hope you
21 got that impression. I didn't even see the viewgraphs, to be
22 honest with you. This was intended to have that open and
23 honest exchange, and I'm always -- just give me a call, I'm
24 glad to do that.

25 DR. POWERS: See, up until now we have been picking
26 the plants based on a strategy, and we've executed that
27 strategy. Now we would like to have you help us on the

1 strategy. Give you a little extra work, see. You've got too
2 much time going down walking, walking down plants.

3 MR. REYES: Thank you.

4 MR. ROSEN: All right. Thank you gentlemen, Luis.

5 [At 4:00 p.m., Wednesday, June 19, 2002 the meeting
6 was concluded.]

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