Official Transcript of Proceedings ACRST-3240

NUCLEAR REGULATORY COMMISSION

Title: Advisory Committee on Reactor Safeguards
Plant Operations Subcommittee

PROCESS USING ADAMS
TEMPLATE: ACRS/ACNW-005

ORIGINAL

Docket Number: (not applicable)

Location: King of Prussia, Pennsylvania

Date: Tuesday, June 10, 2003

Work Order No.: NRC-945 Pages 1-314

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1 UNITED STATES OF AMERICA

2 NUCLEAR REGULATORY COMMISSION

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4 ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

5 PLANT OPERATIONS SUBCOMMITTEE

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7 TUESDAY

8 JUNE 10, 2003

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10 KING OF PRUSSIA, PENNSYLVANIA

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12 The Subcommittee met at 8:00 a.m., in the
13 Conference Room of the Nuclear Regulatory Commission
14 Building, 475 Allendale Road, King of Prussia,
15 Pennsylvania, John Sieber, presiding.

16 SUBCOMMITTEE MEMBERS PRESENT:

17 JOHN SIEBER

18 STEVE ROSEN

19 TOM KRESS

20 MARIO BONACA

21 BILL SHACK

22 GRAHAM LEITCH

23 VICTOR RANSOM

24 GEORGE APOSTOLAKIS

25

A-G-E-N-D-A

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

2 (8:30 a.m.)

3 MEMBER SIEBER: Good morning. It has been
4 noticed in the Federal Register, it is a meeting of
5 the Advisory Committee on reactor safeguards and, the
6 plant operations subcommittee of the ACRS.
7 The Federal Register notice for this
8 meeting was published May 14th, 2003. The designated
9 federal official for this meeting is Maggalean Weston,
10 who is back here and, other ACRS members in attendance
11 are Steve Rosen, Tom Kress, Mario Bonaca, who is also
12 the ACRS chairman, Bill Shack, Graham Leitch, Victor
13 Ransom and George Apostolakis. Our executive
14 director, Mr. John -- Dr. John Larkins is also present
15 with us this morning.
16 So, with that, I think we are ready to
17 begin. Mr. Miller?
18 MR. MILLER: Well, it's indeed a pleasure
19 to welcome the ACRS to Region 1. The regions are on
20 the front line, so to speak. What we do is very
21 important work. Our job is to provide effective
22 oversight of the plants that are operating in this
23 region and, a number of plants that are in the
24 decommissioning status. Our job is to provide
25 effective oversight to assure, above all, that the

1 operations at these plants are safe and, of course,
2 that, as well, that the public understands -- has an
3 understanding of the status of these operations and,
4 through that process has confidence that their safety
5 is in fact being protected. So, it's important work.
6 The agenda that we have laid out is one
7 where, following some opening remarks by me and an
8 overview, really, of the region and of our activities
9 and our challenges. We will present Jim Wiggins, my
10 deputy and the division directors will present a
11 perspective on the reactor oversight program, how we
12 implement that program. And, our focus is going to
13 be, really, on challenges.
14 No program by itself is sufficient.
15 Programs can be improved and, certainly, are necessary
16 to guide activities, but, in the end, it's the people
17 implementing the programs that make the difference.
18 And, so, what we hope to do today is to talk about the
19 program, emphasizing the challenges that we face, the
20 techniques, the approaches that we find are important
21 to be effective.
22 As if we needed any reminder about the
23 importance of this, Davis Besse, certainly points out
24 the -- how vital it is to have an effective inspection
25 and oversight program. And, I mentioned people. One

1 thing, above all, that I'm proud of as regional
2 administrator in this region is the staff of the
3 region. We have an outstanding staff. And, so, I
4 think it's appropriate that as a part of the agenda,
5 we have members of the staff here today in the
6 audience, but, this afternoon, we will have a session,
7 a round-table session, if you will, which will permit
8 you to interact with a number of staff members, talk
9 about technical issues, talk about, again, the methods
10 that we've employed to be effective in our oversight.
11 And, hopefully, you will find that of use.
12 I've asked members of the staff and the
13 management team that will make presentations to, as we
14 go through, just give you a brief introduction, talk
15 a little bit about their background, just so you get
16 a sense of the strength of the staff and the
17 backgrounds that they bring to this important work.
18 Jim's already covered the logistics and,
19 so, John, with that, let me just turn it back over to
20 you. Welcome to the ACRS.
21 MEMBER SIEBER: Thank you. I think this is
22 an appropriate time to continue on with the
23 presentations. I would like to say that we do
24 appreciate the fact that the region has gone,
25 apparently, to great expense to provide information to

1 us and, we are, like you, working on a number of
2 things that are pertinent to operating plants today,
3 including Davis Besse and, the agency's reaction to
4 that and, assessing whether that reaction is the right
5 one, or, perhaps, should be changed. Overall, I think
6 the agency has followed its procedures. The
7 procedures are well established and well thought out.
8 Every time there is an event, I think it's an
9 opportunity for us all to gather the lessons learned
10 and seek some introspective look at how we react and
11 how we deal with these kinds of issues.
12 Other issues that we're interested in as
13 a committee is the use of risk information in the
14 regulatory and enforcement process.
15 UNIDENTIFIED SPEAKER: We can't hear you,
16 Jack.
17 MEMBER SIEBER: Pardon?
18 MR. MILLER: There's a hand mike there that
19 you might use and see if --
20 MEMBER SIEBER: Let's see if it works.
21 Okay.
22 The other area that we're interested in,
23 of course, is the use of risk information in
24 regulation and in operation of the plants. We were at
25 Peach Bottom yesterday to ask questions about how they

1 use risk information to operate the plant and maintain
2 the plant. And, it's important for us, for example,
3 to know and understand that the SDP process is
4 working, even though we still have another year before
5 the final fire protection SDP is finalized and issued.
6 We have a keen interest in the ROP, to make sure that
7 that process works.
8 So, these are the kinds of things that I
9 hope during the day that you folks can address for us
10 to some extent and, that we will ask questions from
11 time to time as we go on and, if it's going to be
12 covered later in presentations, you can tell us that
13 and, then, we will provide an IOU to see that our
14 questions are answered.
15 So, with all of that, again, we thank you,
16 you and your staff, very much for hosting our visit
17 here. And, I'm sure that we will learn a lot. Thank
18 you.
19 MR. MILLER: We see this as a very timely
20 visit. I mean, in this period of reflection in the
21 aftermath of Davis Besse, there's perhaps no more
22 important group than the ACRS, to look independently
23 at how we're doing business, the methods and the like
24 and, so, I think that the presentations today will in
25 fact address the issues that you are interested in.

1 We know later in the week, I believe later
2 in the week, you're going to be addressing safety
3 culture, much discussion about safety culture from my
4 discussion. And, I think throughout the day, I think
5 you'll hear a number of perspectives that, hopefully,
6 will be useful to you on that, as well as, you know,
7 the other issues, risk, how we perform our work and
8 the like. So, I think it should be good.
9 We also would encourage you, our
10 presentations and the spacing of the timing of these
11 presentations were set up to allow a fair amount of
12 time to interact. So, we're just counting on you to
13 interrupt us as we go through. We're going to say a
14 number of provocative things, so, I'm sure you won't
15 need provocation, you'll ask questions, anyway. But,
16 we look for a good exchange.
17 MEMBER SIEBER: I would like to point out
18 that yesterday in our meeting at Peach Bottom, the
19 resident inspector was there and provided answers to
20 some of our questions, which, in my opinion, were --
21 showed an excellent understanding of what the mission
22 and the actions of the agency really are. And, to me,
23 when I listened to this gentleman talk, I was quite
24 proud that I work for the agency.
25 MR. MILLER: Yes. That's Tony McMurtry

1 and, there are many more like Tony and, many of them
2 are sitting in this room. And, you'll have an
3 opportunity to interact with additional staff. In
4 fact, with your permission, what I'd like to do before
5 I start is, at least have the folks up front at the
6 table, sitting here, introduce themselves. I'm Hub
7 Miller, the regional administrator.
8 MR. WIGGINS: Jim Wiggins, deputy regional
9 administrator.
10 MS. WALKER: I'm Tracy Walker. I'm the
11 communications coordinator for the region.
12 MR. ROGGE: I'm John Rogge, I'm the current
13 deputy director for reactor projects.
14 MR. BLOUGH: I'm Randy Blough, director
15 reactor projects.
16 MR. LANNING: Good morning. I'm Wayne
17 Lanning. I'm the director of reactor safety.
18 MR. HOLIAN: Brian Holian, deputy director
19 DRP, normally, have been director of Indian Point
20 several projects.
21 MR. CIRLENJAK: Jack Cirlenjak. I'm deputy
22 director of protective safety.
23 MR. MILLER: So, we've got a good team and,
24 you'll hear from others as they proceed.
25 There's a book -- You have a book and, I'm

1 going to be talking from, you know, a number of
2 slides. And, by the way, also speaking of people, in
3 the front of your book there is a set of photos that
4 layout the organization and you can place a face with
5 a name. But, the next section is the chart for
6 values.
7 What I'd like to do is to give you, first,
8 an overview, really, of the region and, beginning with
9 a bit of history and historical perspective. I do
10 that with some trepidation, because John, you're here
11 and Graham's here and, Mario are here and, they've
12 been involved in Region 1 much longer than I have been
13 involved. But, I'm going to give it a go, anyway.
14 I think the context is, often in
15 everything and, much of what we face today in the way
16 of challenges relates to how the industry developed in
17 this region. It has been a hot bed recently of
18 deregulation and consolidation and, that brings with
19 it a number of impacts, positive ones and, then, some
20 -- also, some important challenges for us as that
21 unfolds. Public interest in the northeast is strong
22 in nuclear power. There's an active citizenry, the
23 New England Town Hall or Town Meeting, that concept is
24 played out time and again in this region. We're
25 blessed with a very active, interested group of

1 citizens and it has a big impact on how we do business
2 in this region.
3 I'm going to talk about resources and
4 challenges in staffing. Staffing is, in some
5 respects, perhaps, our most important business, the
6 key to meeting the mission and, we've recently had
7 significant challenges. So, there's a fair amount to
8 talk about there. I'll cover it very generally and,
9 there will be subsequent conversations.
10 And, lastly, I'd like to talk a little bit
11 about philosophy, if you will, the approach to
12 oversight. And, I've put the words there, safety
13 culture, put them in quotes. I'd like to at least
14 give you a perspective of this region.
15 If I could, the next slide, historical
16 perspective. The system, the whole concept of
17 developing nuclear power and harnessing -- harnessing
18 nuclear power for producing electricity really kind of
19 got it start here in the northeast. The Yankee
20 system, which involved multiple owners, operating a
21 number of plants in the northeast. Yankee Rowe, I
22 think was the first plant to get an operating license.
23 A first large plant to get an operating license. That
24 license occurred in 1960. I think they began
25 operations in 1963.

1 But, what it set up was a situation for a
2 number of plants, small, single unit plants that were
3 operated by a consortium of owners. My sense is that
4 no self respecting utility in the late fifties and
5 early sixties would be caught dead without -- without
6 owning at least a piece of a nuclear power plant.
7 And, so, what got set up was a, again, system of
8 ownerships that involved, you know, six, half dozen to
9 as many as nine or so owners.
10 Now, along with that came some important
11 challenges. Governance was a very challenging thing.
12 A number of you much closer to it than we are, were
13 not involved in the meetings, but, my sense is that
14 often nothing moved forward until you brought the last
15 owner along. And, so, it set up a very challenging
16 situation for people trying to manage these plants.
17 Also, my sense is that Yankee Atomic, a
18 curious situation. Yankee Atomic with this new
19 technology of all of the interest that there was in
20 nuclear power, a growth industry, it attracted a great
21 number of very savvy people. And, so, you have the
22 situation where Yankee, the Yankee system was
23 populated by very competent people, but, they were
24 centralized at a distance from the plants and, so, set
25 up was a challenge in terms of supporting the plants

1 from a -- from a distance.

2 This -- As time went on, of course,

3 additional plants were built. A number, you know, the

4 larger stations, of course, were built and began to

5 operate in this region and, then, beyond. Graham, of

6 course, was involved in Limerick and bringing those

7 two big units on line. So, the complexion changed a

8 bit. But, what came with this was a situation where

9 in worst case TMI standards weren't what they needed

10 to be. There were challenges. And, in fact, this

11 region, if you look at it, there were eleven different

12 sites, 17 units in this region, were at one time on

13 NRC's watch list, were on some form or trend and the

14 like.

15 So, I say this because in some respects

16 even today, as we will hear Randy and others talk

17 about plants and the challenges. A number of the

18 issues we're dealing with today are really legacy

19 issues. They're issues that go back to the problems

20 that set in as these plants were operated under this

21 system.

22 The other thing of note here, of course,

23 is that there have been enormous public interest in a

24 number of these cases, some more than others.

25 Millstone, of course, gathered enormous attention.

1 I've got Shoreham listed here. Shoreham may be a bad
2 example, because it never really operated for any
3 significant time. Seabrook, with issues involving
4 emergency preparedness. There has been this very
5 strong public interest that I talked about. Salem,
6 the period that it was on the watch list. You can go
7 right down the list. So, that's kind of a historical
8 picture.
9 Now, what has happened, the next chart,
10 this shows a comparison over ten years. And,
11 actually, this is a little bit, I'm going to say,
12 deceiving is the wrong word. Yankee Rowe, I believe,
13 made a decision to shut down in 1992, about that time
14 frame that it ended operation. But, really, from
15 about 1997 on, both of the chains that you see on this
16 chart occurred. In 1993, if I go back to that, Yankee
17 Rowe was still operating, there were 21 sites, 30
18 units. I say 17 owners, that's also deceiving. There
19 were 17 different, I think the best term is, operator
20 owners, because there were many owners behind the
21 scenes, far more than the 17.
22 But, over the past several years,
23 certainly, since the time that I've come to the
24 region, there's been an enormous change in
25 consolidation. The -- Virtually, every plant in this

1 region is now a merchant plant. And, I think that as
2 Region 1 is unique in that regards. There are other
3 merchant plants out there across the country, but,
4 none -- no situation like exists here. Denay
5 (phonetic), actually, is the last, that is still
6 regulated and, it will become a merchant plant and be
7 sold, the plan is, I guess, by the end of the year.
8 So, what you have in this, of course, is
9 the departure of ten -- ten owners and, these are big
10 former players, Boston Edison and Consolidated Edison,
11 GPU, Ducaine Light, others have departed the scene.
12 And, what has happened is, we have a situation where
13 there are four new owners, a number of who have come
14 and now have bridged across regions, Entergy, the
15 biggest player, new player in the northeast, we
16 regulate now as much of Entergy as Region 4 does.
17 Dominion from Virginia, operating Millstone. Florida
18 Power and Light, operating Seabrook. And, I'm sure
19 I'm missing one, but, the point is, there's been this
20 consolidation.
21 Well, what have been the effects, I often
22 get asked the question. But, isn't this deregulation
23 inexorably lead to problems? The need to, you know,
24 removing the capacity for these plants, to go back to
25 utility and get coverage for proven costs. And, on

1 the face of it, that's a very good question. For the
2 most part, this development has been very positive.
3 It has been very positive because it has required
4 companies to be far more focused on effective
5 management. And, there's been much discussion about
6 it and, I don't need to go on at any length here, but,
7 what we've seen are better processes. And, you're
8 going to hear a lot of talk about corrective action
9 programs. But, at the root of those are very mundane
10 practical things like effective work control.
11 Effective work management processes. The person on
12 the street doesn't have a clue how hard it is to get
13 work done at a nuclear power plant. With the number
14 of organizations involved and the complexity of the
15 units and the number of -- number of components that
16 are involved, it's a very difficult process. It's
17 really an issue of logistics and effective management
18 of the logistics.
19 So, what we've seen, by and large, in this
20 consolidation is professional players. Players with
21 a significant corporate resources and experience
22 coming in and instituting a common basis across a
23 fleet of plants, or a number of plants, processes that
24 have been proven to be effective. And, so, in that
25 respects -- in that respect, this has been a positive

1 development.

2 John, a question.

3 MR. LARKINS: Yesterday when we were at

4 Peach Bottom -- Can you hear me? --the issue came up

5 of resource allocations, how much power did the plant

6 manager have in procurements he wanted to purchase in

7 replacement components or do upgrades, thing like

8 that. He seemed to be somewhat limited in his ability

9 to make decisions about what he could buy above a

10 certain level. I forget, whether it was half a

11 million dollars, he had to go to corporate. And, it

12 raised a question about how quickly they could make

13 upgrades or bring in replacement components and things

14 like that. We couldn't get a good answer.

15 MR. MILLER: Let me address that. In

16 theory, the process of regulation is one where, in

17 theory, there was a premium on effective management at

18 that time. But, my perception is that under the old

19 system, there was a great deal of room for management.

20 The demonstration to the utility commission that costs

21 were prudent, I'm sure, at times were difficult, but,

22 often not that difficult. And, so, what has come

23 about clearly is a much more business-like approach to

24 not only doing work, but, planning -- planning work.

25 One of the things that we're very

1 interested in, we're focused on and, Randy and I were
2 just at Seabrook this past week. Spent two days at
3 Seabrook. And, a lot of our questions were, what is
4 your plan? What is your long-term plan? Are you
5 taking into account obsolescence? And, one area that
6 is of concern to me is the area of, you know, logic
7 controls and the INC area where there's just a great -
8 - You can talk about aging and components, I guess,
9 that relays and think of Limerick and, you know,
10 everybody's got their set of INC equipment that is
11 going to wear out and, the question, Is it in the
12 budget. Are you taking into account of long-term --
13 Are you looking at the long-term investment,
14 especially, for these plants that are in this merchant
15 status, because they don't have the capacity to reach
16 back and say something has emerged and, we need you to
17 cover it. They've got to make it in the marketplace.
18 And, so, what you see at this plant and,
19 this is new for a lot of people and, as we go to the
20 plants and, we heard it at Seabrook the other day and,
21 we've heard it at all the plants in this region that
22 have gone through this change, initial reaction from
23 many people is not as easy as it used to be and,
24 there's just an overwhelming emphasis on cost and
25 budgets and defending, or making a case for spending

1 money. Where, before, it was not as much -- as much
2 a problem. I'm sure that's not entirely true and, I
3 don't want to look in who operated under the old
4 system and under the new system as well, I think, but
5 --
6 MEMBER LEITCH: It's interesting. One of
7 the questioners, part of the discussion at Peach
8 Bottom yesterday, they were discussing limits of
9 approval for site vice presidents. And, they asked
10 me, well, what was the limit when you were the site
11 vice president? And, I don't know if there ever was
12 one. I mean, that was the understanding, he had to
13 justify certain projects, but, there wasn't the formal
14 structure that you could approve up to this and,
15 beyond that, you'd have to get to a higher level and
16 so forth. So, those formal processes that you're
17 talking about are, I think, relatively new.
18 MR. MILLER: To me, it brings out the
19 importance of one other thing and, here's where the
20 ACRS has always been very helpful and, you hear a lot
21 of talk about it today and, that's risk informing the
22 decision-making process. What you see at virtually
23 all plants right now, it is a bit of a zero zoning,
24 not complete. I have a feeling that if it was all
25 zero zoning, that there wasn't some contingency there,

1 I would really worry, because nobody can predict
2 everything and, in fact, the strength of the large
3 fleets is that they at least advertise that they've
4 got the capacity to sort of self-insure, if you will.
5 One plant has a problem, they've got a fund that they
6 can draw upon to deal with those things that you just
7 can't predict.
8 But, John, I think at every plant that I
9 know of, I've heard the staff and, we've talked a lot,
10 not just the inspectors, but, we in management, go
11 around and talk to people. You're here -- When you
12 ask the question of what's new, what's different? The
13 first question -- The first answer almost every time
14 is, Boy, are we ever focused on budget now. And, it's
15 not a surprise. That's a -- That's a -- That's an
16 understandable situation.
17 We'll have an opportunity to talk more
18 throughout the day. In the end, it's how do the
19 plants perform that makes the difference and, that's
20 where we judge whether or not they're spending enough
21 money, or, not spending enough money. It's what does
22 the equipment tell us.
23 MEMBER ROSEN: Let me not less this stand
24 just the way it is, because I was at Pilgrim in the
25 seventies and, in a position where I watched the

1 budget process, just like the one they described at
2 Peach Bottom, where individual managers could make
3 recommendations and do things up to, say, $50,000 or
4 $25,000, whatever the inflation adjusted numbers made
5 sense. And, then, you'd recommend above a certain
6 amount. It would be recommended to a committee, which
7 would put it in the future year's budget and add
8 things up by some priority and say, ultimately, a big
9 number to the board of directors, or, otherwise, vice
10 presidents and senior vice presidents to approve.
11 So, it's not completely new. Let's not
12 leave the impression that just because they've become
13 merchants. The Boston Edisons of the world, back in
14 the seventies, although they only operated one plant,
15 had quite a bit of financial stability, but, they also
16 ran a process very akin to the ones you're hearing
17 about described today.
18 MR. MILLER: Sure. And, you know, that's
19 absolutely right. It's a changing tone, perhaps, for
20 some plants. Every plant's different. You know, we
21 all know the trouble Millstone got into and Northeast
22 got into by just what you're taking about, you know,
23 an overly aggressive process for challenging the
24 spending of money and the like and, so, it's not as if
25 it's only new to the current regime. But, it clearly

1 is on a routine basis, touching more of the people.
2 It's touching more of the people, the system engineer
3 and others, who are operating at the plant. So, it's
4 an important issue.
5 MEMBER ROSEN: But, what is different is
6 that in the old days, if you could say this is an NRC
7 requirement and make it stick, I mean, actually have
8 a letter from the staff, or, a regulation, or, a guide
9 to which you had licensing process committed and,
10 someone could point out that you aren't exactly doing
11 it right and had to make some modifications to come
12 into full compliance, that immediately would be
13 approved because that was rate basable. The
14 justification for that was, it's a regulatory
15 requirement, you've got to click in the box over here.
16 You didn't have to go through any cost benefit. And,
17 the company would then earn its return on that money,
18 once they put it in service. So, that's different.
19 Now, there isn't any of that.
20 MR. MILLER: And, Steve, this is why, you
21 know, this long-term planning is so important.
22 Thinking about, you know, when they're going to need
23 to, you know, replace, not just safety equipment, but,
24 it's also, you know, the fuel water heaters, you know,
25 the turbine, various large overhauls and replacements,

1 because it is kind of a zero sum gain and, if they're
2 not planning that effectively, it robs, it takes from
3 the funds that are available to do preventive
4 maintenance on safety equipment and the like. It's a
5 very, very important issue.
6 But, to sum it up here, I think what we've
7 seen is -- Yes, George.
8 MEMBER APOSTOLAKIS: When you asked
9 Seabrook whether they had a long-term plan, if they
10 had told you, we have none. What would you have done?
11 UNIDENTIFIED VOICE: It's not working, by
12 the way.
13 MR. MILLER: Well, I don't have a
14 requirement to, but, there's a lot that we can do as
15 a regional administrator and, there's a division
16 director and, deputy regional administrator. We have
17 access to the very senior people. In a sense, though,
18 that's kind of an academic question, because everybody
19 has a long-term -- has a long-term -- has a long-term
20 plan and --
21 MEMBER APOSTOLAKIS: Let me tell you why
22 I'm asking, because this is -- I have a agenda. One
23 of the most difficult questions the fiscal -- is
24 facing now is, whether good indicators, good safety.
25 And, to what extent should the agency interfere with

1 the monitor of the plants. Were thinking in terms of
2 indicators and, we should stay away from telling
3 management how to do its business. When I hear about
4 that, I say, Okay, I'll go along and, then, you come
5 here and say, I asked them whether they had a long-
6 term plan. I'm trying to reconcile those two. I know
7 that they don't have regulatory in front of them.
8 But, we are interfering, aren't we? And,
9 I think that's good. And, that's not formalized. You
10 are doing it because you think it's important, I
11 believe. But, there's no rule anywhere that say you
12 have to ask them. Because what may be this is a
13 completely personal opinion, that may be a way out of
14 this safety culture business. Maybe, bring to the
15 attention of the licensee certain things and, then,
16 let them respond, because if you bring it to their
17 attention, they will do something about it. And, as
18 you said, if they don't, there are ways, maybe,
19 motivating them without really saying that this is a
20 violation. That's why I'm raising the question.
21 MR. MILLER: Yeah. And, I think that as
22 you see us as we talk today, there's no real simple
23 answer that I can give to this question. And, I think
24 if you -- It's a mosaic. It's a whole number of
25 things that, collectively taken together, give us,

1 first of all, a read on safety culture. And,
2 secondly, provide us the methods to convey what our
3 issues and concerns are. It's a mosaic. It's no one
4 thing.
5 And, so, in a sense, I'm kind of saying,
6 as you follow through the day, if at the end of the
7 day, you don't have an answer to that question, I will
8 feel like we've, you know, not done a very good job.
9 MEMBER BONACA: One thing on the same
10 issue. One of the reasons for asking that question
11 is, what decisions are being made, was because I know
12 in terms of this power plants that they purchased, one
13 comment I've heard from some people is that all
14 decisions are being made somewhere else. And, when I
15 hear that, I'm concerned about people not taking
16 responsibilities on the working level for what's
17 happening, because they feel that somebody else is
18 making decisions and, they don't have participation or
19 anything like that. That was the reason why that
20 question was asked at Peach Bottom. And, I'm not
21 saying that there is a trend there, but --
22 MR. MILLER: I've not seen a case where in
23 the merging of the cultures, there isn't a, Are we
24 against them. They're calling all the shots. They
25 don't really understand the place. I can't think of

1 a case where that doesn't set in. And, it is partly
2 because there is a new agenda. There is a new vision.
3 There is a new plan and, the plan is a bit tough.
4 Now, what we're concerned about and what
5 we're looking for is situations where there's no
6 bottom up. And, one of the reasons and, you're going
7 to hear us talk about it, in this region as long as
8 I've been here and, I think, perhaps, before that, we
9 spent a great deal of time in the plant. A lot of
10 time managing in the plants, Ran knows this and other,
11 a lot of time in the plant, not to substitute
12 ourselves for the inspectors, but, to, firsthand, get
13 a feeling for just this kind of thing. And, this
14 means getting around and talking to a cross-section of
15 people, one-on-one, in the shops, in the engineering
16 area, middle-level management, all the way to the top.
17 It's to try to get a feeling and a handle on it.
18 Now, you're asking a question of, really
19 and, I hear your question, George and it has to do
20 with, how do you -- you don't have a requirement and -
21 -
22 MEMBER APOSTOLAKIS: I hope you understand
23 why I'm asking.
24 MR. MILLER: Yes, I do.
25 MEMBER APOSTOLAKIS: We have this problem

1 and we're trying to understand.

2 MR. MILLER: And, I think that through the

3 day -- Through the day, we're going to give you a good

4 perspective on this.

5 MEMBER APOSTOLAKIS: One last question.

6 I'm sure there are other questions that will be asked

7 of managers, in addition to, do you have a long-term

8 plan. This is very valuable because it comes to

9 people here, who have hands-on experience with the

10 regulations. I wonder whether the staff at

11 headquarters has ever tried to capture this knowledge.

12 Have they ever interviewed you as to what you think

13 are important issues and, maybe, cataloging them --

14 MR. MILLER: Yes, of course. In fact,

15 there are members are here and, I'm sure -- But,

16 really, we are part of a team. And, Randy and Wayne

17 and others can talk about the numerous mechanisms

18 there are for sharing this information, counter-part

19 meetings. We were at a counter-part meeting last

20 week, I believe, in headquarters. We significantly

21 contributed to the -- to the development of the

22 reactor oversight program. In fact, in this region,

23 our inspectors were very much involved in that.

24 So, clearly, at the senior management

25 meeting, we talk about this and there's an exchange.

1 The four regional administrators are -- The four
2 regional administrators talking, you know, at a senior
3 management meeting is a sight to behold. I mean, none
4 of us are shy and, so, there's a lot of -- This is
5 another mechanism. We're not shy about, you know, not
6 only talking about the plants, but, talking about what
7 is important in terms of what underlines, what drives
8 performance. What drives performance. And, you know,
9 I recognize this is a very challenging area. I think,
10 again, I beg your indulgence and let us go through
11 this and --
12 MEMBER APOSTOLAKIS: That'S fine. I'm
13 sorry for interrupting. These are the kinds of
14 questions --
15 MR. MILLER: Sure.
16 MEMBER SIEBER: I don't want to delay you,
17 set you off track. Hold the discussion about the
18 state of the industry in Region 1 or elsewhere. The
19 consolidation that's been going on has a direct
20 bearing on safety culture. For example, if you would
21 step back ten years, you'd find a two unit plant would
22 have about 1,200 employees and, virtually, no
23 headquarters functions. Everybody would be at the
24 site, doing whatever it is they do. And, that process
25 of decentralization actually started about 30 years

1 ago and, that was at least in the plants where I have
2 worked, one of the -- one of the factors that helped
3 us improve performance.
4 An engineer who was designing a design
5 change in the plant, he'd have actually taken it to
6 the location where it was going to go, rather than sit
7 and read a bunch of drawings and try to install
8 something, you know, in an existing piece of
9 equipment.
10 So, now, in the effort to cut the budget,
11 1,200 person plant staff may now be 700 persons, or,
12 600 persons. And, because of the change in the
13 physical location and, oftentimes, the company by new
14 people from other corporations, you lose that
15 ownership of projects, the ownership of the plant that
16 you had at one time, perhaps, ten years ago. And, so,
17 the question is, can you actually see that in the
18 plants? And, the second part of that question was, if
19 you saw it, what would you do about it? Would you
20 wait until the actual performance of the plant began
21 to decline, or, is there some leading indicator that
22 would say, I'd better talk to somebody now? Or, I
23 better get the licensee's attention now, rather than
24 wait for an event, or, wait until the list of greens
25 and whites is getting --

1 MR. MILLER: Let me tell you the
2 conversation we just had with the senior executives in
3 the last two weeks. The plant that's going to have
4 significant downsizing, because, really, we talk a lot
5 about positive aspects in this consolidation, they
6 have to bring to bear, significant experience and the
7 like and, good processes. But, the thing that we're
8 watchful for is the effects of cuts. And, the
9 challenge is and, what I told the executive is, we
10 can't sit here. We don't have any rules on how many
11 people you have operate this plant.
12 First of all, just make sure as you do
13 bench marking and, typically, the sizing of the plant
14 ends up being a lot of bench marking, you try to look
15 at what others are doing and, if you try to benchmark
16 good plants and, you say, they're doing it with this
17 many and, I guess, we should be able to do it with
18 about that many. It's not all that. We look for some
19 amount, as I mentioned earlier. I'm leery, always, if
20 something's topped down. But, some bottom up and,
21 evaluation, in other words, of the functions. We're
22 looking for differences. Are you bench marking
23 somebody in a valid way?
24 But, the last thing we left with them is,
25 we're looking for you to identify some indicators,

1 leading indicators, not lagging indicators. Leading
2 indicators that will tell you when you're beginning to
3 get in trouble, so, you can pick up on it and reverse
4 it before it's too late.
5 Now, from out side, I'll tell you what the
6 leading indicator is. The leading indicator is
7 inspection findings. It's inspection findings. It's
8 down at, how does the licensee respond to that event.
9 And, I don't mean event with a capital E. I mean,
10 event with a small E. And, you'll hear that much
11 today. That's the leading indicator. It's inspection
12 findings.
13 MEMBER ROSEN: The leading indicator to
14 you.
15 MR. MILLER: And, the leading indicator for
16 us. The leading indicator for them is, I would say,
17 that inspection findings, as well, their own
18 inspection findings. Their inspection findings of
19 their own -- of their own activities.
20 MEMBER ROSEN: Corrective action programs.
21 MR. MILLER: Their corrective action
22 programs.
23 MEMBER ROSEN: It seems to me, it's not
24 your inspection findings, that's too late, too late
25 for the licensee. By the time you get a finding, you

1 failed as a licensee. It seems to me that as a
2 licensee, you need to take, as your leading indicator,
3 things that you see that are wrong in the plant, not
4 wait for others to find them for you.
5 MR. MILLER: Steve, first, you're real
6 precise. You're exactly right. It is not just our
7 inspection findings, just from out side, it's also our
8 observations. It's our observations. Things don't
9 make it that far. And, part of what we're trying to
10 do is get a -- we're trying to gauge how effective the
11 licensee is at finding and fixing their own problems.
12 They've got to set the -- They've got to set their
13 threshold way down from where our findings threshold
14 is. Our observation threshold is very low. But, I
15 mean, our finding threshold is -- it has to be set
16 much lower.
17 I think they've got to be looking at
18 behaviors. I think they've got to looking at how
19 people are behaving and, maybe, that's the same as
20 looking at how people do work in the field. If you
21 have a rash of occupational safety issues, for
22 example, I think that ought to be an indicator for
23 them.
24 But, to answer your question, John, we've
25 had these discussions. It's an area of concern to us.

1 And, perhaps, more than any other area, I think if you
2 look at the various parts of the plant, the area of
3 engineering, is the area that I suppose and, here, I'm
4 speaking personally and, I'm, perhaps, most concerned
5 about is the area where the lead times, good or bad,
6 are long and seeds of problem are sown at the point
7 where, well before they'll show up for good or for
8 bad. And, that's the most costly area in terms of,
9 you know, operating expenses and the like. And, so,
10 we were watchful for that.
11 So, I mean, this has been a very, you
12 know, interesting time. It's been a challenging time
13 for us in the Region 1, but, an exciting time to watch
14 this all play out here in this region.
15 MEMBER LEITCH: I think an important
16 insight too, into the corrective action progress is
17 the level at which issues are identified, that are
18 entered into the corrective action program. Many --
19 At least some licensees, I think, are tracking how
20 many are identified by NRC info, their quality
21 assurance program, versus how many are self-identified
22 by the line organization. And, also, perhaps, how
23 many are self-revealing. So, we have a really healthy
24 safety culture, in my mind, the line organization is
25 identifying the vast majority of the items. And, I

1 think when -- I think that's -- that kind of analysis
2 of the corrective action program provides some
3 valuable insights into the health of the organization.
4 MR. MILLER: That's the key, absolutely,
5 it's the key. A site -- An average site these days is
6 reporting at least a couple of thousand problem
7 reports a year.
8 Brian, how many problem reports were there
9 at Indian Point 2 last year?
10 MR. HOLIAN: Three thousand --
11 UNIDENTIFIED SPEAKER: Around 10,000.
12 MR. MILLER: I think it was 14,000. I
13 think it was 14,000 at Indian Point. And, if you go
14 through, if you're a plant that's going through a
15 recovery, discovery and recovery, it can go up to very
16 large numbers. And, that's the -- that's the --
17 that's the fertile field that has to be mined to get
18 these kinds of insights. Graham, you're exactly
19 right, looking at that. That's where the data is that
20 they can operate on, I think, to know and get early
21 indication of a negative -- of negative trends.
22 If I could just --
23 MEMBER BONACA: One last thing I'd like to
24 mention. In this transition to a more business-like
25 operation that you have. I think one of the important

1 elements was the ability to do on-line maintenance.
2 I mean, the outages going down to very short time.
3 Would like to have an understanding of what you see.
4 I mean, is it being controlled properly? I mean, is
5 risk information being used to properly manage this?
6 Because, I think it is a very positive development, if
7 it is done correctly. So, you may want to comment on
8 that at some point.
9 MR. MILLER: Yeah. I'm going to state that
10 for one of the later presentations. But, clearly,
11 that's one of our inspectible areas, is how on-line
12 maintenance, risk -- Are risk insights being used
13 effectively to assure that the plants don't get into
14 problems.
15 Again, just so you know, as we look at
16 this, we are very cautious in our outlook. One of the
17 other things that has been done to make big dents in
18 backlogs is the concept of a fix-it now team at
19 plants. It's the highly planned work -- You've heard
20 of the 12-week rolling schedule which, Graham, I think
21 you may have invented at Limerick, at least you get a
22 lot of credit for this. And, that's the plan. A lot
23 of work is being done these days by the fix-it now
24 team, which is -- you get an SRO and you get a work
25 planner, an electrical guy and a mechanical guy and

1 you go up and do work. So, we've got our eye on that.
2 We saw an event at Calvert Cliffs
3 recently, where a team was doing work and brought a
4 plant down. So, I say this just so you know, we're
5 alert to those situations where they're going to be
6 pushing -- pushing the envelope, if you will, or
7 putting stress on the system through these methods of
8 being more efficient.
9 The next thing I just want to talk about
10 briefly and, Brian will talk a little bit more about
11 this, is that in Region 1, at times, the public
12 interest is overwhelming and, there's no other word to
13 use than overwhelming. It has accompanied a lot of
14 the plant situations that have developed. But, since
15 9/11 especially, the industries have been absolutely
16 inundated at times with public concerns and, requests
17 for us to support meetings. Congressional interest at
18 times has been off scale in terms of -- in terms of
19 the Congress coming to the site, looking for
20 briefings, correspondence has been enormous.
21 There's a chart, it's in your book, to
22 just sort of summarize and give you the numbers. You
23 can see that there are very large number of requests.
24 Congressional requests, we virtually always support,
25 not in all case, but, we always support. This has me,

1 in one case, for example, going to Vermont Yankee with
2 Congressman Sanders and a large audience, you know, of
3 five or 600 people, just as one example, testifying
4 before Congress on a number of occasions. A great
5 deal of concern, of course, associated with the events
6 of 9/11. It's more than that. I mean, it's just in
7 the part of being in Region 1.
8 We have had to, much of the time we've
9 done this, really, is part of the program. The
10 concern that I've had over the past several years,
11 especially, is that this activity, which is vital, is
12 that this activity will begin to cut into our safety
13 work. So, we've done a number of things. For
14 example, when the New York Times on the second day
15 following Indian Point 2 failure, ran a front page
16 piece that said that the NRC knew that there was a
17 leak in that steam generator, saw it coming and, did
18 nothing about it. You know when that happens, you
19 better organize yourself, you better do something fast
20 and effective to deal with the onslaught. The
21 onslaught came.
22 That wasn't true. Steam generators leak
23 a little bit. You know, you can't, from a little bit
24 of leakage, detect when a steam generator's going to
25 fail. But, we had to contend with the perception that

1 we were sitting there, lively watching, you know, the
2 truck drive right over the edge of the cliff. And,
3 so, what we have done at Indian Point, given the
4 numerous issues that existed at that plant, for
5 example, formed a communications coordination team,
6 have realigned the region. Brought Brian Holian into
7 the picture, having him report to the front office.
8 We've done a lot of things organizationally to try to
9 wall off and deal with this onslaught from the
10 outside, so that inspectors can keep focused as much
11 as possible just on safety work.
12 About a year -- two years ago, I think it
13 was, we went -- made a pitch in the budget. We needed
14 two FTE to deal with the special attention that we
15 have in this region. Tracy was dedicated full time to
16 helping us manage this, as well as that FTE was used
17 to really fund the efforts of a lot of us. It's a
18 massive thing in this region.
19 Now, we could spend a long time on this
20 and I don't want to do that. That's not what you're
21 here to do. But, you can't talk about Region 1 and
22 not understand at least the enormity of this.
23 What you see is a great deal of
24 frustration, as we get the requests -- If we go back
25 to that slide -- the Indian Point case especially,

1 with a number of counties and town halls that have
2 requested us to support meetings and, we simply have
3 not been able to do it. I've got a letter on my desk
4 right now from Senator Schummer (phonetic) and, one
5 from Congressman Kelly, expressing a bit of
6 disappointment that we didn't support a recent town
7 meeting. So, this is a -- this is a continuous thing
8 for us. We've attempted to be smart about it, to do
9 outreach. This is very important, obviously, because
10 it's not good enough just to do the right thing by
11 safety, but, having the public understand that their -
12 - that their safety's being protected, is an enormous
13 challenge. And, we are at our limits, honestly, on
14 what we can do.
15 I'm going to pass around --
16 MEMBER LEITCH: Just so that I understand
17 this chart. Does not supported mean that the meeting
18 was held and there was no NRC present?
19 MR. MILLER: There was no NRC present,
20 that's correct. And, you can see -- Go ahead.
21 MS. WALKER: Just one point of
22 clarification. For most of the public meetings, that
23 means we didn't send someone. For things like
24 congressional site visits, not supported means we
25 didn't send senior management. The senior --

1 congresswoman, anyone who visited a site. Certainly,
2 the senior resident or resident would support. We
3 just didn't count it as management.
4 MEMBER LEITCH: I understand. Okay. Thank
5 you.
6 MR. MILLER: This is potentially a
7 bottomless pit, as you can imagine.
8 I don't have enough copies to go around to
9 everybody. I'm going to pass out several copies of
10 some news clippings and you can share those. Diane
11 Spence (phonetic) is our public affairs officer and,
12 I think she said that the stack of articles over the
13 past several years is probably about this high. I
14 selected just several. And, what this will show are
15 several things.
16 First of all, a number of the pieces that
17 are written about nuclear power are very factual and
18 very helpful. Helpful in the sense of having the
19 public understand a situation at the plant and what
20 our conclusions are. A number of pieces are alarmist.
21 You can scan it and you can see some of the ones that
22 sort of jump out at you as being alarmist. Sometimes,
23 they're inaccurate. And, when they're inaccurate in
24 an important way, it cuts into our credibility, we
25 have to pick out spots and we will act.

1 Now, near the back of this package, you'll
2 see one particular article that, in effect, said that
3 Consolidated Edison was discharging to the Hudson
4 River, NRC Millett and, NRC did nothing about it.
5 And, in that instance, with a great deal of my
6 personal time and efforts of a lot of people, we -- we
7 responded, wrote a letter to the editor confronting
8 that, because it was simply not true and it was very
9 harmful to have that kind of piece presented or
10 published. We don't attempt to take all of the pieces
11 that have an alarmist tone to them and counter each
12 one. That's just beyond our capacity to do that.
13 But, we have, you know, picked our spots and have
14 taken on those real harmful articles.
15 Also, we've attempted outreach. We've
16 attempted to, as much as we've had to say no in many
17 cases, we've attempted to get to elected officials and
18 hold meetings, where people who are truly interested
19 in what you're doing, we hold meetings. And, Brian
20 can talk more about some of the ones at Indian Point,
21 four and five hour meetings that we attempt to lay it
22 all out and answer all questions.
23 There's an -- There's an element here. If
24 you look at the last two pictures in the back of ads
25 that are running on street corners in New York City

1 right now related to Indian Point and bringing out the
2 perspective, at least, that it's a weapon ready to be
3 used. And, our capacity or ability to counter the
4 inaccurate and wrong information that underlies that
5 is -- is limited.
6 So, what I'm laying out for you here is,
7 just giving you a taste of things, this is only a
8 taste, but, it's a big part of what we contend within
9 the region and it has an impact, certainly, on
10 management time and our resources.
11 MEMBER ROSEN: Do the plants help you? Is
12 there anything countering? It seems to me that this
13 is Indian Point's job to counter this.
14 MR. MILLER: It's, first of all, the
15 licensee's job to try to counter this. But, in the
16 end, we're the -- we're the servants of the people.
17 We're the third party. We're the -- We are the
18 overseer and, this credibility problem that licensees
19 have. Now, when it comes to factual information, it
20 is their job, not ours. We don't have the capacity to
21 go out and try to, you know, counter a lot of this.
22 One other thing and, this is important.
23 It's not our job to sell nuclear power and, we're
24 always very conscious of, as we take on inaccurate
25 pieces, we don't appear to be in any way promotional.

1 That hurts our credibility. It's not what we're out
2 to do. We take great pains to have people understand
3 our only passion is objectivity, calling it like we
4 see it. And, then, from there, of course, we try to
5 convey what our findings are to the public. So, we
6 could talk a long time about Indian Point. Brian will
7 give you some highlights later. But, it's not just
8 Indian Point, it's a number of other sites, as well,
9 where there's a great deal of activity and interest.
10 Any other questions on that?
11 Let me, last, go to -- I'm going to touch
12 on resources and staffing before I -- I'm not going to
13 go into this in great detail, because Randy Blough and
14 Wayne will cover this and, Jim Wiggins in detail.
15 But, if you go to the chart that's got the -- This is
16 an interesting chart. In the region we see one of our
17 big jobs is the development of staff. We have very
18 little external turnover. Just a few people have
19 left, to go outside the NRC. But, we've been quite
20 successful in having people feed up within the region
21 to senior jobs and to other regions and, very
22 importantly, to headquarters. And, so, what you see
23 on this chart which is a part of budget that's the
24 blue line and, of number of qualified inspectors,
25 that's the red line, you see a significant drop over

1 the last several years.

2 The obvious question is, how do you meet

3 the mission when you have such a delta or difference

4 between what's budgeted and what you have in the way

5 of qualified inspectors? And, again, Randy and Wayne

6 will provide more detail on this. But, a lot of it is

7 through the interim certification, or the quick

8 qualification, limited qualification and a number of

9 very significant -- a number of very experienced

10 people we've been fortunate enough to bring onto the

11 staff. There are a number of other coping measures,

12 which I won't go into here, but, this has been a

13 significant challenge for us.

14 We have gone a significant way. We've had

15 a large amount of over-hiring we've done. I think

16 right now, we're some dozen or so over our ceiling or

17 our budget. But, it also tells a story. You can see

18 the line, the green line which is the staffing line,

19 started to pick up in 2002 and, it went up between

20 2002 and 2003 and, you'll see that red line lags

21 behind that. Lags behind by a year or two years,

22 which is the amount of time it takes to have somebody

23 become fully certified.

24 This has been a big challenge for us.

25 But, also, an area, I think, of a large number of

1 successes.

2 I want to ask, again, Wayne and Randy and

3 Jim to talk about the program that we have for

4 developing people. We get a mix of entry level, as

5 well as experienced hires. It's a very comprehensive

6 program. A very comprehensive program. And, I'd like

7 -- We'd like to spend a little time with you on that.

8 But, just overall, from my perspective at the

9 beginning, I wanted you to know, this is a significant

10 part of what we do here in the region and we've had

11 some recent challenges.

12 MEMBER ROSEN: I don't want to overstay my

13 welcome. Maybe, I put a hard question to you. Was

14 that not foreseeable?

15 MR. MILLER: Not completely.

16 MEMBER ROSEN: Why?

17 MR. MILLER: Because we -- Perhaps, in some

18 respects, it was, if we had been more linked to enter

19 a large number of these losses, if you will, were to

20 senior jobs that opened up fairly suddenly in NRR and

21 in headquarters office. It's not --

22 MEMBER ROSEN: And, some retirements.

23 MR. MILLER: Yeah. And, some -- to some

24 extent it was retirements. But, the overwhelming part

25 of it were losses to senior positions on the EDO

1 staff. Senior technical assistants within NRR. A
2 number of senior positions in headquarters. We have
3 always prided ourself in this region and, I have, you
4 know, of being always on the over-staffing side of
5 things. Being over-staffed. We told the staff many
6 times, try to get me in trouble with Jessie Front and
7 with Paul Byrd, who is head of HR, try to get me in
8 trouble. But, this is a result of a fairly sudden,
9 you know, movement at headquarters.
10 Now, there's always at any one time the
11 budget allows for some number of people being in the
12 training and development process, so, it's not in the
13 -- In a normal year without a lot of attrition, you'll
14 always have some number of people who are not fully
15 qualified and, the program's built to accommodate
16 that.
17 MR. LARKINS: Do you have something, maybe
18 one of these presentations coming up, which will take
19 a look at what the staffing needs are to fully
20 implement the ROP for Region 1?
21 MR. MILLER: Absolutely. And, we --
22 MR. LARKINS: Say, over the last year or
23 two?
24 MR. MILLER: We have that. Wayne, in fact,
25 I guess had another periodic -- The divisions meet,

1 they had a retreat, I guess, last week or so and,
2 among other things, is the updating of where are we in
3 terms of the critical skills needed to do the program
4 and, that's procedure by procedure. How many
5 electrical types do we need? How many people do we
6 need?
7 And, I'll tell you, we've had great
8 successes. I like -- Fred Jackstimmer (phonetic) was
9 the system engineer at TMI, who was responsible for
10 doing head inspections. And, so, you know, when you
11 have somebody like him -- I just use him as an
12 example. You know, he was relatively -- hadn't been
13 here for very long when Davis Besse hit. We had a
14 person on the staff that probably knew as much as
15 anybody in the agency about the practical aspects of
16 doing head inspections. And, so, we are very mindful
17 of hiring people with the right skills and, we've had
18 some success with newer people being able to step in,
19 in fairly short order, to make a difference.
20 MR. LARKINS: The other thing is, I think,
21 the executive resource board does at least talk about
22 the fact that the regions are competing for
23 headquarters for a number of positions and there
24 should be some built-in mechanisms in the budget to
25 account for that.

1 MR. MILLER: There is. Increasingly, the
2 agency has seen a need and has actually in the budget,
3 provided slots to the region. Now, I'll tell you,
4 that can only go so far. All the regions, I think,
5 are like us, focused on over-hiring and, we -- I think
6 it's really a combination of the two. No one's ever
7 stopped us here from over-hiring.
8 MR. LARKINS: What bothers me, I see this
9 a one-way street, though, mainly, it's from the
10 regions to headquarters. And, it seems to me, that
11 there should be some small portion of the staff coming
12 from headquarters coming back to the regions, to get
13 that experience and opportunities in the region.
14 MR. MILLER: We've had a few come back, as
15 we had senior grades to support that. I'll make
16 myself popular with the staff here and I'll say, that
17 we raised all the grades in the region one step and,
18 then, perhaps, being somewhat facetious here -- It's
19 part of the regional job to develop. Folks who are on
20 the front lines get experience invaluable when it
21 comes to assuming positions of leadership across the
22 agency. And, so, we're proud of that.
23 Lastly, let me just talk a little bit
24 about inspection oversight philosophy. I mentioned at
25 the beginning, no program by itself is going to get --

1 going to make you effective, it's how you implement
2 the program and, this is true with self, it's true
3 with the ROP.
4 In my view, you know, the ROP has brought
5 a number of very positive things to NRC oversight
6 programs, a greater emphasis on risk and objectivity,
7 to the performance indicators and the like, provide a
8 sound foundation for oversight. But, still, the key
9 thing is effective implementation.
10 And, the first thing that -- the last page
11 -- I think is more important than anything, is having
12 an aggressive mind set. If you don't have that and
13 you don't have, you're going to affect communications.
14 The management doesn't have the inspectors know that
15 they're going to be supported, but, they're expected
16 to have an aggressive mind set and are supported. If
17 there isn't a great deal of senior management
18 involvement, things are not going to work. I don't
19 care what process you're talking about.
20 In this region, again, you'll hear it a
21 lot, we have always placed an emphasis on significant
22 senior management visits to the sites and, these are
23 visits where we spend a couple of days, a number of
24 us, talking to a cross-section of people. But, also,
25 it gives us an opportunity to meet first-hand with our

1 inspectors, to hear what their concerns are, a lot of
2 the things that don't formally fit into the program
3 and, make sure that those -- those, very often
4 important, leading issues and concerns are -- are left
5 unaddressed.
6 I want to take you to a set of slides.
7 There's a set of slides in the package. Tracy,
8 they're in the package, aren't they?
9 MS. WALKER: Yes.
10 MR. MILLER: And, for effect, what I've
11 done is, I pulled out a presentation that I made in
12 1998.
13 MS. WALKER: They're right after the last
14 slide. They're right after this slide.
15 MR. MILLER: In 1998, I stood before the --
16 all of the licensees in this region and the senior
17 managers of all of the licensees in this region and I
18 said, Look, this is what we tell our inspectors to do
19 and, you can keep book on us, this is what we're
20 telling our inspectors to do, this is what we -- And,
21 it starts with on the first page, the first obligation
22 of inspectors is to go find problems.
23 Now, logically, you can say that the
24 second bullet is the one you'd normally start with.
25 If you're thinking logically you'd say, focus on

1 what's important and go find problems and communicate
2 effectively. But, I put the first one, go find
3 problems, first, because I think that has to be --
4 that has to be something that everybody carries with
5 them and practices day in and day out. They're
6 complex -- The organizations are too complex, to not
7 have problems. And, if you don't approach it with
8 that perspective, you'll miss it.
9 And, I went on to say, if you look at the
10 second -- second page where I elaborated on finding
11 problems and, it goes to the questions you were asking
12 about, how do you get early indication. And, among
13 the various reasons that I talked about was, if you
14 don't pick up on issues when they're small, they will
15 accumulate and become -- become a problem.
16 The next page, I'd just like to emphasize
17 to you, is the need to, on the part about focusing on
18 important issues, is, we've talked a lot about having
19 a split personality. Being an inspector, you've got
20 to be -- you've got to have a split personality.
21 You've got to be able to dig very, very deep, but, at
22 the same time -- but, periodically, step back and look
23 at, where does this fit? Bring in risk insights and,
24 what does this mean?
25 The next thing really gets to safety

1 culture. On the next page, it talks about assessment
2 of licensee self-assessment corrective action
3 programs, that's what we've always talked about in
4 this region. Under the old system of self -- Under
5 the new system is the need to focus on evaluating the
6 effectiveness of licensee corrective action programs.
7 But, there has always been a strong element of self-
8 regulation in this business. We're very limited in
9 our resources. And, so, what I often say to
10 inspectors is, it's not your job to go off and
11 inspect. Really, it's your job to be a part of a team
12 to go out through inspection and figure out how
13 effective licensees are at inspecting and fixing and
14 finding their own problems. So, that as a byproduct
15 of every inspection, we should be getting some
16 insights and clues on the safety culture of the plant.
17 And, safety culture defined as finding problems that
18 are low level and fixing them effectively. It
19 requires licensees to connect -- It requires us to
20 connect the dots.
21 MEMBER SHACK: Isn't this sort of a split
22 personality, what you're saying here, you know, that
23 you're focusing on the little things, because they'll
24 grow to big things and, yet, we focus on an important
25 problem, some how, you know, the green findings are

1 still findings. But, some how, because we've colored
2 them green, they really do seem to go away and no one
3 seems to pay a whole lot of attention until that
4 finding starts to get towards the white range?
5 MR. MILLER: The key word on this page is
6 assessment. It's connecting the dots. It's
7 attempting to assure that we do not have a situation
8 where, if you step back and look at it, you can see a
9 pattern that's developing.
10 MEMBER SHACK: But, how does an assessment
11 play in -- The action matrix doesn't allow that in a
12 way. I mean, you look at white findings. Green
13 findings can pile up till the cows come home.
14 MR. MILLER: There's a battle between two
15 bad situations and, I always talk about a narrow
16 winding road with deep ditches on both sides. One
17 ditch on one side is a situation where you take a lot
18 of little things and you mound them up and you make a
19 big deal out of nothing. And, you drive licensee
20 priorities in a direction that's not helpful, it's
21 counter to safety.
22 And, on the other side, you got the ditch
23 that is -- you got a bunch of things sitting there
24 right before you, they're changing out the filter
25 cartridge every month and, then, it's every three

1 weeks, then, it's every two weeks. That one thing
2 gives you an insight, that if you connect the dots,
3 you've got a problem. So, we're trying to go on that
4 road, that windy narrow road, trying to stay out of
5 either of those ditches.
6 This region has been strong on use of
7 cross-cutting issues from the beginning in the ROP.
8 Randy will talk about that.
9 MEMBER BONACA: Do you provide a form of
10 planning to your perspective on how to read
11 effectiveness of licensee programs? How to go after
12 the inspection to understand in fact whether the
13 licensee is effective in fixing and findings problems.
14 Is there a process you use?
15 MR. MILLER: There's a great deal of
16 training and counter-part meetings that we have and
17 the like. We all teach other. I learn as much from
18 inspectors as I hope, you know, to teach them. As
19 prescriptive as the program is, there's nothing, if
20 you do it by rote, you know you're going to miss it on
21 some frequency. There's still an enormous amount of
22 good judgment that has to be brought to bear on this.
23 I wish there were simple rules.
24 MEMBER BONACA: I mean, at times, we go to
25 a licensee and we say, How many problem reports do you

1 have corrective action program? The answer is, only
2 500, only 300. As if that was a measure of good
3 performance. It's not, necessarily. It could be a
4 major, very high threshold for identifying
5 commissions. So, you ask about the parameter and you
6 get an answer that, again, could go either way. And,
7 so, I'm just wondering if -- It's a tricky area.
8 There are so --
9 MR. MILLER: I'm suspicious of anything
10 that is a simple formula. And, what we frequently
11 tell licensees is and, I tell senior managers, because
12 I'm most worried about senior managers missing this
13 point. Don't assume that because you can find a
14 problem report, which I know one plant, the
15 presentation was probably pointing out how they had
16 written a condition report, because the vice president
17 put his car in front when they had a requirement at
18 the plant that they back cars into the parking slots
19 and, that proves that we've got a little threshold.
20 And, I said, that's fine. Don't think for a moment
21 that there aren't problems out there that are buried
22 and that are hidden, that you haven't identified yet.
23 So, you can't say that because you have 3,000 problem
24 reports this year, or, 4,000, that proves you've got
25 an effective program.

1 It's -- It is still a situation where
2 there has to be a great deal of good judgment brought
3 to bear in applying each program. And, I hope as you
4 go through the day, you'll be able to see through some
5 of the examples, you know, I can make this more
6 concrete for you and a little less abstract. But, it
7 starts with, though, a feeling on the part of
8 inspectors that, you know, that we are looking for
9 them to be focused on finding problems and, those are
10 legitimate and, our team work as we assess what the
11 meaning of these things is, because there's no one
12 inspector, certainly, none of us up here, who, by
13 ourselves, alone, can make all the good judgments that
14 have to be made when you're trying to piece together
15 the eaches, when you've got something that's truly a
16 pattern, as opposed to just a lot of little things
17 that, you know, really don't, in the end, mean a lot.
18 MEMBER LEITCH: You assess licensee'
19 performance in the ROP by inspection findings and
20 performance indicators, primarily. There are no
21 direct performance indicators on the cross-cutting
22 issues. And, I guess we've been told on a number of
23 occasions that, if there are problems in the cross-
24 cutting areas, that they will eventually reveal
25 themselves in PI's or inspection findings. And, we're

1 not entirely sure that that's the case and, I guess
2 even if it is the case, it seems to be a very long
3 feedback.
4 MEMBER ROSEN: Can I say something? I
5 think you're exactly right. If there are problems in
6 cross-cutting areas, they will reveal themselves in
7 plant performance. Absolutely, the problem is that
8 it's too late by the time they did.
9 MEMBER LEITCH: That's what I'm saying.
10 It's a long feedback.
11 MEMBER ROSEN: Not that they won't be
12 revealed, they will be revealed. The licensee, the
13 resident staff and the ACRS rep have waited too long.
14 MR. MILLER: Brian's going to talk about
15 Indian Point and, I think it's useful to talk about
16 Indian Point, because that's -- to me, it's an example
17 of where I think we can be effective. And, I talk
18 about a mosaic. I've talked about a lot of different
19 things, it is a lot of things, including, just to give
20 you an example. What tripped us to Indian Point is an
21 issue, long before the steam generator failure, is
22 standing in the steam pump room and having the team
23 leader of a team inspector and the resident inspector
24 and the senior resident inspector, proceed around the
25 room and talk about equipment problems in that room

1 and, to tell a story of how in virtually every one of
2 those cases, the licensee had jumped to the quick
3 first plausible explanation of the problem that
4 existed, to have those problems recur, because they
5 weren't -- systematically, they were not getting to
6 the bottom of the problem. It's almost a behavior.
7 Now, if I had examples that they could
8 point to, no one example was a big one. I recall one
9 being the discharge valves on the off-speed pumps were
10 sticking. And, the rationale was, well, they will --
11 they'll operate when the pressure from the pump under
12 the seat. Well, eventually, the resident inspector
13 persisted and they disassembled the valve and, in
14 fact, there was significant balling on the stems. You
15 can play this story out many, many times.
16 I think that there is this aggressive,
17 aggressive approach to running the program, we should
18 be able to pick up on things before they proceed to
19 the point where there is real trouble. It goes back
20 to my main point here is that, no problem with it's
21 self or this program is going to be effective if there
22 isn't an aggressive approach towards implementing it.
23 We'll talk throughout the day. These are
24 large questions. They're very large questions and,
25 the international community, I know Bill Crevice

1 (phonetic) and I talked yesterday -- he was in Vienna
2 -- much discussion about safety culture and how you
3 assess safety culture. I was just standing with the
4 thought that, I don't think that inspection procedures
5 that would some how now look at safety culture would
6 be an answer. I think that if you view every
7 inspection we do as providing insight, overall, into
8 the effectiveness of a licensee's corrective action
9 program means safety culture.
10 MEMBER BONACA: You said you'll comment on
11 Indian Point. It will be interesting to review the
12 Davis Besse event. I mean, there we have indications,
13 they were not safe. I mean, there were no proceed
14 collective data at that point. But, I guess it goes
15 into the action of, so you feel the guy that's
16 available to you in the cost-cutting area, it's
17 sufficient at this stage.
18 MR. MILLER: I believe it is. But, that's
19 not -- It's not black and white. It's not something
20 you can quantify. There is still judgment involved.
21 And, I think and, I've said this before to folks, in
22 some respect, we may have unwittingly, not wittingly,
23 oversold this program.
24 UNIDENTIFIED SPEAKER: Which program is
25 that?

1 MR. MILLER: The ROP. We've oversold it in
2 the sense of it being all objective. It is more
3 objective. Clearly, it's more objective. The
4 indicators don't lie. The part that, perhaps, we've
5 oversold unwittingly is the fact that there's still
6 this element of inspectors in the field making
7 judgments about what they look at, how they connect
8 things. And, the assessments that we do, there's no
9 way to make those rote. And -- But, having said all
10 that, I'm optimistic. I think this program is a good
11 program and works, if it's implemented well.
12 MEMBER SIEBER: The formal inspection
13 procedures are more extensive than the ones previous
14 to that, which takes, to me in my way of thinking,
15 some of the initiative away from the inspector,
16 because he's got to do more items to fulfill his
17 inspection requirement than he had before. And, so,
18 the idea of having the time and the resources to dig
19 deeper into problems where you can make an evaluation
20 of whether this is just a superficial thing, or, has
21 a root cause that is a cross-cutting issue, or, more
22 importantly, the overall operation of the plant may
23 not be there.
24 MR. MILLER: That's an important issue and
25 I want to save that for the later presentations and to

1 ask the inspectors that. I think that's a very
2 important issue.
3 MEMBER SIEBER: I guess I have another
4 question before we leave this area. We go to every
5 region over a period of years and talk to licensees
6 and, we've been now in all the regions and discussed
7 the ROP. And, I get a little bit of a different
8 flavor, depending on what region we're in, as to how
9 the ROP is managed in that region, even though the
10 results seem fairly consistent from headquarters'
11 standpoint.
12 I would be interested, since I know the
13 regions talk with one another, interested in knowing
14 whether you see differences from one region to another
15 or not and, if so, are they important to the process
16 and the outcomes?
17 MR. MILLER: Every region's the same and
18 every region's different in terms of licensees and the
19 environment that it operates in. I'm going to ask
20 Randy and Wayne to address John's question, as you go
21 through your presentation, because there are a number
22 of things that are aimed and worked very hard on
23 trying to get appropriate consistency. Certainly,
24 things are going to be different, but, we've worked
25 very hard with the program office and the other

1 regions to assure that there's consistency. And, I'll
2 just leave you, perhaps, with this, I've made trips to
3 Jackson, Mississippi, to -- back to my old stomping
4 grounds in Chicago. I used to be the regional
5 administrator there, to Enterra (phonetic) and Exelon,
6 to Dominion in Richmond and, tomorrow, Elise and I are
7 going to Florida Power and Light to bridge -- If
8 anybody can get book on a region, it's this region,
9 because we span all of the other regions and, it's
10 very helpful to compare notes. We get good feedback
11 on what they see in differences.
12 But, let me not say more on that. TO save
13 that, you know and, have the others address that.
14 MEMBER SIEBER: Yeah. I bring that up
15 because that was one of the industry complaints
16 regarding the south systems. They believe that they
17 perceive differences from one region to another and
18 plants were rated under that system. And, I would not
19 like to see the same situation occur --
20 MR. MILLER: Right.
21 MEMBER SIEBER: -- I guess, every time I
22 can, I ask for some assurance that this doesn't
23 happen.
24 MR. MILLER: Thank you. That's a -- That's
25 a good question. It's one at the top of our minds.

1 MEMBER SIEBER: Okay.

2 MR. MILLER: I've taken a long time here.
3 This introduction of the overview is useful. The
4 agenda would call for a break later, but, I think with
5 the length of this discussion, perhaps, we should take
6 a break now?

7 MEMBER SIEBER: I think that's fine.
8 According to my watch, which I only paid $9 for, it's
9 10:08 and, we usually take a 15-minute break, so, why
10 don't we come back at 10:23.

11 (Whereupon, a recess was taken.)

12 MR. MILLER: Jim Wiggins is my deputy
13 regional administrator and, he'll make the next
14 presentation.

15 MR. WIGGINS: Good morning. I think we
16 should be able to catch up on some time. We can move
17 through this relatively quickly.

18 As Hub said, I'm Jim Wiggins. I'm the
19 deputy regional administrator. I've been in this job
20 since 1999. I got to the agency in 1980, after six
21 years in the Navy. I've held various positions in the
22 region. I was the senior resident at Limrick, when
23 unit one was finishing construction, going through
24 pre-op and start-up initial operations. I've had some
25 division jobs here. The latest would be director of

1 division reactor safety, before I took the RA
2 position.
3 During the time in the region, I've had a
4 couple significant assignments at headquarters. I
5 spent six months as a branch chief of materials and
6 chemical engineering branch, which was at the time
7 when the agency was struggling with the Yankee Rowe
8 pressure vessel, pressurized thermal shock issues, so,
9 that was a neat learning activity for me. And, then,
10 I went back as the division director for division
11 engineering for another six months and had a number of
12 steam generator issues. So, that's briefly me.
13 So, let's go on and talk about the region.
14 We're basically a standard organization. Each of the
15 four regions are fundamentally the same in the
16 organization. I'm not going to spend a lot of time on
17 our organization, but, I will point out some of the,
18 let's just say, differences and, I'll point out the
19 reasons for them.
20 Our region, currently, our budget's 216
21 FTE. If you count the number of people we have on
22 board, we're 240 individuals that are in the Region 1
23 organization. The difference between the two is, as
24 Hub discussed, some over-hire positions. We've hired
25 additional people. But, it's also, we have some part-

1 time folks. The way the calculation is done, you get
2 more actual people than you have in FTE.
3 In the front of the book, there's some
4 other information about the organization. There's
5 pictures, you can put some names with the faces and
6 things like that.
7 Let's first -- As you can see, the
8 organization, it's the standard four divisional
9 operations with reactor projects and reactor safety
10 being in the reactor arena. There's a small part of
11 nuclear materials safety that does the commissioning,
12 that's a reactor area position, also and, it shares
13 with MNSS. Then, there's the administrative. First
14 in the office of regional administrator, I want to
15 make a couple points.
16 We have, basically, three groups in our
17 front office. There's a technical program staff,
18 which does the allocation and enforcement work. We
19 have a couple special cases for our region. One would
20 be the communications coordination position, that's
21 the role that Tracy Walker fulfills. Hub described
22 his block, the extensive heavy work load we've had on
23 meetings, correspondence, things like that,
24 especially, since 9/11. Most of those activities that
25 you'll see were related to Indian Point, or, security

1 issues.

2 We use the communications coordination
3 position to give us help in managing both internal and
4 external communications, includes meetings and
5 correspondence. We also have a writing initiative,
6 since we are engaged in a significant amount of very
7 important correspondence to varied stakeholders, each
8 coming at the issue from a different position. So,
9 we've put a lot of time in trying to improve the
10 writing skills of ourselves and our staff.

11 The third aspect I want to point out is
12 the Indian Point special project that, as Hub said,
13 Brian Holian is leading that. This is a group that
14 we've -- we've actually stood up twice. We stood it
15 up early on and, then, basically, there was a
16 normalization in the activities and, we stood it up
17 again. It's been in that current situation for the
18 last six months or so. The next slide will give you
19 a little bit more of perspective on what's in there.

20 You can see, Brian is the director. It
21 has support from public affairs. The support team's
22 block is basically groups from the region, technical
23 groups that provide advice on issues. You have the
24 normal project oversight. There's a security element,
25 since there's a number of security issues around the -

1 - around the plant. And, some communication issues.
2 MEMBER ROSEN: Brian will discuss later on
3 why [inaudible].
4 MR. WIGGINS: Yeah. Well, it really gets
5 formed as a result of the work load at Indian Point
6 and, there was a purpose to centralize the focus on
7 Indian Point. Most importantly, to wall off the
8 people involved in Indian Point, away from the folks
9 that are watching the rest of the plants in the
10 region. What we wanted to do was, make sure we didn't
11 lose focus on the other plants by spending so much
12 senior level attention at Indian Point.
13 MEMBER ROSEN: There is some [inaudible].
14 MR. WIGGINS: Yeah. We had done this --
15 MEMBER ROSEN: Very wise measure. We
16 already know what happens when you get too focused on
17 a plant --
18 MR. WIGGINS: Right. As Hub indicated
19 before, we've had more than our share of problem
20 plants in this region. And, a number of us that have
21 been in this region for a while, looked through whole
22 bunches of them and we kind of learned some tough
23 lessons through the years. So, we know it's --
24 Particularly, in a case like Indian Point, where it's
25 attracting the senior most managers in the agency,

1 Brian, EDO's level, commissioners, chairmen,
2 occasionally. It's very important to keep a strong
3 focus on the rest of the plants.
4 When you look at this, in one form, it
5 stood up not long after the tube failure indicated.
6 Then, you look at the work load. You look at what
7 actually is driving the organization, cause you don't
8 want to be in this type of an organization longer than
9 you have to. So, when things tended to get more
10 normal, then, we -- we stood it down to a great
11 extent. Brian never lost the role as the lead in it,
12 but, his infrastructure changed. Then, like I said,
13 in the last six months or so, we've had to add more
14 resources to it and flush it out more, because of the
15 issues that are -- that play at the site, that he'll
16 talk about, that was security to begin with and, then,
17 mostly now, emergency preparedness, so, there's a lot
18 of work for us up there.
19 Okay. Next slide is a reactor projects
20 organization. It's a standard graph for projects.
21 There's seven branches. Five are -- Two of which have
22 some special functions. One branch has what we call
23 our work control analysis center. This is a special
24 group that I'll talk about later, that monitors our
25 reactor oversight program performance. Another role

1 I wanted to discuss is the emergency response
2 coordination. We run our incident response activities
3 projects here. That includes our incident response
4 center and, includes our activities to train people to
5 be prepared to respond to a significant event.
6 We've taken advantage of the ability to
7 refurbish our incident response center. We can have
8 a long discussion about where that's been over time.
9 We can -- Yeah. We can arrange for that.
10 We've recently installed some additional
11 equipment in there that really has markedly, I would
12 think, improved our capabilities of managing
13 incidents. We've used it several times. Most
14 recently in Oyster Creek several weeks ago, where a
15 cable failure led to a loss of electrical. We also
16 used it for a security issue at Seabrook and a
17 charging system issue at Millstone. These were events
18 below the threshold where the agency would have gotten
19 into a full activation. We were in either just normal
20 augmented oversight, or, we were in monitoring mode.
21 It's -- We can -- We'll arrange to show you the
22 facility. We'll get the -- We'll get the equipment
23 started up and see what we've got down there.
24 The next slide is a division reactor
25 safety, fairly standard arrangement in the regions.

1 We've broken things down. The operational safety
2 branches, where we do our operator licensing work,
3 plus, inspections. Wayne will discuss that in our
4 region the examiners are inspectors. So, we don't
5 have any pure examiners, they're all dual qualified
6 individuals, who are working toward that dual
7 qualification.
8 We have three engineering branches. The
9 senior reactor analyst, who you'll get a chance to
10 talk to later are --
11 MEMBER ROSEN: How many of them do you
12 have?
13 MR. WIGGINS: Two. Two, formerly, and,
14 several in a -- in a program to develop more skills.
15 And, a set of individuals that are kind of expanding
16 knowledge. Wayne can discuss that more completely,
17 when he's up. He was involved in developing that fall
18 along program.
19 Okay. Next slide is our materials
20 division. The reason I just brought that up is, I
21 wanted to, as I said before, we do decommissioning,
22 which includes Patterneck, Millstone, Yankee Rowe and
23 Maine Yankee, along with materials facilities that are
24 decommissioning. That's all managed out of our
25 materials division. Not much more to say about that.

1 And, lastly, is our resource management
2 division, that's a standard arrangement among the --
3 among the regions.
4 If there's no more questions, I have a
5 couple of selected topics I just wanted to discuss.
6 I wanted to cover a couple of issues on resources and
7 staffing, some of it redundant to what Hub said.
8 We'll build on some of the points he made. Then,
9 we'll talk about planning and budget performance, or,
10 PBPM planning, budgeting, performance, monitoring
11 activities. Again, we'll talk a little bit about
12 external communications. Give you a sense for
13 allocation and enforcement of work and what the work
14 load is. And, then, we'll talk a little bit about
15 some of the insights we get for our work coordination
16 analysis center.
17 The next slide is slide 23. We've
18 mentioned before that one of the challenges we face is
19 accommodating losses that we've had. I think it's
20 useful to point out that very, very few people have
21 left the agency out of our region. Most of the --
22 Most of the losses are just normal kinds of rotations
23 and, a number of people taking positions in
24 headquarters, senior jobs in headquarters.
25 You had a question earlier about, could it

1 be anticipated. Well, there's -- You recognize it's
2 a complex matter. It's complicated. There's a lot of
3 dynamics at work in this. I mean, the economy is one
4 thing that I think has a meaningful effect on people's
5 retirement decisions. We have all the standard lists.
6 We know the lists of when people's eligibility dates
7 are for retirement and, the fact of the matter is that
8 we're really focused on that list, as I think every
9 organization has been focusing. But, certain things -
10 - A couple of other things happened to us that we
11 learned a lesson out of this.
12 And, what really happened that drove a lot
13 of the staffing issues that we've been trying to
14 accommodate is the fact that headquarters
15 simultaneously was dealing with expected retirements.
16 So, there is a number of -- a large number of
17 opportunities available for our staff to go down for
18 senior positions in headquarters. And, there's other
19 engines that cause people to be interested in this,
20 not just for career development, but, you have
21 residents who need to move every so often and they're
22 looking for -- they're looking for new challenging
23 assignments.
24 You know, we look at this and, obviously,
25 we try to discipline ourselves to not sit here and

1 shake our fist at people, you know, NRR for taking a
2 lot of our best people, or, EDO's office. We
3 recognize that it's a credit to people we've brought
4 on and how we've developed them and, how we've allowed
5 them to develop, that these folks are marketable
6 commodities in the agency. I think, that's something
7 that we're proud of. Also, we continue to see the
8 headquarters organization are folks that have a
9 connection to Region 1, which, in the end, helps us.
10 We're familiar with them, they know us. It makes it
11 easier to interact.
12 MEMBER ROSEN: Before you get off that. I
13 know you're not happy with having had happened -- It
14 wasn't what you wanted to happen. You certainly want
15 people to be recognized for the skills they've
16 developed here and move on, that's important regular
17 management, as well. But, what happened in terms of
18 the numbers, the 20 percent decline, where you're
19 playing catch up and I know you didn't want that to
20 happen.
21 MR. WIGGINS: Right.
22 MEMBER ROSEN: So, the next question is,
23 how do you anticipate that in the future?
24 MR. WIGGINS: Yeah. That's the lesson we
25 learned and, the we was not just the four regions,

1 but, NRR, also, which was the principal place where
2 these folks went. So, the five organizations have all
3 recognized that we can't do this to ourselves again.
4 We found out what was happening in NRR, but, we found
5 out before it actually happened, but, not enough time
6 to do some planning. So, now, we know better and we
7 track that. I'm pretty much tied in with the other
8 deputy regional administrators and the deputy director
9 of NRR. We converse monthly in a planned call, I get
10 some -- we get some of the data that NRR uses to
11 manage their personnel decisions, so we get kind of an
12 insight as to what they're looking for, which tells us
13 a bit about what we might be looking at in the next
14 several months.
15 MR. MILLER: Steve, also, the senior
16 management meetings hit a lot of topics and there's a
17 competition for time in those meetings, but, I made a
18 strong pitch and was able to make a presentation
19 before the senior managers. This is from Travers
20 (phonetic) on down, on the situation and, I think
21 there is agreement that there needed to be federal
22 linkage among the offices and this business of looking
23 ahead. This is what Jim is saying. So, I want you to
24 know that this has been discussed in detail, at the
25 top level within the agency.

1 MEMBER ROSEN: We don't want to be too self
2 incredulant towards this -- it isn't what we would
3 want to have happening. And, in this area, you're
4 going to have indicators. The other areas you're
5 talking about earlier on safety culture, it's very
6 hard to have an indicator. But, here's you've got a
7 very clear indicator as just the numbers as to the
8 situation.
9 MR. MILLER: It's also a competition, too,
10 among people around the agency and, you're getting a
11 lot of people hire competitive and one out and more
12 numbers from the Region 1 group. We're looking at a
13 number of people. I'm looking at one right now, a
14 former senior resident from Oyster Creek and Indian
15 Point, who's sitting right there, as a senior
16 assistant, who's visiting us now in her role as NRR.
17 Very talented people.
18 I have to say one thing. I have to say,
19 also, though, that the people who are here in the
20 region are here for a reason. The thing we have to
21 offer is the outstanding work that the regions do,
22 being on the front lines, making a difference.
23 There's, I don't think, a better job in this agency.
24 And, I was years in headquarters making policy and, I
25 know the ways, but, none of it rivals, really, the

1 enormous satisfaction, professional satisfaction that
2 comes from being out inspecting, figuring out whether
3 things really are as they're advertised and making a
4 difference in the field. So, that's the one thing
5 that we have to offer and --
6 MR. WIGGINS: Yeah. It's -- That's
7 essentially a marketing strategy we have and, that's
8 pretty -- that's been successful for us.
9 We go to the next slide and you've seen
10 this in house presentation. We worry about the gap,
11 also, between the -- When we're saying qualified
12 staff, that's in the vernacular of the agency. It's
13 really certified. Everyone we hire is qualified to do
14 the job. It's just whether they've got the
15 credentials, whether they got the certs. But, we
16 don't have anyone doing a job here that they're not
17 only qualified professionally to do, but, have
18 sufficient certifications through the formal process
19 to be allowed to do it.
20 We have been fortunate, as Hub said. We
21 have -- Using the fairly aggressive process where
22 we've committed, even Jack Cirlenjak, the deputy
23 director of division reactor safety, spent a
24 substantial amount of his times directly related to
25 recruiting individuals, both at experienced and entry

1 level. As a result, we've been able to make up this
2 gap through -- through -- through hiring some people
3 with expertise that's important to us. Hub mentioned
4 the individual that we got, that was a prior -- his
5 prior time was assistant engineer that did reactor
6 pressure vessel and inspections. He was the RCS,
7 assistant engineer. That comes in handy. We have a
8 number of those folks who are familiar with design,
9 electrical, things like that, that we're able to get
10 through the initial certification process relatively
11 expeditiously, bring them onto the playing field in a
12 limited role and, that's how we -- that's how -- one
13 of the ways, the principal way, I think, to make up
14 the difference.
15 MEMBER SIEBER: There was a article in the
16 Nuclear News, which is an A&S publication, a couple of
17 months ago, that talked about the pool, the expected
18 future pool of nuclear qualified engineers and, that
19 is declining. And, it would seem to me, the agency
20 cannot be as [inaudible] as the licensee can, as far
21 as adjusting pay scales and working conditions.
22 Does the agency take into account the fact
23 that the replacement group of nuclear engineers, or,
24 nuclear trained people is declining, whereas, the work
25 force in the nuclear industry is clearly aging and,

1 more people are leaving? I think the licensees and
2 the agency would be faced with some pretty demanding
3 situations in the future, where you'll have to do your
4 own training, you know, to provide sufficient
5 background for people to be qualified and certified
6 for these jobs. Do you have a comment about that,
7 Jim?
8 MR. WIGGINS: I think the agency generally
9 tries to take that into account. Let me just start at
10 the top and, if you view nuclear engineering narrowly
11 like a person in nuclear engineering degree, actually,
12 when you get right down to it, you need very, very few
13 of them on staff in a region to do what the region has
14 to do. We do very little work that requires detailed
15 knowledge of reactor engineering, or, accident
16 analyses from a calculation point of view. That's all
17 -- If it's done in the agency, it's done in NRR and
18 research.
19 What we need are good, savvy, common
20 sense, fundamental, brass tacks engineers, nuts and
21 bolts people. You get -- Chemicals fit real well in
22 what we do, chemical engineers, cause they're used to
23 processors and are familiar and trained on that, or,
24 mechanicals. We've got a good track record of taking
25 those folks and giving them enough nuclear knowledge

1 to make them conversant in the technology and, then,
2 with our on-the-job training programs that are part of
3 the certification process we have, it doesn't take
4 long before we can bring, you know, decent engineers
5 with good common sense and they become quite
6 productive.
7 Having said that, I think it is fortunate
8 right now and, I'm not sure exactly why this is, but,
9 it's fortunate, we've been able to attract folks with
10 current industry experience. We have people with
11 current or past SRO licenses that are still being
12 attracted to us. A lot has to do with what Hub said.
13 We -- We tell our folks and, it's not a lie, it's what
14 we believe, that when you come to work in a region,
15 you get involved in inspection. You get to do a job
16 that you can make a difference out there. It's where
17 the activity really is. It's where the safety
18 decisions are being made. You get a chance to go
19 there and contribute and contribute to an activity
20 that does make a difference for safety. So, we
21 emphasize that and we've been fairly successful so
22 far. When the economy turns, we'll have to see what
23 that brings. But, right now -- And, salary is an
24 issue. You know, I can think of several cases.
25 Now, we have a lot of flexibility as

1 compared to standard non-exempt kind of government
2 agency. We are an exact agency, we use flexibilities
3 that are available to us that way to set salary. This
4 isn't a government agency, as you know. A person has
5 to start at step one of the scale. We try to -- We
6 try to meet salaries to the extent we can. It's not
7 uncommon, though, that, particularly, you get some
8 folks with special skills, like, senior reactor
9 operator license, who's a current shift watch stander.
10 When you look at the net, you're talking thousands of
11 dollars difference in what we can -- what we can offer
12 and what they're making. But, we offer different
13 things in terms of quality of life and the -- and the
14 type of work that we do.
15 MEMBER ROSEN: To what extent do you use
16 contractors?
17 MR. WIGGINS: We have used -- had to use
18 contractors in this region to make up for the gap as
19 a coping measure. Wayne will discuss that. One of
20 the differences in the region and, this used to be and
21 I'm not sure it's exactly that these days, is why you
22 need contractors. We've been fortunate in this
23 region. For years, we've had technically savvy
24 engineering people, so, when we had to map up as part
25 of the oversight program to do the safety system

1 design inspections, we had folks that had a relevant
2 background and experience that they've been doing it
3 for us, they've been doing it on the outside for other
4 licensees. We were, overall, probably in good shape
5 relative to the rest of the regions that way.
6 So, our use of contractors, mostly, is for
7 a numbers exercise. That's not to say we wouldn't in
8 the future have to go to get a particularly skilled we
9 don't have on board. But, that hasn't -- Would you
10 agree with that, Wayne, that hasn't been the driving
11 problem here. But, it's been mostly use of
12 contractors to flush out, fill out some of our team
13 inspections, so we can take the NRC certified
14 individuals and use them to support the holes in the
15 resident program that we need to fill, either short-
16 term or long-term. That's basically how we've been
17 making this gap. We can show this gap and still tell
18 you, we're doing a hundred percent of the ROP. We're
19 getting it done. We've gotten the program done since
20 it started.
21 MEMBER ROSEN: Could you clear up for me
22 whether you're talking about a pay disparity between
23 your staff and outside in the industry, or, pay
24 disparity between the regional staffing?
25 MR. WIGGINS: No. I was referring to what

1 we're competing for in the jobs that are leaving from
2 the private sector.
3 MEMBER ROSEN: Okay. Thank you.
4 MR. MILLER: I was going to say. In the
5 area of design, the agency has traditionally utilize
6 contractors to supplement the staff, bring in people
7 with a great deal of expertise, with solid design
8 experience. I think we all know that that's not
9 something that you develop over night and, I suspect
10 we're still utilizing some contractors in that role,
11 in addition to what Jim talked about, you know,
12 providing general expertise in the area of, you know,
13 pulley systems, or, certain areas, we've always used
14 contractors.
15 MR. WIGGINS: The point I was trying to
16 make is, in our region, we've been fortunate that
17 we've had more of those folks on our own staff. Some
18 other regions, if you asked the question, you'll get
19 a slightly different answer, that they need the
20 contractors to provide -- In fact, several years ago,
21 a couple of RAD cycles ago, the reason why contractors
22 existed, because in the fundamental beginning of ROP
23 was the decision that there wouldn't be any more
24 contractors in the process. So, that didn't work,
25 initially, but, it was really -- NRR had to provide

1 for contractors to make up for skill set deficiencies
2 while the other regions acquired or built those
3 skills. We didn't have that problem to the extent
4 that some others had. And, like I said, it's a
5 numbers issue for us.
6 If you go to slide 25, you see a bit about
7 -- This is a demographics study. The numbers in the
8 columns would be added. For your resident
9 inspections, we have seniors and residents. We have
10 an average time in nuclear industry of eight years
11 before they come to NRC. And, our average for
12 residents in NRC is ten years, which is decent. And,
13 you can see for a selection of regional inspectors,
14 you can see that the numbers are comparable. Like I
15 said, aggressive hiring has allowed us to bring in
16 good people and we've maintained highly qualified
17 experienced staff by focusing on their, Hub likes to
18 all it matriculation, and they come in and we bring
19 them into the organization and we continue to look to
20 their development. We'd like to do more. One of the
21 aspects of being short, the gap, we've also had to
22 curtail some developmental activities for experienced
23 staff, beyond those that are necessary for ROP
24 certification. So, we're kind of over aging a bit of
25 our future. We know we have to pay that eventually,

1 come around to the point where we'll be able to free
2 some people up to do some developmental activities,
3 like I did in going down to NRR several times.
4 Okay. The next topic is -- I'm sure
5 you've gotten discussions from the agency on planning,
6 budgeting and performance. It's a general process for
7 planning and monitoring performance the agency uses
8 overall in this region. Let me just focus a bit on
9 what we've done in the monitoring area, which is where
10 we've done most of our work.
11 We've -- We've established -- Obviously,
12 all the regions and all the program officers have
13 metrics and operating plans that they work to. The
14 regions are standard in terms of what metrics we
15 compare ourselves to. How we've developed those
16 additional metrics which we have in this region --
17 Each of the regions has a core set of metrics that are
18 comparable among the four regions. And, then, there's
19 additional ones that those regions have developed to
20 use in their own -- for their own management purposes.
21 We, in fiscal '02, put a team together to
22 improve our metric in our operating plan monitoring
23 processes. We took advantage of having a person that
24 was in the agency's leadership potential program and,
25 had her come out and do as her task assignment a

1 leadership -- sort of a leadership role on a team that
2 benchmarked not just the regions, but, we benchmarked
3 licensees that we knew had fairly well developed
4 performance monitoring systems and, we wanted to go
5 specifically, to learn the lessons they had, so, we
6 wouldn't have to repeat them.
7 They put together a different program.
8 We've revised our program significantly and, it's been
9 successful. We have a couple of handouts that you can
10 pass around and take a look at, if you want. This is
11 a -- These are two compliments of the monitoring. The
12 first one is what we call windows are colored metrics
13 and, the second one is more budget related detail.
14 That's how we track ourselves. There's other things
15 going on in terms of branch -- periodic branch self-
16 assessments that occur from monthly to quarterly,
17 depending on which branch that feeds up into this
18 process, also. We feel pretty good with this. It's
19 been effective in allowing us to make some
20 improvements overall in meeting agency expectations.
21 But, it's also given us better insight on how well
22 things are going in the region and where we need to
23 put additional attention.
24 This is a slide on external
25 communications, which is something Hub mentioned

1 before. We try to break out things between the Indian
2 Point related matters and the other related
3 activities. You can -- You can see basically the
4 greens at Indian Point. Hub went over that. This is
5 a work load, I'm confident, no one -- none of the
6 regions see. Obviously, Davis Besse's been attracting
7 a lot of attention for our friends in Region 3. But,
8 I think we still win out in terms of the extended
9 relation --
10 The next slide is correspondence,
11 similarly broken out. You can look at that, at your
12 leisure.
13 MR. MILLER: If I could, just on
14 that. You know, the region is not typically geared up
15 to deal with this sort of thing and, what we found is
16 that it was very inefficient to have a lot of
17 different people dealing with correspondence and
18 inquiries and the like, so, the branch chief for River
19 Valley, let's say, it's a letter and, then, he has to
20 struggle with writing that letter and, you know, the
21 establishment of Tracy's position has been very, very
22 important, because it allows, you know, some
23 expertise, if you will, and, again, it just has freed
24 up a lot of technical people from the need to deal
25 with this onslaught. A huge positive impact to have

1 that position established.

2 MR. WIGGINS: All right. The next topic is

3 allegations and enforcement. This slide gives you a

4 sense of the numbers that we -- that we deal with.

5 You want to focus on the rows that deal with reactors.

6 If you look on 31, there's some points on allegations,

7 itself. There, significant activity continues, how a

8 licensee is dealing with concerns.

9 One of the things that probably disturbed

10 that experiment was 9/11. Since that point, we've had

11 an explosion in a number of allegations related to

12 security base, you know, if you compare prior to 9/11

13 to after 9/11. Right now, about 35 percent of the

14 numbers that you saw on that slide were security

15 related.

16 MEMBER ROSEN: If you took those out, if

17 you replotted those without the security, would you in

18 fact see the performances?

19 MR. WIGGINS: Actually, that's rarely

20 studied, even with that.

21 MEMBER ROSEN: Even without the security?

22 MR. WIGGINS: Yeah.

23 MEMBER ROSEN: You'd still see --

24 MR. WIGGINS: Security moves on seven, I

25 guess. I'll have to get the background. We'll have

1 to take a look. But, it's still -- There's still a
2 fairly consistent number of other things coming in.
3 MR. MILLER: Dan is our coordinator for
4 allegations and enforcement.
5 UNIDENTIFIED SPEAKER: I believe the number
6 of HNI issues has increased some, as a result of
7 security, but, I don't think it's a significant
8 increase, if that's your question.
9 MR. WIGGINS: All right. If you back up
10 security, what would the data show, things getting
11 better or --
12 UNIDENTIFIED SPEAKER: The data in terms of
13 allegations?
14 MR. WIGGINS: Yeah.
15 UNIDENTIFIED SPEAKER: You looked at a
16 hundred and 171 there and, you backed out 35 percent
17 of that, you might see a slight increase. I don't
18 think it's -- We can get that number, if you'd like.
19 MR. WIGGINS: He's going to work some
20 numbers up and provide it to you later.
21 MEMBER ROSEN: It's a very -- It's very
22 important that ypou look at -- not improved despite
23 consolidation, or, in place of the consolidation and
24 deregulation.
25 MR. WIGGINS: I think --

1 MEMBER ROSEN: What I would want to know,
2 I would want to have any proven, albeit, a small
3 graph. It seems helpful that the ongoing maturation
4 and consolidation would rectify.
5 MR. WIGGINS: Well, I think as Hub said,
6 you've got to be real careful about looking at one
7 number and trying to draw a conclusion without safety
8 conscious work environment from this number alone.
9 There's a lot of things that affect whether a person
10 raises an allegation or not and, it doesn't
11 necessarily have to be related to -- Well, it could be
12 related to a number of things.
13 The one that is related to your -- to a
14 test on safety conscious work environment are ones
15 that directly relate to how effective a licensee is at
16 wanting people to find problems and dealing with those
17 problems professionally when they come up. You see
18 that in allegations when you get a -- folks come in
19 and say, well, now, I brought this problem up and, I
20 keep bringing it up and I can't get an answer.
21 Eventually, they get frustrated and they come to us.
22 That's one flavor of it. That suggests one problem
23 with the problem identification system.
24 Another one, when you look at -- Another
25 type of problem which is even worse is, a person

1 brings up a problem and, then, the person perceives
2 something happened to him or her because the problem
3 came up; the harassment, intimidation, discrimination,
4 those kind of events. That's another bad indicator of
5 a different sort.
6 It's kind of hard -- It's certainly an
7 element of it, but, as we said before -- I've got to
8 be hesitant to try to pin it on Warren. A lot of
9 other things happen, too. Restructuring causes
10 consolidation of activities. It causes downsizing.
11 Downsizing puts pressure on people, they worry about
12 their jobs. They get more worried overall for
13 whatever -- We discipline ourselves not to get
14 involved in people's agendas. We just take the issues
15 as they come and try to work them. But, the practical
16 reality of the matter is, when you have that kind of
17 an activity going on, every time we've seen a
18 downsizing, you're going to see some -- some --
19 MR. MILLER: Yeah. At least --
20 MR. WIGGINS: -- company allegations.
21 MR. MILLER: -- in this region. Jim's
22 point's a very good one. It's still a dynamic
23 situation, even though a number of these are
24 transfers, you know, a couple of years in the past.
25 I still see it playing out. I think it's going to be

1 something we have to watch for a little bit longer
2 before we can draw a conclusion about what effect does
3 9/11 have, what effect has the consolidation, itself,
4 had. Is there improvement or not? Is it becoming
5 ascentotic (phonetic)? Or, is a discussion about
6 industry performance becoming ascentotic with some
7 level that is perhaps acceptable.
8 MR. WIGGINS: All right. The next line
9 talks a bit about enforcement. There's another area
10 where we -- From a 50,000 foot view, you think that as
11 you look on that reactor oversight process that now
12 seeks to develop findings that are green or greater,
13 as compared to the prior system, where we had to take
14 issues, determine if there were violations and, then,
15 try to score them under a very level system, you would
16 think, oh, well, the way the process is currently set
17 up, there's going to be less of these so-called
18 isolated enforcement actions. It's a very level three
19 and it involves civil penalty cases, things like that.
20 That's all true. Except, one of the things you'll
21 hear later on in the discussion, is, the ROP brings
22 you a certain amount of work to develop, to identify
23 and characterize the findings by color. It turns out,
24 it's not as simple as one might think, or, how it
25 might have been an initially envisioned.

1 So, the work in enforcement has
2 essentially been a transference from having people
3 discussing severity levels and sitting at enforcement
4 conferences. We don't do that any more. We don't
5 have nearly the number of conferences any longer, that
6 discuss the issues. But, when you look internally at
7 that time, we're still spending a lot of time with,
8 among ourselves, with our headquarters counterparts
9 trying to settle on, what's the performance issue and,
10 what color it is. So, there's still a good amount of
11 work going on in that regard. And, you'll hear more
12 about that when folks later in presentations talk
13 about the significant determination process, some of
14 the struggles that we have and the challenges.
15 Okay. Getting near the end here.
16 MEMBER SIEBER: Could you explain what you
17 mean on the previous line by the term, wrong doing?
18 MR. WIGGINS: Yeah. Wrong doing --
19 MEMBER SIEBER: Intentional?
20 MR. WIGGINS: Yeah. I'll give you the
21 dictionary definition, wrong doing is either
22 deliberate acts or acts done by careless disregard
23 and, don't ask me what careless disregard is, that's
24 why we have a lawyer on staff and, even he has trouble
25 figuring that out. It's something that I've never --

1 It's essentially something that you should have known.
2 By your position, you probably -- you can make a case
3 that you should have known a regulation applied and,
4 you didn't take the time to go check it out, that it
5 did apply and, you ended up violating it. That's
6 essentially careless disregard. But, it's not even
7 near that clear. But, most of the cases we're looking
8 at are deliberate cases, that are wrong doing. H&I is
9 a special form of wrong doing.
10 MEMBER ROSEN: That's in the reactor area?
11 MR. WIGGINS: Yeah. But, we don't see too
12 much of that any more.
13 MEMBER ROSEN: Any what?
14 MR. WIGGINS: We have many more materials
15 licensees and much more activity going on in there.
16 It's much more frequent than we have the kind of --
17 those kind of issues we're trying -- We still have a
18 good inquiry of cases that our investigators are
19 looking at. A lot of those are H&I related matters
20 that they're involved in, which I said is a kind of a
21 subset or a special form of wrong doing type case.
22 MS. WALKER: Another thing that that
23 includes is also fitness for duty cases.
24 MR. WIGGINS: Okay. We talked about the --
25 I mentioned the WCAC, our work coordination analysis

1 center. I'll show you -- This is one of the charts
2 that Debbie Kack (phonetic) produces. At the very
3 beginning of the oversight program when we were
4 coming, actually, getting ready to do the pilot, it's
5 that far back. It was clear to all of us that we
6 needed to substantially upgrade our processes for
7 following where we were and assessing where we were
8 against the program. One of the principal
9 differences, to me, between the prior program and the
10 ROP is, this ROP has a lot more eaches in it than the
11 prior program. The prior program generally, were
12 centered in areas, an inspector, even the program
13 documentation said, the inspector could decide when he
14 or she was done, could kind of decide whether to
15 follow procedure or not in terms of what to look at.
16 This ROP's got much more mechanics to it,
17 to make it consistent, inscrutable, predictable and
18 all the qualities that we wanted to have in the ROP.
19 In our region, it was important we knew that you can
20 call it contact time, or, somebody said, a lot of it
21 is just being there, for an inspector, being present,
22 watching. So, it was important for us to know where
23 we were in terms of program completion and know where
24 we were in terms of how much actual inspection and
25 inspection-like effort we were -- we were applying,

1 so, we wouldn't get seduced -- that's my word --
2 seduced by the mechanics of this program.
3 You can lose the bubble in the ROP if you
4 focus too much on the mechanics and spend all your
5 time focusing on the mechanics, it will take that time
6 if you let it. You won't spend your time trying to
7 assess licensee performance. So, we needed a
8 mechanism that we can look at where we work and track
9 and tell us whether we're on target or not, in terms
10 of program completion, without having too many people
11 worrying about it and let them worry about what we pay
12 inspectors to worry about what's going on in the field
13 and being able to tell us a story about a performance
14 on a licensee.
15 So, we put this group together. Randy, it
16 works for him in DRP. He's taken a major role in
17 developing this.
18 MEMBER SIEBER: How can you tell when an
19 inspector is actually doing his job, or her job,
20 proper?
21 MR. WIGGINS: I wish it were that easy.
22 You have to -- You have to apply a whole spectrum of
23 activities. You -- You don't measure -- Although, you
24 look at what findings the individual is coming up
25 with. That's not all, because if you look for

1 findings in a highly performing licensee, they way we
2 define findings, that's going to be difficult. Hub
3 mentioned, we still -- our folks still have
4 observations, they're still valuable things that they
5 come up with.
6 We have regular contact between -- between
7 the inspectors and their front line supervisors, even
8 the residents and, that's the -- the residents versus
9 region based, there's different challenges. The
10 region based, you don't -- you don't see them for a
11 week or so at a time, as they're off in the field.
12 Or, the resident, they're currently away and, you
13 have, you know, challenges of your communications
14 mechanisms to keep close with those folks. But, we
15 expect our inspectors to communicate with their branch
16 chief frequently and, that's what happens.
17 The agency has expectations for management
18 business to the site, for inspector oversight. The
19 branch chiefs are -- the project branch chiefs are
20 periodically at each facility, once a quarter. The
21 division directors up in Iowa make trips to go to the
22 facility to help discuss management business in a
23 context of assessing licensees. There's also an
24 element of talking to our own people and getting a
25 sense of what they're doing. So, you apply varying

1 techniques to try to measure it.

2 MR. MILLER; I think best -- In addition to

3 what Jim is saying, I think what Randy and Wayne are

4 going to talk about and, of course, there are all

5 facets, taking about one way or another, provides

6 insight on this very thing you're asking about. We

7 worry about this all the time. Are we -- Are we

8 finding the things that we should be finding?

9 MEMBER SIEBER: Yeah. I worry about it,

10 too. And, I guess that after 35 years in the

11 business, I've seen very aggressive inspectors and not

12 so aggressive inspectors. And, at the same facility,

13 there are individual differences. And, I think the

14 effectiveness of the new program, relies on the front

15 line resident inspector for the most part. And, so,

16 that becomes an important issue in my mind. And, I

17 guess as we get into this later on, if there are

18 metrics that you use that are objective, as opposed to

19 the subjective visit, a couple of days working through

20 the inspectors routine and his files. That gives you

21 some information that is it objective.

22 MR. WIGGINS: Well, we can come up -- There

23 are some objective measures in that package, but, they

24 don't measure what you asked. They give you an

25 inference. They raise a question that you might

1 answer. And, you'll see in there, we're tracking
2 findings. We're tracking findings. We've got to be
3 real careful when we do, we recognize it. We're --
4 We're not tracking findings on the idea that if you
5 have a lot of findings, it's good and, if you have few
6 findings, it's bad, necessarily. There's all kinds of
7 problems that that brings. First, it may not be
8 accurate. It doesn't -- It doesn't, on its face, take
9 into account what the licensee is up to. There's
10 several other issues that, you know, that -- problems
11 that that could cause. But, it does cause you to
12 raise a question.
13 If we see some difference in findings or
14 observations, what we're seeing in terms of findings
15 and observations doesn't match the discussions we had
16 about a particular plant in either our mid-cycle, or,
17 end of cycle, or, day-to-day discussions, then, you
18 know, once a month, we meet on those metrics and the
19 statistics, we raise a question and we try to get an
20 answer. We try to challenge ourself to figure out the
21 answer.
22 MR. MILLER: There's daily contact between
23 the inspectors in the field and, the critical person
24 in the whole mix here, that's the branch chief in the
25 region.

1 MR. WIGGINS: Okay.

2 MEMBER SIEBER: Do you use your region
3 based inspectors in any way to check on the
4 effectiveness of the licensee based inspectors?

5 MR. WIGGINS: Not -- Not -- I won't say per
6 se, but, it's obvious that if a region based team
7 comes back with some issues we might understand why
8 were we so far -- why were we -- why didn't we find
9 this earlier. But, mostly -- I mean, that's what
10 we're looking for is the region based inspectors and
11 the residents are complimentary functions. They work
12 together well. We inspect them, work together well.
13 We have fairly regular expectations for how they
14 communicate, how they work together in this region.
15 It isn't a process of, you know, a region based are
16 spying or anything like that, or, measuring
17 performance of the residents.

18 But, like any organization, if something
19 happens, an event occurs, or, we find a problem and we
20 kind of sense that, gee, we should have found this
21 earlier, we'll do a lessons learned, to try to see
22 what learnings there are for us, you know, and, let
23 the chips fall where they may at that point.

24 MEMBER SIEBER: Thank you.

25 MR. WIGGINS: I want to just point out --

1 MEMBER LEITCH: Can you explain what BI and
2 --
3 MR. WIGGINS: Yeah. That's where I was
4 going.
5 MEMBER LEITCH: Okay.
6 MR. WIGGINS: We just pulled a chart out of
7 something that's in the book. BI is baseline
8 inspection. I wanted to talk about the stack on the
9 far left, which is baseline inspection and, the stack
10 in the middle which says BIP and BID, that's
11 preparation for inspection and, inspection
12 documentation. And, then, you can take a look at the
13 stack bar at the far right. The loose translation,
14 it's total program effort.
15 Now, each stack bar pairs, the left side
16 is what we call the program or the budget, that's what
17 the -- that's what this year's activity is supposed to
18 be. And, the right side, the darker one is the
19 actuals. So, we look at this monthly and we want to
20 make sure that we're getting adequate coverage on
21 baseline inspection. This is one of the tools that we
22 use to make sure that's the case. We want to keep a
23 handle on our total effort to see why -- you know,
24 whether we're doing -- whether we're near the budget
25 on that. And, if we're over it, what's driving it.

1 But, the thing that we really focus on these days and
2 it's especially important given the challenges that
3 we've discussed in staffing, is the prep and doc, the
4 preparation and documentation.
5 Take a look at the next slide, it's kind
6 of interesting analysis that you can see. The top line
7 is the number of qualified staff and, the bottom line
8 is what our percent of preparation only. We separated
9 preparation from the -- from the prep and doc number.
10 If you take a look at the shape of the line, you can
11 see that the slopes are different and, that kind of
12 worries us.
13 Now, what makes it a little bit difficult
14 is, obviously, we've been doing the ROP now for a
15 while and, as you do the ROP you learn how to do it
16 more. Particularly, when you talk about residents, it
17 gets more repetitive. They're now through the third
18 or fourth time, they're going through the year. So,
19 obviously, there's less preparation time for them in
20 not having to learn some major function of the system,
21 or, say, flooding protection. They now have to become
22 -- They invested the time already to learn flooding
23 protection for regions of the facility. Now, all they
24 need to do is, on the going forward years, is to -- is
25 to conduct inspections, make sure licensee's doing

1 what he needs to do to provide for flooding
2 protection.
3 So, there's certain efficiency you're
4 going to gain just by familiarity with the program.
5 But, the thing that worries us is, will we -- are we -
6 - you know, when are we cutting back on preparation
7 because we just run out of time. And, that's --
8 that's what we worry about, probably. Out of this
9 current program, the ROP, if you look at it from a
10 resource point of view, the biggest struggle and the
11 biggest thing we worry about is making -- is, are we
12 getting an adequate amount of preparation, cause
13 without preparation, this program's effectiveness is
14 going to -- going to be -- going to take a big hit.
15 The ROP, it is kind of detailed and,
16 remember, I said it's the ROP mechanics. It's a
17 program that you can spend a lot of time just making
18 sure you do all the eaches. But, if you don't get the
19 prepare correctly, then, your effectiveness of doing
20 a particular inspection is going to go down and, your
21 opportunity to find some problems is going to go with
22 it. And, that's a -- that's a problem that we worry
23 about constantly here and keep careful track of this
24 and keep -- keep -- We make sure through all the
25 mechanisms we have, counterpart meetings, daily

1 discussions, whatever, that it's a still consistent
2 expectation and that our staff gets adequate
3 preparation time to do these inspections in a
4 reasonably effective way.
5 We'd like to see any differences in the
6 curves be caused solely by efficiencies gained by just
7 getting more familiar with the process and learning
8 how to do it better and faster.
9 MR. LARKINS: The ROP in terms of the
10 resources, allow you flexibility, if you got, say,
11 more than one or two problem plants? I mean in the
12 plants -- You don't seem to have the same level of
13 flexibility as you did at one time, to move qualified
14 people to handle problem plants?
15 MR. WIGGINS: That's true. That's true.
16 Because the ROP is much tighter in terms of explicit
17 expectations at what has to get done at each plant.
18 Now, I compare this to -- I've been doing this since
19 1980. Randy and Jack, I don't know how many programs
20 we've seen. And, I'll give you mine. This is the
21 tightest program I've seen in terms of what you're
22 given in terms of -- in FTE to do it, as compared to
23 what it takes to get it done. So, you're
24 substantially more challenged, if you -- you know, to
25 handle these unexpected emergent things. Now, we've

1 been successful thus far.

2 MR. LARKINS: When you reach the point, do

3 you have a clear indication of when you're at that

4 cutoff point, when you can no longer --

5 MR. WIGGINS: We'll know it. We'll know --

6 MR. MILLER: It's immediately felt. Now,

7 the agency cannot predict where the problem -- I'll

8 use power plants loosely here -- are going to show up.

9 So, if you look at the agency budget structure, all

10 the regions at the baseline level in terms of plant

11 support or, I guess -- what it is -- plant special

12 inspections, there's a certain amount that even among

13 the agents, that in effect becomes a pool, cause some

14 of the regions are going to have more challenge than

15 others at any one time. There's an expectation that

16 the regions will share resources as necessary to deal

17 with a Davis Besse, to deal with an Indian Point.

18 And, the record is replete with that.

19 The other thing in this region, honestly

20 and, let's be frank about it, the budgeting has been

21 favorable to us with respect to the number of sites.

22 As consolidations occur, we're still operating with a

23 budget model that was, you know, based upon, you know,

24 a system where there were -- Indian Point 2 and Indian

25 Point 3, for example, were two separate sites. If it

1 weren't for that fact, I don't think we would have
2 been able to make it over the past several years,
3 honestly. We have utilized that situation.
4 But, I think that's kind of a case that's
5 special to Region 1, but, longer, bigger picture, I
6 think there's a recognition that the regions and NRR,
7 I should say, has to provide resources as issues
8 emerge that could not be specifically anticipated in
9 a budget that's prepared three years before the time
10 that you --
11 MR. WIGGINS: The budget for the activities
12 that you're talking about, these plants to the right
13 side of the action matrix, are more or less done
14 nationally. It's more of a national expectation, how
15 many plants at one time would be in the multiple or
16 repetitive degrading cornerstones plant, for instance,
17 let's say. And, the NRR and the regions have
18 recognized that we under predicted, nationally, how
19 many of those plants would exist. So, there's budget
20 corrections. And, NRR has been good. I'm not just
21 saying it cause Laura's here. They've given all the
22 regions plenty of help, us included.
23 We have -- We have one of the advantages
24 of having folks that were in the region that went down
25 to NRR as qualified inspectors, they come back to us

1 occasionally to do some tours as backing up for
2 resident positions where the position's not filled and
3 need them to get that done. So, there's been a
4 recognition, there's a budget correction that's been
5 going in. It's certainly in this budget cycle, we'll
6 see where it comes out. It recognizes that we need to
7 put more resources in this account that funds these --
8 these more difficult to handle plant situations.
9 MR. LARKINS: I was just wondering if
10 someone is really forecasting well, because at one
11 time when I was in NRR, we had a special inspection
12 branch which provide the resources when needed, sort
13 of like a buffer. A more prescriptive program, I'm
14 wondering how well prepared we are to handle emergent
15 issues. I mean, everybody's getting tighter and
16 tighter.
17 MR. WIGGINS: My answer is, we're learning.
18 My recollection is, the agency in its budget
19 calculation early on assumed you'd have one plant and
20 multiple degrading cornerstone in the country. That's
21 not true. So, we've had to make up for that. There's
22 measures that had to be put in place to make up for
23 it. A lot of it is NRR providing folks back out to
24 the regions to plug some holes in the inspection
25 program, talk about contractors and how we use them,

1 make up for differences in numbers. We've had some of
2 that happen. And, Wayne and Randy will talk about
3 some other coping measures that we're using.
4 MR. LARKINS: One thing this committee has
5 commented on, the license renewal. And, a lot of
6 plants now are -- I'll get the exact number. But, at
7 some point, there's going to be an inspection, an
8 inspection of these plants and I think it was
9 highlighted to the commission in the last ACRS
10 meeting, you know, are we forecasting, looking
11 accurately at what we need to do that.
12 MR. WIGGINS: Yeah. Wayne might be able to
13 comment more -- more specifically on it. But, we know
14 what the inspection work load is for license renewal.
15 There's three team inspections that we have to do per
16 facility and, that's in the pre-renewal period. So,
17 I think we have a decent handle on that, between DRS
18 and Wayne's folks and the Debbie Katt function and,
19 Randy's in the DRP shop. We pretty much have a --
20 have a handle on that right now.
21 Now, the numbers of license renewals are
22 changing. That's a big budget decision right now, you
23 know, do we take on all comers, do we -- do we cap the
24 review at ten, do we cap the review at 12? There's a
25 whole bunch of decisions going on in this budget

1 cycle. But, once those decisions are made, we pretty
2 much know what the inspection obligation is and, you
3 can build that in to your, you know -- that's the base
4 of what you have to do in the region. So, we haven't
5 had a problem thus far.
6 MEMBER LEITCH: Jim, our concern, though,
7 was not so much as inspections that you have to do to
8 support license renewal, but, those future inspections
9 to confirm that the licensee has implemented the
10 programs. In other words, our concern is not now,
11 but, perhaps, ten years from now, as we enter the
12 period of extended operations of these plants, there's
13 a very significant, up our way, of inspection
14 activities that are in front of us and, we want to be
15 sure folks re cognizant of that and, I think they are.
16 MR. WIGGINS: I think they are. It's
17 worthwhile to worry about it. I don't know that it's
18 a lot of specific thinking right now on, you know, how
19 much, or, what it will look like, or -- You know,
20 fundamentally, I'm sure it will come down to whatever
21 the reactor inspection program is when this happens,
22 since we change programs every five years or so.
23 Whatever the program is, you know, one of the
24 considerations I would hope when you develop that fall
25 along program is, how do you accommodate these renewal

1 plants.

2 I mean, one of the bases for license

3 renewal is, there's not much difference the day after

4 the renewed license is effective than it was the day

5 before. So, you know, folks have to be doing the same

6 things. So, our program ought to be sensitive to the,

7 you know, what it's sensitive the day before, it

8 should be okay the day after. That's kind of a --

9 Maybe, that's a pipe dream.

10 MR. LARKINS: That's an over

11 simplification.

12 MR. WIGGINS: Yeah. It's an over

13 simplification.

14 MEMBER ROSEN: There are a lot of things

15 licensees are permitted to do before they enter the

16 license renewal period. And, that is a burden for the

17 regions, because they will do them or not do them.

18 MR. WIGGINS: Right.

19 MEMBER ROSEN: And, when they did them, did

20 they do them well and in the context of the license

21 renewal. That's probably what Graham's referring to.

22 MR. WIGGINS: Yeah.

23 MEMBER ROSEN: I'm a little uncomfortable

24 with the idea that at least some preliminary thinking,

25 we get into the planning and budgeting cycle for that,

1 because, clearly, if you're going to get into that
2 period and have not dealt with it in the planning and
3 budgeting cycle, you're in trouble already.
4 MR. BLOUGH: The way I understand the
5 status now is, that headquarters is working on what
6 those just-in-time inspections will be and, then, from
7 that, we'll know what the magnitude of them is and,
8 there's a memo working to the process. So, it is a
9 byway, but, we don't -- we don't know the size of it
10 and, it could be larger than --
11 MEMBER ROSEN: If it isn't, then, you're
12 okay.
13 MEMBER BONACA: It's actually becoming even
14 more challenging now, because the standardized process
15 that is in place that licensees are going to rely on
16 this approach. And, the way the reviews are being
17 done right now for the approval is that for whatever
18 the plant states, they are consistent with the report,
19 the staff does not perform any inspection now. They
20 simply say that, you know, are the inspections
21 proceeding, entering into license renewal, then, we
22 will inspect them, verify that they're consistent with
23 us. So, that's putting off to the future what they
24 used to do now. So, there's really quite a work load.
25 I think you have to look at it.

1 MEMBER ROSEN: The subcommittees or this
2 committee labor 30 percent of our time on those
3 things. When you get into pre-consulting from us and
4 a lot of -- a lot of commitments are being made on
5 their behalf.
6 MR. MILLER: This meeting is being
7 transcribed and, so, there will be others, who will be
8 in a position to focus on that and, we'll know of your
9 comments. We appreciate that perspective, though,
10 because you can't forget the inspection piece of this,
11 is what you're telling us.
12 MEMBER SIEBER: One of the problems I think
13 you'll find is that, you know, a lot of the aging
14 management programs are covered by all, but, some are
15 not and, some are unique to the specific site. The
16 licensees today are consistent with what they were
17 many years ago, they will tell you, I'm not ready yet
18 and, I don't have to be until such and such a date.
19 Then, you can come and inspect me. So, all this is
20 going to come at a -- at a -- probably your worst
21 opportune time. And, it's going to require, since
22 these are much needed programs toward the bulk of the
23 program it's going to require individual analysis to
24 be able to inspect them. And, I suspect that's what's
25 going to happen. And, even though this is the tail

1 end of the license renewal process, it seems to me,
2 the thing that's driving the question of how many a
3 year are we going to do, besides the fact that in
4 three months, wants to get the advantage of lower
5 write-down costs as quickly as they can. I think the
6 problem in the NRR budget manager time and staff
7 review time, is driving it, because there is a great
8 amount of work that goes into the writing of the SCR
9 at NRR. So, that's -- That's where today's FTE crunch
10 is. But, that is going to drive the inspection
11 requirement five years, ten years from now. And, by
12 then, you aren't going to have any choice.
13 MR. MILLER: We hear this concern and, I'm
14 glad you're raising it. I believe that headquarters
15 is aware of this. It sounds like you've been making
16 this issue through the ACRS meetings on license
17 renewal and, it's a timely thing to be raising.
18 There's a great deal of questioning and concern,
19 actually, being raised by industry about whether or
20 not there's enough agency resources being devoted to
21 this. And, what you're saying is, don't just look at
22 the front end, look at the inspection and recognize
23 that it will all come due at the same time. I
24 understand the concern.
25 MEMBER ROSEN: When it comes due, you'll

1 have to have procedures that are different than you
2 have now for inspection and, people trained somewhat
3 different than they are now.
4 MEMBER SIEBER: We think we're making the
5 point and I'm nervous enough about it that I try to
6 make it every day that I'm engaged in this business.
7 MR. WIGGINS: I guess I should have said,
8 I don't know enough about it to really comment
9 completely. But, I'll add another concern. We
10 actually worry also about what the inspection looks
11 like and how much of it is inspection versus some type
12 of a licensing decision in the field. We've had some
13 experience with that, that isn't the greatest in the
14 world. I think if you look -- In my opinion, if you
15 look at what we did overall with motor operated
16 valves, I think in the end we had a good program.
17 But, it didn't take us ten years to finish it -- I
18 think the way we did it, we evolved -- we evolved how
19 we approached the issues. And, in effect, we were
20 making licensing decisions through the inspection
21 process, which has not been the most efficient or
22 effective way of doing it. It's difficult to maintain
23 consistency and, it puts a different burden on the
24 folks that are doing it as an inspection versus what
25 we typically do as an inspector. Your points are well

1 taken. I guess I'll have to get much smarter on the
2 issue.
3 That completes what I was presenting.
4 MR. MILLER: That slide is, if you want to
5 show the last one, this is source of great pride for
6 us. It shows that even this staffing challenge, clip
7 the resources, they're in the field, it starts and
8 ends there. But, the previous slide, the one that
9 showed the prep time is the slide that I used at the
10 senior management meeting as kind of an attention
11 getter. That this is easy to track. The thing you're
12 really worried about is the quality. And, we have to
13 give our people the time to prepare. So, we throw
14 that out just to let you know, this is a challenge.
15 It's on our radar screen. And, we've got an obsession
16 with, you know, finding ways to, you know, assure that
17 there's quality in inspection and, that we're
18 monitoring it closely.
19 MEMBER ROSEN: Help me with the acronym,
20 DIE.
21 MR. BLOUGH: Direct inspection effort.
22 That's essentially inspection hours.
23 MR. MILLER: The time you're actually doing
24 the inspection.
25 MR. BLOUGH: Doing the inspection.

1 MEMBER SIEBER: Let me ask just a couple
2 general questions that would require an opinion or an
3 answer and, I guess everyone will have a different
4 point. But, do you believe that the ROP is an
5 effective tool for regulation of performance and the
6 safety of the fleet of reactors, they way it's applied
7 today?
8 MR. MILLER: Yes. And, in my talk, I
9 mentioned that there -- it has to be applied -- the
10 best word I can use is aggressively. And, I think
11 that's the question you have when you -- that's the
12 question you have for the whole day here. That's a
13 good question. And, I hope that as the day goes on as
14 you hear from others, they'll offer you their own
15 individual perspectives on this. But -- Maybe I
16 should go last, not first. But, I think, yes, but, no
17 program by itself does the job. It's how it's
18 applied.
19 MR. WIGGINS: I would give it a yes thus
20 far. I'll talk about this region. My opinion in this
21 region is, we haven't needed to deviate from the ROP
22 to deal with any performance issue. That's kind of a
23 backwards measurement. But, one of the things you
24 have to look at is, you know, did you -- when you
25 looked at the issue that you were dealing with and, a

1 lot of us have experienced dealing with performance
2 issues and, you decide -- you see what the ROP tells
3 you to do with it. It hasn't been wrong. We've been
4 able to implement the program and attack the issues
5 that we thought needed to be attacked. So, thus far,
6 you know.
7 MR. MILLER: We've had one deviation that
8 Brian will talk about, Indian Point and it's not a
9 major deviation and it has to do with the current
10 status that come out of this back end of this action
11 matrix. It goes from multiple degrading cornerstones
12 and out. So, there has been that deviation. But --
13 In making my comment, do I sit here, or, do I not lose
14 sleep at night? I'd lose a lot of sleep at night.
15 But, I would be doing that if it were the old program,
16 or, the new program, or, some other program. And,
17 most of the people here, I think, lose sleep along
18 with me.
19 MEMBER SIEBER: If you could change one
20 thing -- Let me rephrase that. If you were forced to
21 change one thing in the ROP to make it better, what
22 would that be? You may want to think about that and
23 tell us after.
24 MR. MILLER: It's a good set up for the
25 next couple of talks.

1 MEMBER SIEBER: Okay.

2 MR. MILLER: We were, I think somewhat --

3 planning for a working lunch without an agenda,

4 because we knew that this would have this kind of --

5 take this kind of course, though we've had

6 presentations and a lot of good discussion, hopefully,

7 helpful to you. At this point, the plan would be to

8 have Randy begin his presentation and, I'll leave it

9 up to you, really, when you want to -- you think it

10 would be a good break point for lunch. I think if we

11 just look at the agenda and help me out here on the

12 plan --

13 MS. WALKER: Lunch is ready. It's 11:45.

14 MR. MILLER: We can do it now, or we can

15 get partly into it. Or, we can take a break and then

16 start --

17 MEMBER SIEBER: It sounds like, if it's

18 ready, now is a pretty good time. And, a working

19 lunch is not a bad idea.

20 MR. MILLER: So, if we can take a break

21 and, then, have Randy start to make a presentation

22 after some period of time.

23 MEMBER SIEBER: All right. Fine. What

24 time would you suggest we start?

25 MR. MILLER: Well, do you want to take 15

1 minutes to kind of gather up lunch and, then, he can
2 start his presentation at that time?
3 MEMBER SIEBER: I think that would be fine.
4 (Whereupon, a recess was taken.)
5 MR. BLOUGH: Before that, I was a Naval
6 officer for six years. With NRC all my time has been
7 in reactors, except for two years in '97 and '98,
8 where I was in charge of the region One internal
9 Safetty Division. Otherwise, I've had resident and
10 senior resident inspector section chief and most of my
11 time in reactor projects in the ROP.
12 This afternoon, the rest of the presenters
13 will tell you everything that I'll forget to tell you
14 and, if we don't, we'll blame each other. Actually,
15 my part is to talk about the program and, then, to
16 give you some assessment results and, Wayne will talk
17 about the inspections and inspection results, as well
18 as a little bit on STP.
19 I've got about 20 slides here. The first
20 slide just shows simple one, flow chart of the ROP.
21 We use this during our annual assessment meetings,
22 just to explain the concept and, it show the concept
23 is very simple. The details are very intricate and,
24 that's -- the kind of point of this is, we've been
25 very much involved in the ROP since the development

1 stage. It's still evolving and Region 1 is very much
2 involved in those requirements.
3 I believe the ROP is sound and, we've done
4 a good job in Region 1 in supporting the ROP and,
5 also, helping our staff work through all the issues
6 that they had to work through to understand the ROP.
7 And, I think now we have a good number of compliance
8 to the staff. And, one of the things that
9 contributes to that, in my view, is the fact that
10 there was a lot of concern early on about how
11 constraining the ROP would be. We all had some
12 misconceptions early on about how constraining it
13 would be and, it's really not as constraining,
14 perhaps, as many thought when we were just discussing
15 its concept and not actually involved in the
16 implementation.
17 The cross-cutting areas, I think, are
18 vitally important and, it's important that throughout
19 our efforts we're assessing licensing performance in
20 our own oversight efforts and, that we're looking for
21 what the comments are on trying to discern the meaning
22 from the -- I'm still on the previous slide.
23 MS. WALKER: Okay. Sorry about that.
24 MR. BLOUGH: Trying to discern the meaning
25 from the information that we're getting. I already

1 mentioned that we've been heavily involved -- Is there
2 a slide --
3 MS. WALKER: What's the subject?
4 MR. BLOUGH: Simple concept, intricate
5 implementation. Okay. Actually, I was speaking from
6 a slide that didn't get into the book.
7 To summarize what I had said was, that the
8 cross-cutting areas are important. It's been
9 important for regional folks to be involved in the
10 development and evolution of the process and, then,
11 just comment from that, I would say that it's been
12 particularly important for Region 1 to be very
13 involved in the ROP because of the Indian Point case
14 and, here's a case where there was no precedent within
15 the ROP for a plant whose issues were not necessarily
16 episodic, but, they were chronic in developing over a
17 long period of time. And, therefore, the recovery
18 required -- broad based recovery -- after it proceeded
19 for a long period of time.
20 And, the first -- the first iteration of
21 our assessment process had actually envisioned a plant
22 whose recovery was probably more -- more narrowly --
23 It didn't need to be as broadly focused and was
24 accomplished more quickly than Indian Point. So, we
25 had to be very much involved in developing the ROP as

1 it applies to the plant in that sort of situation.

2 Now, I think we're back onto the slides

3 here. This slide, I just want to talk about our

4 approach to inspections and a little bit of

5 philosophy. You've seen all these slides before in

6 Hub's presentation. But, this is what we tell

7 ourselves and what the dialogue is around here about

8 the philosophy. In order to have value for safety, we

9 need to do those things and, they're centered around

10 finding problems while looking in important areas and,

11 having found a problem, put that problem into safety

12 perspective and communicate effectively.

13 MEMBER ROSEN: I know you mean finding

14 problems that the licensee doesn't already know about,

15 because in an earlier spot you said you didn't want to

16 find any corrective action --

17 MR. BLOUGH: Absolutely. Absolutely. And,

18 it runs the gamut. But, some element of the problem

19 that a licensee isn't aware of. But, it may be a

20 problem that they knew of, but, the problem that we

21 point out is that they're not dealing with it

22 properly, or, they missed relevant considerations.

23 MEMBER ROSEN: Or, they misjudged the

24 problem.

25 MR. BLOUGH: Right. Again, the most

1 valuable ones are the ones where the inspector
2 completely comes upon an issue that's a problem that
3 the licensee is unaware of.
4 Communicate effectively has always been
5 important for us. And, under the ROP, we're actually
6 writing less detail, you know that, the inspection
7 report, itself and the assessment documents are not
8 like they were in the south era, but, nonetheless, the
9 written -- a written word is important and it's
10 watched closely. And, verbal communication is also
11 very important. And, in fact, the program endorses a
12 level of verbal communication on those issues and
13 things -- well, actually below the threshold that the
14 inspection reports and the assessment reports and, we
15 take that responsibility very seriously. In fact,
16 consider it a matter of professional ethics to
17 communicate with the licensee, because we don't
18 operate the plants, they do. And, we should not be
19 sitting here with information that we think would be
20 useful to them in any way.
21 MEMBER ROSEN: If I heard one criticism of
22 the process from the licensee's side it's that
23 inspection reports now are not -- don't have the
24 richness that they used to in terms of things the
25 licensee management and senior management need to know

1 about to get under way fixing some sort of underlying
2 issues. That the inspection reports are now somewhat
3 more sterile in that sense.
4 So, the thing you're talking about which
5 I think is the professionalism of communicating
6 effectively below the threshold of what's in the
7 report. I can't over emphasize that, in terms of its
8 importance to the licensee.
9 MR. BLOUGH: We agree, that's important.
10 We also recognize that we carry now the responsibility
11 of trying to test whether that information is being
12 transferred within the licensee information, because
13 what we're freed up from under the ROP is writing at
14 grade level, because there are some issues that the
15 inspector will find that require an extraordinary
16 amount of context when you put it into writing, into
17 a written document that everyone can see. And, it
18 will be taken out of context, or, even exaggerated if
19 we don't go to pains to get it in proper context.
20 We're freed up from some of that writing and we carry
21 an extra responsibility with it.
22 Of course, the other side of that is,
23 there should be only one regulatory process. So, we
24 should not be expecting or requiring licensee action
25 when we tell them issues verbally, we should expect

1 them to take the information and consider it and,
2 we'll continue to conduct our inspections and see
3 where it goes. And, if we have issues below the
4 threshold even in documentation and we discuss it with
5 the licensee, at that point, we are at a level where,
6 truly, you might expect it before something
7 significant happens, the issue would progress at least
8 to the point of green findings, or a cross-cutting
9 issue that would get in the assessment report before
10 you have a serious problem.
11 MR. MILLER: In this area, which has no
12 real clear, you know, detailed guidelines, it falls
13 below the level of what prior procedure gets
14 documented. Again, I think we're talking team. I
15 mentioned that a number of times this morning. These
16 messages get sent by the individual inspector, but,
17 very importantly, they get sent by branch chiefs and,
18 then, by regional management for a number of reasons.
19 Sometimes, it needs that extra emphasis and a higher
20 hat placed on things to really make sure that some of
21 these things that are fine below radar, but, that
22 might be early precursors, in fact, are making it
23 through to senior management.
24 I understand that some licensees do have
25 a sense of loss. It tends to be the more senior

1 people who are not in all the exit meetings, because
2 the exit meetings, I think, we fairly thorough and the
3 inspectors are quite thorough in what they pass on.
4 It's the higher levels of management that are feeling
5 the sense of loss. And, so, we have always put this
6 premium in this region on the significant presence in
7 the field, the site visits, that hasn't lessened at
8 all. It's only been amplified. The reason and the
9 necessity for doing that has only been amplified by
10 this new program. Make sure that a lot of that
11 important stuff is assessed properly, communicated
12 effectively and gotten to levels that can really use
13 it.
14 MR. BLOUGH: Hub had said earlier that it's
15 very important that we have an aggressive mind set
16 with respect to inspection and, we think continually
17 questioning is a real watch phrase for us and, it's
18 something we need to reenforce constantly.
19 This slide is an excerpt of information
20 from the NRC on reactor safety talk. Dr. Powers is
21 often one of the presenters for this course. And, we
22 share this sort of information with all of our
23 inspectors. An interesting point on this slide is
24 that that course is teaching continuing question as an
25 element of defense and strategy. Likewise, another

1 important principal for us is that we are continually
2 assessing.
3 Now, the ROP has the assessment process as
4 a continuous process. Whenever thresholds are
5 crossed, once we finalize a determination that a
6 threshold has been crossed through a significant
7 determination process or PI, then, the assessment
8 categorization changes and the NRC's action can be --
9 can be brought. But, more than that, we have also a
10 number of continuous processes to supplement that.
11 PI and R inspection, inspection licensees
12 corrective action process is a continuous issue. There
13 is relevance to that is that it's a part of every
14 inspection and, often, each inspection will deal with
15 some elements of problem identification and the other
16 phases of corrective action. But, often, it's problem
17 identification. We have a -- We have now a revision
18 to the program have been in place for about a year and
19 a half perhaps, called PI Stambles (ph) where, in
20 addition to corrective action being applied at every
21 inspection, we'll come back on low level events, or,
22 issues that we think are fruitful and look within a
23 month or two, to see how a licensee has done in
24 evaluating that issue. And, we call that -- That's
25 another element, a continuous process of problem

1 identification and resolution inspection. We call
2 those -- Here, we call those PI and R samples. And,
3 then, of course, our assessment process and our
4 biannual PI and R team inspection is another element
5 in the inspection process.
6 MEMBER ROSEN: Randy, at Peach Bottom
7 yesterday, we heard about the PI and R team in the
8 field there and, also, about the sampling process.
9 And, I asked about whether the sampling process was
10 general, or, just in this region. Is it in your
11 inspection menu?
12 MR. BLOUGH: It's part of the program and,
13 that was a change since the initial implementation,
14 where it's always been an expectation that every
15 inspector will spend a portion of that inspection
16 looking at this area. And, we have periodic team
17 inspections, we added this element that we call PI and
18 R samples.
19 Now, we may spend more time trying to
20 coordinate that with the other regions. I don't know
21 if we've benchmarked other regions. But, lots of
22 times issues that are discussed in our in our
23 coordination meeting at 8:00 a.m., will get put on the
24 board. We'll send an immediate evaluation and once
25 it's resolved and on line to correct, the immediate

1 issue, transfers to the other side of the board for
2 consideration and a PI and R sample. The branch
3 chiefs in both divisions are then involved in deciding
4 which wants to go out and look at and whether it's
5 best done by the resident or some specialist. It's a
6 long answer to your question, but, it is part of the
7 program.
8 MR. MILLER: Randy's more modest than I am
9 more humble. I'll brag a little bit and say this
10 region pushed hard early on in the formation of the
11 program, to get more time, real time following
12 corrective action issues. The periodic teams are
13 important. But, it's very difficult at the end of the
14 year to go back and look at a list and take issues
15 that are nine months, 11 months old and try to find
16 somebody who can even talk to you about what happened,
17 as opposed to go in fresh, kind of while it's
18 happening and, without obscuring the experiment, we're
19 very careful not to get involved too soon. Give the
20 licensee system a chance to operate. There's a lot of
21 judgment when you enter in. But, going in more real
22 time, there's great insight and, those issues are
23 fresh.
24 So, the program was in fact changed to go
25 to a biannual, as opposed to an every year team

1 inspection and, we got additional hours to do this
2 more continuous sort of thing. Catch these issues
3 kind of closer to the time when they're happening.
4 MS. WESTON: Am I understanding correctly
5 that this is tied to the corrective action program of
6 the licensee?
7 MR. BLOUGH: Yes. It's a way of checking
8 how the corrective action process is dealing with
9 issues.
10 MS. WESTON: Do you look for any trends
11 when you're doing that?
12 MR. BLOUGH: In that element of the PI and
13 R inspection, the samples, not necessarily, unless
14 there's a trend associated with the issue, itself,
15 that caused us to go in. The biannual inspection
16 would be more likely to look at trends and, in fact,
17 the most recent change to the biannual inspection, I
18 think, has strengthened, if you look at trends.
19 I'll continue on here with --
20 MEMBER APOSTOLAKIS: Let's go back to --
21 MR. BLOUGH: George wants to go back to the
22 previous slide.
23 MEMBER APOSTOLAKIS: How do you assess the
24 cross-cutting area?
25 MR. BLOUGH: The cross-cutting areas are

1 important because to some extent, the performance
2 there largely determines what we might call the safety
3 culture of the plant, but, not entirely. We've got
4 some additional views on that, but, it's important
5 from that aspect, so, we come at it in a number of
6 ways.
7 One, the inspectors are trained to look
8 for cross-cutting aspects in each inspection and, to
9 discuss those and document those. Secondly, it's a
10 matter of discussion amongst ourselves. Whenever we
11 talk about plant performance and whether it's in
12 preparation for licensing management to come in to
13 talk to the regional administrator, or, make
14 provisions for a site visit, or, what we're seeing
15 during a site visit, or, any part of the assessment
16 process, but, most notably, the semi-annual mid-cycle
17 assessment, which happens halfway through the
18 assessment cycle and the end of cycle assessment,
19 which is at the end of -- after the end of the ROP.
20 That's of very great focus. In fact, we
21 may spend more time talking about those common themes
22 and whether there is a trend in cross-cutting area
23 than we do discussing the actual cornerstone.
24 MEMBER APOSTOLAKIS: [inaudible] What kinds
25 of themes [inaudible].

1 MR. BLOUGH: Well, first of all, is, the
2 opinions of the inspectors are important. That's a
3 matter of dialogue for us in all the cross-cutting
4 areas and, the themes and what they've seen in terms
5 of the inspection finding. In the area of safety
6 conscious work environment, one of the things -- one
7 of the things that happens is that unless there is a
8 confirmed problem, perhaps, with an office of
9 investigation, investigation that finds harassment and
10 intimidation, it tends to be -- So, it's a matter --
11 It's a matter of discussion in all our assessment
12 meetings. It would not be documented as a theme in an
13 assessment letter, unless there were issues that led
14 us -- on the docket type level of finding. And,
15 often, that comes out in the office of investigations.
16 MEMBER APOSTOLAKIS: And, if we look at the
17 other one the performance, the social scientist who
18 works on the culture --
19 (Fixing microphone.)
20 MR. BLOUGH: While you're doing that. We
21 do get input for our assessment process where the
22 agency allegation advisor, who looks at the statistics
23 and the number and nature of allegations per site,
24 will give us typically a paragraph of assessment on
25 three or four plants and what they've seen from

1 looking at the allegations in the plants and, the
2 possibility they should be looking at requirements for
3 specific things.
4 MR. MILLER: You can always take it down to
5 a real practical level. Real overt situations where
6 somebody's been flatly discriminated against because
7 they raised a safety issue -- I mean, I've seen maybe
8 a few, but, they're typically the kind of thing that
9 takes an incredible amount of office of investigation
10 resources to figure out what the full story is, to
11 hear the story from one individual and, then, the
12 person who was the supervisor and so on. Most of the
13 time, it's a much more subtle thing. And, so, the
14 practical kind of example is the one that -- Let me go
15 back to the one that I gave earlier at Indian Point in
16 1997, standing in the off-speed pump room and
17 listening to the inspectors tell me one story after
18 another where there is rationalization about an issue.
19 So, the obvious question, why is that?
20 Management was narrowing the right things in terms of
21 what they expected, but, there was another emphasis on
22 keeping a plant on line. Recovering quickly from an
23 outage and a problem, there is not a, go do the wrong
24 thing. And, so, how do you measure that. I think
25 it's what Randy just said, it's the -- it's the

1 experience of the inspectors, it's what they see being
2 there day in and day out. It's the professional
3 judgment, the feeling, in effect, that they get about
4 a place that is very telling about the health, or lack
5 of health in a -- in a system.
6 I removed an inspector years ago in Region
7 3, when I found out that the inspector, the regional
8 based inspector, would go to the resident's office,
9 ensconce himself in the office and ask for regulatory
10 affairs, who were very willing to do his bidding, go
11 out and collect information and bring it to him. Now,
12 there's a thousand things wrong with that picture.
13 Most of all, it is the loss of the contact that that
14 individual has with people in the field, where you can
15 go in and talk to the engineers and, after you're done
16 having them explain to you the calculations on torque
17 and the like, you can step back, push back from the
18 table and say, how are things going?
19 It's amazing, when you ask that question,
20 people will tell you how things are going. But, you
21 have to ask the question. And, so, you know, you ask
22 a question here and I'm giving you kind of an answer
23 that is moving around a bit, but, it's a real
24 practical thing. It is the contact that we have,
25 mostly through our inspectors, with people in the

1 field. They will tell you. Do they feel pressure?

2 Now, there's production pressure at all

3 the plants. But, when does it cross the line and when

4 is it excessive and, when is it too frequent? So,

5 much of this ends up being a subjective thing. And,

6 anything we might do to try to write a rule and write

7 a formula, I feel would be counter-productive. Or, in

8 fact, be counter to -- to safety. I know it drives

9 some people nuts that we don't have some simple

10 formulas and, I suppose it's a little unsettling that

11 there's still this dependence in this program on a

12 human element -- now, I'm speaking of our side -- but,

13 the human element is still there. We are still -- In

14 this program, we're all the advancement and the

15 betterment, it is still a function of professionals

16 and it's a function of our people doing an effective

17 job.

18 MEMBER APOSTOLAKIS: This is very

19 enlightening.

20 MEMBER BONACA: I have a similar question

21 I'd like to ask before -- We were at Peach Bottom

22 yesterday. We had -- We asked information about this

23 scram that took place in December 21st, where they

24 had, essentially, a failure a scram and, then,

25 yesterday, the licensee engineer listed eight

1 additional malfunctions, was a number of malfunctions.
2 I know he promptly sent a team to look at the event.
3 Now, counting eight additional
4 malfunctions gives you a real concern about what's
5 taking place there. That's why he sent a team. Now,
6 apparently, they performed an evaluation, determined
7 that the safety significance was slow, because I
8 believe the CDF increase a fraction of [inaudible].
9 What happened at that point? I mean, do
10 you -- Previous times, before you had this
11 significance examination process, you still would have
12 to pursue the issue for the fact that you had so many
13 additional malfunctions. Now, do you drop the issue,
14 or, do you -- You don't. How do you handle that
15 issue?
16 MR. BLOUGH: When an event happens, there's
17 several phases of review. One is real time and,
18 that's what we call incident response. The inspector
19 and ourselves, often, and the region follow an event
20 to make sure the plant gets to stable condition.
21 Then, we'll look at the significance of the event, to
22 determine what type of follow up inspection is needed.
23 And, typically, we'll look at what type of inspection
24 is needed before they start up and, then, you make an
25 inspection to make sure that the licensee has learned

1 all that they can from that event. And, events are
2 important. You learn a lot from events. And,
3 licensees should learn all they can and, so should we
4 from events.
5 In this case, we had a special inspection
6 team. The special inspection team had a number of
7 green findings, but, it's -- it's true, that they
8 chronicled all the equipment malfunctions that
9 happened after that scram. And, they were included in
10 the inspection report. That report, even though it
11 only had green findings, had a significant impact on
12 the company. When they read it, it did get to the
13 senior management and, we've had discussions, also,
14 you know, that this is indicative of, you know, what
15 appears to be a trend in equipment reliability, not
16 the front line equipment so much, but, equipment
17 across the plant and, the company now wants to meet
18 with us to tell us what their program is for improving
19 equipment reliability.
20 So, it's -- And, then, of course, we would
21 look at all the inspection findings through our
22 assessment process and decide if there's something
23 formal and substantive there that we would highlight
24 in the assessment letter. So --
25 MR. MILLER: There never has been a simple

1 way to do this, but, we're trying to read the
2 licensee's reaction to these things. And, it is
3 significant that after -- We were also down on a
4 management visit at the site, not long after that
5 happened, even before our inspection. We -- the issue
6 with the senior management team there. And, their
7 response, I think, the first step is good and, that is
8 that they're going to make a presentation, not just on
9 that event, but, on equipment reliability at Peach
10 Bottom. Because, in some of our management visits and
11 inspections down there, we've seen problems with
12 diesels and some other things that we think might be
13 indicating a bit of a decline, solid plant overall,
14 but, you know -- And, so -- I think we'll make
15 judgements after we go down there and hear what they
16 have to say. But, I think what we've seen in this
17 case is a reaction to our letters and the mission.
18 MEMBER BONACA: Yeah. I was curious
19 because that could be the beginning of a trend in the
20 cross-cutting issue and, that means that you have a
21 tolerance of, you know, some malfunctions, they're not
22 safety significant, then, you get more and more and,
23 then, you have tolerance on the part of personnel.
24 And, that's interesting to me also, whenever you speak
25 about this significant determination process, an issue

1 that I've been bringing up a number of times, where
2 you have an event you determine is not safety
3 significant. Then, you have another one which is just
4 like that and you determine it's not safety
5 significant, which means repeat events.
6 Now, these are list at old times we used
7 to view as important, if you just fix it, it was a
8 statement regarding your corrective action program.
9 You didn't learn the lesson, so, you may have fixed
10 the specific problem, but you didn't learn the lesson.
11 How is it being dealt with? All we've
12 heard until now is that during the inspection process,
13 we will take notice of that. But, is it possible for
14 the resident inspector to really keep a log, or, does
15 he keep a log of possible repeat events? How do you
16 look at this behavioral --
17 MR. MILLER: Randy can give an example of
18 how we have dealt with -- Mario was talking about with
19 multiple cases when there's a cross-cutting issue
20 event?
21 MR. BLOUGH: A number of the cases where we
22 created a cross-cutting issue are Seabrook is one.
23 Likewise, Salem, when we did a special inspection of
24 the diesel turbo-charge failures there. We determined
25 that there had been prior failures, that corrective

1 action hadn't been implemented in some cases for that.
2 And, that became actually the issue that we associated
3 with the white finding there. So, likewise, at Nine
4 Mile recently, there was a degradation in the reactor
5 close to the cooling system and, when we look at it,
6 we see there are prior -- prior opportunities to
7 identify and correct the scope of the piping
8 degradation there, so, that becomes basically the
9 issue.
10 But, then, again, those are issues of
11 importance and they rise to --
12 MEMBER BONACA: Because they're of a cross-
13 cutting nature. That's why I mean, from the isolated
14 event, you have a cross-cutting tendency to have a
15 behavioral element develop.
16 MR. MILLER: I think you're talking about
17 a situation like this, there can be an off-speed pump
18 one day and be a diesel the next.
19 MEMBER BONACA: Absolutely.
20 MR. MILLER: And, that's the Seabrook case.
21 MEMBER BONACA: Okay.
22 MR. MILLER: Seabrook had a case that was -
23 - Was it a white on off speed?
24 UNIDENTIFIED SPEAKER: Off speed.
25 MR. MILLER: A green on off speed. But,

1 you take that, coupled with the white on the diesel
2 and, we identified a cross-cutting trend in our -- in
3 our -- in our assessment letter, which by these days,
4 there aren't that many that get these, that has impact
5 and, so, that's how we intend to get at just the thing
6 you're talking about. Every time you come up, you
7 come up green or white, what's it mean?
8 MEMBER BONACA: Or, even if you don't. You
9 may in fact have a significant determination
10 evaluation that says no problem with this issue.
11 Then, there is another one, no problem with this
12 issue. Now, you may have many developing that way
13 and, you know, your guy throws in the corrective
14 action program and, some day, we'll fix it. And, what
15 you're fixing is a individual issue. But, you're not
16 fixing a behavioral and systemic problem beginning to
17 develop and is not being -- is not being captured by
18 the significant determination process in place now, it
19 just is not, because that process only addresses one
20 individual issue.
21 Now, if it raises to the level of a white,
22 then, I have no concern with that, because they pay
23 attention to it. But, if it doesn't, how do you
24 capture the repeat situation? That's --
25 MEMBER APOSTOLAKIS: It seems to me that

1 this is what is the judgment of the inspectors and the
2 senior people.
3 MEMBER BONACA: I'm concerned about that,
4 because, I mean, the inspector is just a human being.
5 He's not going to have -- you know, his mind is
6 metrics, oh, yeah, I'll keep it in mind, I'll log it
7 in. He may, but, he may not. And, again --
8 MR. MILLER: Mario, this is why, at the
9 risk of sounding like Johnny One Note, I'm going to
10 keep coming back to this concept of team. There's no
11 inspector, there's no manager, who, by him or herself,
12 can put this into a perfect, you know, a perfect
13 issue. There has to be a team and, collectively --
14 Randy will talk about the process of the periodic
15 assessments and, these are, what, three days long --
16 MR. BLOUGH: Typically, it takes us three
17 days to do all the plants on a semi-annual basis.
18 MR. MILLER: And, it's just -- just to get
19 at what you're talking about, so, there's not an
20 individual sort of thing. We would fail, if it were
21 just all individuals.
22 MEMBER APOSTOLAKIS: Is there anything --
23 part of the Seabrook example that you can give us,
24 because that sounds very interesting.
25 MR. MILLER: I think Seabrook is an example

1 of where there were a number of instances where we
2 feel that the company was not picking up on issues
3 that they had seen precursors reference to the diesel
4 that failed, there's an off-speed bump, there's an
5 off-speed bump, but, a seal or a bearing that went
6 bad.
7 MR. BLOUGH: We can provide Seabrook
8 example --
9 MEMBER APOSTOLAKIS: What your feeling
10 might be --
11 MR. BLOUGH: These end up getting
12 summarized in our assessment letters and, my notes
13 here which could be correct, say that in Seabrook on
14 June 1st, 2001, was the assessment letter that told
15 them they had a issue, cross-cutting issue in the area
16 of problem identification resolution and the common
17 theme was inconsistent pursuit of resolution of
18 degraded equipment at the site of the diesel failure,
19 the events associated off-speed pump failure event
20 that was a loop of off-site power and that that was a
21 repeat.
22 But, before that, the special inspection
23 report, as well, chronicled this and there would have
24 been discussion. So, it was kind of a theme develops.
25 Now --

1 MEMBER SIEBER: All of those are on your
2 web site.
3 MR. BLOUGH: Pardon?
4 MEMBER SIEBER: All of those are on the
5 agency's web site.
6 MR. BLOUGH: Right. These are on the
7 agency web site. But, we'll be happy to provide
8 anything that help -- anything that helps.
9 Now, Mario was saying that if you have
10 issues that are all below the green threshold, that
11 they set a pattern and, there's an example where they
12 have repeat issues from similar behavioral cause.
13 One, of course, we expect the company to be looking
14 for those things. If we think we see something like
15 that, it would be a matter of discussion between the
16 resident inspectors and the company of the resident
17 inspectors and regional management, regional
18 management and the company.
19 But, the way the program works is, we
20 wouldn't -- it wouldn't get in our formal assessments,
21 unless there are at least green findings that have
22 that element to it. I think when we get ahead to
23 slide 50 or so, we'll talk -- we'll show you the
24 criteria we use.
25 MEMBER ROSEN: I'd like to close with this

1 one question about the other cross-cutting area that
2 we haven't talked about, this human performance. When
3 you have an event that clearly involves some sort of
4 human performance deficiency, what sort of questions
5 are you asking yourself about -- you identify a human
6 that didn't do what maybe was expected.
7 MR. BLOUGH: What sort of questions --
8 MEMBER ROSEN: What sort of questions are
9 you -- are your residents asking and are you following
10 up with management? The question that I'm asking is,
11 cross-cutting areas are a part of this, I think
12 everybody understands this. So, how much are you
13 involved in the human performance issues, or, is it
14 like safety culture, where you only do it as kind of
15 part of something else? Let's take a specific case
16 where you have a clear human performance deficiency.
17 MR. BLOUGH: Yeah. This is Sam Hansell, a
18 senior resident from Susquehanna.
19 MR. HANSELL: Last year at Susquehanna we
20 had eight --
21 UNIDENTIFIED SPEAKER: I can't hear you.
22 MR. HANSELL: Last year at Susquehanna, we
23 had eight green findings that were tied to human
24 performance in the cross-cutting aspect. So, after
25 three -- document three findings and, then, tying on

1 to them in performance cross-cutting aspects was not
2 part of procedures. We got the utilities attention,
3 they did their own internal evaluation and found out
4 they had 27 human performance errors that they looked
5 at and, found some real causes to that issue. In mid-
6 cycle assessment, we had four human performance cross-
7 cutting issues documented in our reports, green
8 findings. Gave that to the utility at the mid-cycle
9 assessment.
10 In the mid-cycle, end-of-cycle they didn't
11 do much with it. They found four more additional
12 human performance cross-cutting issues tied to four
13 green findings. So, we had eight green findings that
14 were specifically human performance cross-cutting
15 issues at the end-of-cycle, extensive cross-cutting
16 issues for Susquehanna put in the end of cycle letter.
17 So, for each one of those eight findings,
18 we took the time to look at the human performance
19 aspect, documented them in the report, a separate
20 paragraph and, that's how we then used the cross-
21 cutting issues to get their attention at the end of
22 the year. It worked very well.
23 MEMBER ROSEN: I think that's very good.
24 I think what we're talking about here is, people who
25 don't do the right thing when they're called upon to

1 take some action. If you really get into that,
2 there's a tremendous window of what's going on in the
3 safety culture at the plant. For example, tell me
4 something about the behavior, assuming that that's --
5 You can make the assumption that one person does it,
6 it's kind of like confidence. If you don't find one
7 confident, there's going to be a lot.
8 One person has a bad behavior pattern with
9 respect to his job, or her job, that person has really
10 no experience and is going the job, a complex job for
11 the first time without any supervision or help. If
12 that person is doing a complex job, a safety-related
13 job with no training, if that person is doing a
14 complex job which requires inter-departmental talking
15 with no coordination. And, clearly, if that person is
16 doing the job without procedures. I mean, these kinds
17 of things can be a tremendous recall into -- what I
18 hear about is the safety culture. And, so, I'm glad
19 to hear that, you know, we had a discussion of that,
20 but, the encouraging part of this ROP gives you the
21 opportunity to do that. To use human events, human
22 performance as a window into the safety culture and,
23 I encourage you to do that.
24 MR. MILLER: There's a parallel thing that
25 goes on here. Our inspectors are very sophisticated

1 and they really work hard and we tease through these
2 issues in our periodic counterpart meetings, feature
3 examples of where inspectors stand up and give case
4 histories, a little bit like what Sam did here, to try
5 and learn from each other. So, we're looking for our
6 people to be looking in a sophisticated way a lot of
7 these things. Like the fact that it's very seldom,
8 just an individual deciding not to do the right thing.
9 There are typically a lot of set ups. It's training.
10 It's for control process. It's production pressure.
11 A lot of things.
12 So, we expect our people to devise in
13 their mind, or, to try to develop a story in their
14 mind on what they think is behind it. So, that as we
15 do our inspections, we can be -- biasing our
16 inspections to be looking in those areas, not to turn
17 around and give it to the licensee, here's our
18 assessment. Here's what you should do about it. But,
19 to bias our inspections, as well as to prepare
20 ourselves to react to their assessments and, judge how
21 thorough their assessments are, to assure their
22 assessments are sophisticated and not just sort of one
23 dimensional, shoot the guy, as opposed to see that
24 there's something behind it.
25 So, it's -- I should let Randy talk. But,

1 I think it requires regular sophistication, that kind
2 of comes back to my point, that the program requires
3 this strong human element and a lot of sophistication
4 and professionalism in the people implementing it.
5 MR. BLOUGH: I listed on this slide just a
6 number of things we do to try to foster a questioning
7 approach and continuous assessment. And, you can see
8 the examples there. I tried to recognize a good
9 variety -- to senior staff on the weekly executive
10 director of operations staff call, when we have an
11 inspector finding that we're particular proud of. We
12 also use things like small awards, instant cash, e-
13 mail distribution. And, the other agents do a similar
14 thing. So, we're actually look at the systems of the
15 other regions, to recognize good findings and, looking
16 at the more rigorous ones to see if we can take some
17 of their examples. I know they recognize good
18 findings.
19 We have a daily meeting, a DRP, DRS
20 coordination meeting. We use this to kind of set the
21 tones, set priorities, talk about coordination and
22 progress and follow up of events and issues.
23 The inspector seminars semi-annually. We
24 have all the inspectors here for about three days.
25 We've got things like breakout sessions. Probably,

1 the most well received part of these seminars is the
2 finding session, where inspectors talk about a
3 particular finding and, what techniques they used to
4 come up with those inspection findings and, then, get
5 questions and quotes from their peers, which is your
6 toughest audience.
7 We do -- In Region 1, we value getting out
8 in the field at lot. I have a slide here that shows
9 just a few statistics. And, the program requires us
10 to get out. We get out more often than required and,
11 these visits, we use them to interact with the
12 inspectors, but, also, tour the plant with the
13 inspectors, interview a cross-section of licensee
14 managers, talk to people in the field and, as kind of
15 a cross-check on the inspection process. We provide
16 feedback to the company. We also provide feedback or
17 guidance to the inspectors as a result of this.
18 I actually brought some agendas which
19 Tracy will pass out. This isn't all the briefing
20 materials, it's just the agenda from three recent site
21 visits. So, you can see thumbing through it, the type
22 of detail we go through on a site visit.
23 I bullet there events, events. I already
24 mentioned, it's important to learn all we can from
25 events for the NRC and for the companies. Not just

1 the big events, the smaller events. Some of these
2 will result in what we call PI and R samples. Others
3 follow up by the resident with some support from a
4 specialist. But, it's important to take plant events,
5 large and small and, learn what can be done.
6 Our assessment meetings and, I'm talking
7 now the internal assessment meetings, the mid-cycle
8 and end-of-cycle assessments. The briefings materials
9 and preparation materials are distributed well in
10 advance. We have really a board of folks that
11 describe discussing plant performance. We'll take
12 about three days to discuss the performance of all the
13 plants. We're discussing the performance of the
14 cornerstones, what issues the cross-thresholds, but,
15 we're also discussing what we see as common themes,
16 what could be evidence of a substantive cross-cutting
17 issue, as you've asked a number of questions about.
18 And, we -- The program tells us -- gives us an agenda
19 for these meetings, but, it also says that at the
20 discretion of regional management, you may discuss
21 other topics that you wish.
22 What we do is, we ask a number of
23 questions. Beforehand, we give the inspectors
24 questions to answer at the assessment meetings. The
25 questions are varied, but, they all -- they all are

1 gathered around, you know, what common themes do you
2 see that are below threshold. What reason -- What do
3 you see that worries you about the way things may be
4 heading in the future, that sort of thing. It's
5 different ways of asking what do you think.
6 MEMBER APOSTOLAKIS: The problem with the
7 safety culture is are we going to be intrusive? I
8 think what you gentlemen have described today makes
9 perfect sense to me. At this point, you rely on the
10 subjective evaluation of a group of people, who reach
11 certain conclusions which then are presented to the
12 licensee and, then, naturally, the licensee takes some
13 action, which I think is fine. One possible reaction
14 to this whole thing about safety culture might be to
15 look at the third rule up there and maybe make sure
16 that we are helping, developing the literature that
17 will help these individuals make these judgments,
18 maybe, easier. For example, if you had a [inaudible]
19 or a year-end report somewhere -- or other examples
20 from other regions and what became available and,
21 maybe, that part of the seminar and, maybe, other
22 things from, you know, other sources. Maybe, that
23 would increase accessability of inspectors to issues
24 like that. So, you won't be relying only on their
25 judgment and experience, but, also, you will enhance

1 them by using your own collective experience of the
2 four regions. And then, it seems to me, would also
3 have a chance of being approved by the commission.
4 MEMBER ROSEN: Well, now, I think we're
5 talking ACRS --
6 MEMBER APOSTOLAKIS: We might say that's
7 not necessary.
8 MEMBER ROSEN: The difficulty I have with
9 that, George, we have described for us what sounds
10 like a process of the safety culture area [inaudible]
11 PI and R. But, Davis Besse happened. That region was
12 not doing terribly effectively what these gents and
13 ladies are describing. Do we back away now, because -
14 -
15 MEMBER APOSTOLAKIS: No. No. No. No.
16 MEMBER ROSEN: -- Region 1 thinks --
17 MEMBER APOSTOLAKIS: This may be a good
18 first step to everybody. Now, then, the next question
19 would be, why did Davis Besse happen and so on. But,
20 it seems to me that this is an important bullet.
21 MEMBER ROSEN: You know, I think you're
22 right.
23 MEMBER APOSTOLAKIS: Because --
24 MEMBER ROSEN: And, if we could be sure
25 some how, that all of this was happening routinely and

1 generically in all the regions and, in fact, it was
2 visible to us, not that it was transparent. Maybe, we
3 could use that. But, we're talking about --
4 MR. MILLER: I'm going to caution you,
5 though. I want to caution you. If there was a simple
6 way to write into this program a formula that you
7 follow, that would avoid what happened there. It
8 isn't just Region 3. Any of us could fall into this
9 trap. We'd do it. I think that almost all of the
10 things you can talk about, especially, you get more
11 and more into the behaviors and things that really
12 collectively constitute safety culture, the more we
13 have to write that down and make that an explicit part
14 of our program, I think is the extent to which we're
15 going to start driving things in ways that we don't
16 intend. There would be an enormous number of
17 unintended consequences of that.
18 I think if we just recognize that in the
19 end there is this human element. And, I don't think
20 it's all one where, you know, for absence of a lot of
21 prescription, you can't reliably count on it working.
22 I can't -- Davis Besse happened. I cannot argue with
23 that. But, I don't think the solution necessarily is
24 adding a lot more prescription. I think it's just
25 emphasizing these things that we've talked about here,

1 this aggression. This aggressive approach. It's this
2 training we're talking about here. Excuse me. I'm
3 offering an opinion here, but --
4 MEMBER APOSTOLAKIS: We want your opinion.
5 MR. MILLER; We're passionate about it,
6 because we think that there are a great many pitfalls,
7 if we start down a path of trying to write explicitly
8 the formula for safety culture and --
9 MEMBER APOSTOLAKIS: That's exactly what I
10 find out hearing about, what you said, it's a
11 corrective judgment. So, I don't have to put formulas
12 down. I don't have to have indicators. And, I find
13 I'm building because all I'm saying is, give them more
14 information --
15 MR. MILLER: All right.
16 MEMBER APOSTOLAKIS: -- as background and,
17 then, you are helping them, you know, formulate --
18 MR. MILLER: That's why we have these
19 seminars.
20 MEMBER APOSTOLAKIS: I understand that.
21 MEMBER BONACA: This morning, I asked if
22 you had adequate guidance to inspectors for those kind
23 of issues. And, you said yes.
24 MR. MILLER: And, I said yes in the sense
25 that we can't think of a formula to make it more

1 prescriptive. It still has the subjective element.

2 MEMBER ROSEN: We're talking about

3 something that wasn't a number or a list of things at

4 each plant that can be checked. It seems to me too

5 facile. And, it leads you to give up and say, okay,

6 well, there supposed to happen - it's comparable

7 history and go on with the program we've now evolved.

8 MEMBER BONACA: For example, the --

9 MEMBER ROSEN: Warning, the next time one

10 of these events happens.

11 MEMBER BONACA: For example, the --

12 MEMBER ROSEN: -- the safety culture, if we

13 don't get something more tangible.

14 MEMBER BONACA: The Challenger disaster,

15 you know, of 1986, has been used as a lesson learned

16 for everybody. I mean, every technical area, because

17 it's a situation that is not so unusual where you have

18 technical information come in, you have a management

19 decision that somewhat over rides it and, as a

20 minimum, just reading that story makes you sensitive

21 about how, you know, how difficult it is to make

22 certain decisions and, you can neglect certain

23 technical insights when they're available.

24 So, I'm saying that if you had, you know,

25 multiple examples that people can read, would it help?

1 MR. MILLER: As soon as Davis Besse
2 occurred and, as soon as the first report which I
3 think was the AIT came up, we made that mandatory
4 reading in this region and we had a stand down across
5 the region to have folks in meetings, sit and talk
6 about what do we learn from this. And, now, we don't
7 do that for all issues, cause all issues aren't, thank
8 God, at that level.
9 Tom Early, years ago, put together a chart
10 on safety culture. This is what a good plant looks
11 like and, here's what a bad plant looks like and,
12 there were a number of features. It had to do with,
13 are resources plentiful, are there excessive
14 production pressures, is there a questioning attitude?
15 He had a number of things. And, I think that's as
16 true today as it was at the time he wrote that. And,
17 all of us could probably write them.
18 I don't think we're in a position where we
19 don't pay attention to these things, we do. It's just
20 that what I'm saying is, I don't know we can write
21 this into our program. And, I agree with you, we
22 shouldn't give up trying. It's just that trying to
23 make those now features that we're going to go and
24 explicitly look at, the next expectation is that we
25 have criteria that say what's good, bad or not --

1 what's good and bad against that. The next thing you
2 know, you've got to document it. And, then, where are
3 you?
4 I think that you'd be down a path that's
5 going to be counter productive, I believe.
6 MEMBER APOSTOLAKIS: Let me -- Let me make
7 a hypothesis about Davis Besse. Let's say everybody
8 there knew that the symptoms were there, but, due to
9 coolant leakage -- What would they have done? Would
10 they have done? So, the answer is no. So, it's not
11 then that they put safety at a lower level than other
12 things. Maybe, the issue is technical knowledge and
13 it's not cultural. I mean, that's an interpretation
14 that comes to mind, that they didn't know.
15 MEMBER ROSEN: Well, the explanation I've
16 offered is, they thought it was coming from the
17 flanges, which --
18 MEMBER APOSTOLAKIS: That's not the culture
19 issue, is it?
20 MEMBER ROSEN: It's a cultural issue --
21 MEMBER APOSTOLAKIS: Why?
22 MEMBER ROSEN: -- because they don't
23 question the attitude. No one said, yeah, that's
24 possibly where it's coming from and we've had a long
25 history. But, it could be from some place else more

1 significant. No one said that, or, if they did, they
2 didn't get an ear.
3 MR. MILLER: Let me suggest an approach
4 here. I would suggest that you ask the inspectors
5 this afternoon, if they -- if they think they can spot
6 a situation where there's a pattern of a licensee too
7 quick to dismiss issues, or, there's a pattern of
8 finding the first plausible explanation. Do they
9 think they're in a position of spotting that where it
10 exists? I think that's the starting point right
11 there. All is lost, if we can't have inspectors who
12 can, just in being there, pick up whether there's a
13 strong pattern or not at the station.
14 MEMBER ROSEN: Jumping on an answer that
15 happens to be convenient without saying, yeah, that's
16 one possible answer. But, what are the other ones
17 that are also good?
18 MR. MILLER: And, on occasion, that will
19 happen. The question is, whether there's a pattern of
20 that. And, I would ask the inspectors. Let them give
21 you their opinion.
22 MEMBER APOSTOLAKIS: Steve, it comes down
23 to multiple (inaudible) does it not?
24 MEMBER ROSEN: Yes, it exactly does.
25 (Several people speaking simultaneously.)

1 MR. BLOUGH: Someone asked a question about
2 regional consistency, so, I do want to make some
3 comments here. We have worked more closely with the
4 other regions and headquarters under ROP than ever
5 before. We have frequent counterpart meetings.
6 Headquarters is very much involved. Headquarters is
7 involved with every assessment meeting that we hold
8 and, we -- So, there is an aggressive effort to try to
9 assure consistency. I would say on the subject of
10 cross-cutting issues, though, that you'll see a range.
11 We have been told by headquarters that we go into more
12 detail and spend more time in our assessment meetings
13 than the other regions. They haven't pushed us to
14 conform with the other regions. That's been an
15 observation.
16 In the area of cross-cutting issues and
17 assessment letters, early on, we were sort of an
18 outlaw because we tended more to document cross-
19 cutting issues, cross-cutting themes in an assessment
20 letter. The last annual assessment letters which went
21 out the end of February, early March, Regions 1, 3 and
22 4 each had, you know, three, four, five plants where
23 we highlighted cross-cutting issues and, Region 2 had
24 none. So -- And, the question then is, you know, is
25 that -- is that because of the performance of the

1 industry in the various regions, or, is there
2 something else going on?
3 So, we discuss these issues and we are
4 pushing to try to make sure we're consistent. You
5 know, I would say, you'll still see a range on these,
6 just like you'll see range of opinions on PI and R
7 inspections. Before the ROP was actually first
8 implemented, I think an early draft of the ROP did not
9 have a PI and R inspection, based on the theory that
10 if there were problems in that area, they would
11 manifest themselves in crossing thresholds over the
12 low level, technically white, and, then, there would
13 be time based on thresholds crossed for everyone to
14 evaluate the issue and for the appropriate regulatory
15 intervention.
16 So, even before we -- the first issuance
17 of the ROP, the PI and R inspection and the issue, you
18 know, assessing cross-cutting issues came in, but,
19 there was that opinion that there still is out there,
20 perhaps, to some degree. So, I'm just trying to give
21 you kind of complete information. Where there were --
22 Our approach on assessment and some of these things
23 we're talking about right now is, we've been trying to
24 advocate a certain approach and, so, our peers -- in
25 discussions with my peers, I'm trying to sell a

1 certain approach here and, to some extent, you know,
2 we're lobbying you right now.
3 The issue -- The issue of what are we
4 missing and what is everyone missing is something that
5 always has to have everyone on edge. And, I think
6 it's a very -- it's a very tough issue. It requires
7 thought all the time.
8 I want to just briefly mention unique
9 sites and, it's just important -- it's just, you know,
10 important in understanding Region 1 and, you know, how
11 we fit the reactor oversight program model. The model
12 has single -- has inspection programs tailored to
13 single, dual and triple unit sites. In the dual,
14 triple unit sites are for dual and triple identical
15 units sites, in essence. We think we've done a good
16 job in adjusting in cases where our plants don't fit
17 that model and, headquarters has been quite
18 supportive. Nine Mile and Beaver Valley are sites
19 where -- are dual unit sites, but, the units aren't
20 identical. There's vintage design, organizational,
21 procedural and, to some extent, happen, even program
22 differences at those sites. So, there's a slight
23 adjustment upward in what we do there. And, in fact,
24 at Nine Mile Point, we successfully petitioned
25 headquarters to have N plus 1 inspectors at Nine Mile

1 Point. So, we have that now. Beaver Valley's just on
2 the other side of that line.
3 Now, there's no budget adjustment for
4 these plants. But, the other -- the other units up
5 there were actually multi-unit stations, where we
6 treat the inspection projects as separate projects
7 and, Hub had mentioned that there is some efficiency
8 there. You don't have to inspect, certainly, the
9 security program, or radiological environmental
10 program separately from Salem, it's the same program.
11 And, we take -- We're taking a number of those
12 efficiencies and looking for places where we can take
13 more efficiencies as the companies get better in
14 operating some of these sites more like a single --
15 single site.
16 So, what we have to do is to get an
17 adequate licensee performance, that's what the
18 program's designed to do. But, we need to try to do
19 that efficiently. So, those are unique sites.
20 You've heard about inspection program
21 challenges. The bullets here are all -- they're all
22 related. We've done a good job of bringing in new
23 talent to -- to replace those who have been promoted.
24 We've had to work at it, though, both in the training
25 and development and, also, in the continuity of each

1 site. The site you were at yesterday, Peach Bottom,
2 both inspectors are turning over in the near future
3 and, so, that's a worry for us. A number of things we
4 talked about in terms of management visits, the branch
5 chief oversight, the things we do. In addition to
6 tasking the inspectors with good turnover and making
7 sure there's some face-to-face turnover. Those are
8 things we need to do to assure continuity at the
9 sites. And, the goal, of course, is to complete the
10 program with high quality.
11 With Indian Point 2, another external
12 staple on our demands, we've been challenged to do
13 that. We've done a number of things to try to monitor
14 quality and, also, just to make sure we get the
15 program done. We call those coping measures, I think.
16 I hate to say Wayne's going to cover it, but, I think
17 Wayne's going to mention that. We've had to encourage
18 inspector over time at times, to forego some training,
19 discretionary training for the more senior experienced
20 inspectors for a period of time. And, these are all
21 things that there's a cost associated with that. And,
22 in the resident program for last year, 2002, we --
23 headquarters endorsed and we took the one-time measure
24 for about two-thirds of the sites. Each inspection
25 procedure has what we call a sample range and, the

1 minimum and maximum and, the inspector's supposed to
2 look at a certain number. We target it closer to the
3 minimum, at about two-thirds of the sites for 2002.
4 We think that should only be a one-time -- one-time
5 measure. We don't think we should be doing that year
6 after year. We have not taken that step for 2003. We
7 hope we don't have to. Although, you know,
8 headquarters will tolerate it another year, if that's
9 what we have to do.
10 This slide shows some statistics on
11 resident turnover. Even though there's a seven year
12 tour rotation, with the promotions and what not, we've
13 seen turnover of two-thirds of the senior residents
14 and, almost 60 percent of the residents, within the
15 last two years. That's part of what we're trying to
16 manage here.
17 MR. LARKINS: Can I ask a question on the
18 pipeline for RI's and SRI's. Is that coming on the
19 interim program we started 12, 15 years ago? What's
20 the main feeder group for RI's and SRI's?
21 MR. BLOUGH: So far, it's been -- We are
22 hiring interns, so we have been all along. So, the
23 typical path is an intern would come into the region,
24 go through the intern program and qualify as an
25 inspector at the same time. So, within two years

1 they'd be a certified inspector, graduate of the
2 intern program. Typically, they'll spend some time in
3 DRS before going out to be a resident inspector. So,
4 the pipeline for the resident program has been the
5 experienced hires, plus the interns after they've had
6 some time at DRS and, that's not -- that's not
7 universally the case. There may be some interns who
8 went out earlier than that, but, that's typically --
9 and the latest group of -- the latest group of interns
10 are none of the ones we hired within the last two
11 years is out as a resident inspector yet, although,
12 the third resident -- one of our interns that has been
13 selected to be the third resident inspector at Davis
14 Besse and, she'll be heading out there within a couple
15 of months, in August.
16 MEMBER ROSEN: What is the approach we're
17 now taking in this cite process -- To what degree do
18 the interns get to the grounding and ERA technique,
19 certainly, understanding this modeling process. How it
20 arises as a result at this influence the inspection
21 program and so on.
22 MR. BLOUGH: They have -- They have a
23 course -- What's the basic course?
24 UNIDENTIFIED SPEAKER: P105.
25 MR. BLOUGH: P105 doesn't have a title?

1 PRA basics, which is -- How long is that course? Two
2 weeks. One week.
3 (Several people talking simultaneously.)
4 MR. BLOUGH: So, they get some introduction
5 to the PRA basics. They study the SPP. They work
6 through cases. They get their training that the
7 inspectors get at the seminar. It's a skill you
8 develop over a period of time.
9 MEMBER ROSEN: Well, you know, PRA's
10 useless to you, unless you also understand the
11 systems. So, you've got to get exposure at the same
12 time. And, if you just get the systems and no PRA,
13 you're not really up to speed in the enviroment your
14 operating. Now, if they had been okay ten years ago,
15 it's not longer okay.
16 MR. BLOUGH: So, I would say early on,
17 we're probably still more heavily towards the systems
18 and the inspection technique and working in the basics
19 for the PRA and, then, working through that with
20 experienced inspectors as they prepare for
21 inspections.
22 MEMBER ROSEN: Well, I encourage you not to
23 send inspectors to the field without some sort of
24 grounding in PRA. They'll really be at sea, even if
25 they think they understand the systems.

1 MR. BLOUGH: No. I haven't given a real
2 complete answer. Does anyone want an amplified
3 answer? Okay. Thank you. We'll take that comment.
4 I wanted to talk about the assessment
5 results for the plants and I have current information,
6 plus some history of the ROP cycle that we've had thus
7 far. The point is, we have, through the ROP, we've
8 seen some reasonable differentiation in plant
9 performance. This slide shows the plants that are
10 outside the regulatory response. At this point, with
11 Nine Mile Point 1 and Salem 1 haven't been recently
12 having white issues in mitigating systems that have
13 been recently finalized. In addition, several plants
14 in Region 1 have current substantive cross-cutting
15 issues.
16 The next slide just talks a little bit
17 about what we've been talking about, what a cross-
18 cutting issue is and, as you see from there, this is
19 right out of the manual chapter. We're looking for
20 not only a number of findings in certain areas such as
21 human performance, or, PI and R, but, also, that they
22 have a common causal theme. So, that's a lot about
23 what we'll be talking about. We expect the inspectors
24 to be looking for common themes at the site and,
25 that's a matter of discussion before -- before they

1 have a master point where they actually are
2 highlighted in assessment letters.
3 The next couple of slides mention the
4 plants to which we've currently highlighted
5 substantive cross-cutting issues. And, counting
6 Salem, Hope Creek, separate inspection projects like
7 we do now, there are a total of five right now.
8 Indian Point 2 are ongoing. And, the other four which
9 have been highlighted for the first time, based on the
10 end-of-cycle meetings that we held this February and,
11 the letters we sent at the end of February or early
12 March.
13 Over the history of the ROP, we're in our
14 -- we're almost halfway into our fourth cycle, if you
15 will, of the ROP. This shows some historical results.
16 In addition, Indian Point, which had been in multiple
17 degraded cornerstone, now is moving from degrade
18 cornerstone to regulatory response. In addition to
19 those, we've had three plants in degraded cornerstone
20 for a period of time and, the plants and the issues
21 are listed there.
22 Typically, we've had a number of plants in
23 Region 1 in the regulatory response, either a single
24 white issue, or, multiple white issues, but, in
25 separate areas.

1 MEMBER ROSEN: Hold on a minute. Could you
2 go back to that?
3 MR. BLOUGH: Yes.
4 MEMBER ROSEN: I guess I'm astounded to see
5 how many of the plants in Region 1 are in the
6 regulatory response column. Is that atypical? One-
7 quarter to half --
8 MR. BLOUGH: that's -- If you look at --
9 It's atypical. I have here the -- I have here some of
10 the results from three years.
11 MR. MILLER: This is over three years.
12 This is not a snapshot of now, right, Wayne?
13 MR. BLOUGH: Well, the degrading
14 cornerstones are historical. If you look back
15 through, we typically have several plants in
16 regulatory response column. At the end of the last
17 cycle, at the end of calendar year 2001, we actually
18 had 11 plants out of 26 in regulatory response. One
19 in degraded cornerstone, one in multiple degraded
20 cornerstone. This is more than, on average, more than
21 the other regions.
22 MEMBER ROSEN: That's fine. I saw that
23 number and I thought it really sticks out.
24 MR. MILLER: This is a point of confusion
25 for a lot of outsiders, who want to look at this and,

1 almost a credit to the old cell, we had cell one, cell
2 two, cell three. And, we were kind of -- It's kind of
3 an integrated assessment and, people look at these
4 columns now and say, well, I guess that must be cell
5 one, cell two, cell three, when in reality, you can be
6 in a regulatory response column for a very discrete
7 issue, where, before, you wouldn't be made cell 2.
8 MEMBER ROSEN: I understand that. Even so,
9 regulatory response is not -- you're not -- you're not
10 anywhere near the edge of the cliff. But, still, one-
11 quarter to one-half is higher than my expectation,
12 based on the other regions. It's higher.
13 Now, I'll have to ask the follow-up
14 question.
15 MR. BLOUGH: We have a lot of case -- We
16 have a lot of cases of a single white issue and, there
17 have been a lot of issues in the EP area, for example.
18 I think the ROP has been good in that emergency
19 planning was an area that, perhaps, where industry
20 attention to it had waned in the years just before we
21 started ROP and, then, by looking at it in a different
22 way, we come up with these issues. And, also, in the
23 emergency planning area we had a number of white
24 issues associated with the --
25 MEMBER ROSEN: Do you understand, you're

1 not answering my question?

2 MR. BLOUGH: Okay.

3 MR. MILLER: We can't give you an answer

4 that we can prove. And, I want to suggest a couple of

5 things. My reason for talking at the beginning about

6 the historical context of this region is, a lot of

7 these issues are legacy issues and, in the years

8 working at it, it's still tough to do a turn-around.

9 And, I think what you're dealing with in the plants in

10 the northeast is -- are plants, many of them that got

11 off to a less than good start. There was a lot of

12 learning as nuclear power developed and spread across

13 the country and, we're still dealing with that.

14 The other aspect, I think, there's some --

15 We're aggressive. We're aggressive. Now, I'm going

16 to say, we're more aggressive than the other regions.

17 All I'll say is, we're aggressive. And, does that

18 plan do it? I can't say. I do know that there is

19 these single stand alone units are a very difficult

20 thing to manage. And, a lot of the performance is

21 still -- What we see today is even rooted in some of

22 those

23 old --

24 MEMBER ROSEN: I think that's possible.

25 And, we're all just speculating.

1 MR. MILLER: Right.

2 MEMBER ROSEN: I think that's a possible
3 explanation. I rather don't think the other
4 explanation you offered, that you're more aggressive,
5 will very well --

6 MR. MILLER: No. No. That's why I'm not
7 saying that. I just know we are aggressive. I think
8 the others are aggressive. What is the answer, I
9 don't know.

10 MEMBER ROSEN: Okay. It's useful to ask
11 questions, even if the answer isn't --

12 MEMBER BONACA: I think it would be
13 interesting to look at it. I mean, even historical
14 when the process was in place. The difference was
15 very large between Region 1 and Region 2, for example,
16 on the reg. And, the other observation I could make
17 is, a lot of problems were self-identified in many of
18 the Region 1 plants. Are certified in other regions,
19 I don't know. We have a very interesting issue when
20 you look at culture and, how regional culture may
21 affect operation of plants. I guess this more of a
22 search issue, but, certainly, it's an interesting one.

23 MR. MILLER: It's one of those issues that
24 you'll never have an answer to, but --

25 MEMBER SIEBER: One way to sort of get it

1 is to ask people who are working either as a
2 contractor or -- I think there is a difference in the
3 cultures from one region to another, as far as
4 licensees are concerned and working all four regions.
5 There is a difference and you folks have a challenge.
6 MR. BLOUGH: I've got a couple of slides,
7 I guess, one slide just on the history of cross-
8 cutting issues of Region 4. This is for all four ROP
9 up till now and, this is a total of -- at one point or
10 another, we've had ten sites with a cross-cutting
11 issue, highlighted. Many of those, we've closed and,
12 some closed in as short as five months; some for over
13 two years.
14 But, we think highlighting, even though
15 it's only a few sentences in an assessment letter,
16 plus all the other things we've talked about that we
17 do along with it. We think they have been useful and
18 highlighting by company attention on these areas.
19 And, I think -- That's all the information
20 I wanted to present. We can move on, or, we can take
21 questions, additional questions.
22 MEMBER SIEBER: I would have thought, by
23 now you folks would have had enough questions. Why
24 don't we move on.
25 MR. BLOUGH: We had Indian Point next on

1 the agenda. Wayne Lanning was going to talk about
2 inspections.
3 MR. HOLIAN: Good afternoon. I'm Brian
4 Holian. I came to the region as deputy director,
5 division director safety in June of '99, following two
6 years with Chairman Jackson, on her staff. Prior to
7 that I had been in NRR's reactor projects for six
8 years. Prior to that at Calvin Cliffs in engineering
9 and operations organization, where I had SDA and SRO
10 and I spent a few years there.
11 I don't miss the DC beltway traffic,
12 although, the mall traffic gets tough around here,
13 but, it's been very good in the region.
14 Next slide. Indian Point, just some
15 general comments to start with. It has been a very
16 challenging case. You've heard some of that. We
17 could have taken another plant to give you some
18 specifics, following up on Randy's discussion. But,
19 as you'll see in a couple of slides, Indian Point
20 presents a good picture of not only cross-cutting
21 issues, but, also, some inspector findings and the way
22 we work that through the action matrix.
23 It did -- was an issue as we went into the
24 ROP, on how we would span the old and the new
25 processes. We did have a very strong inspection

1 history prior to the ROP and, we wanted to make sure
2 that that was carried over, even as we started the
3 ROP. So, that was one of our issues as we looked at
4 that.
5 As we went into the action matrix, we did
6 pioneer quite a few of the issues there. The
7 escalation as we took old findings and tried to apply
8 them in there and make sure we didn't lose that.
9 You'll see that with one yellow finding I'll talk
10 about. De-escalation, primarily, on the issue on how
11 long we could finally open. They chose four quarters
12 when they started. They took that as a good example.
13 We had to prove, at least at Indian Point, that we
14 needed some flexibility on that and, that was granted,
15 you'll see.
16 It has been a significant impact on, not
17 only DRP, but, DRS. We've taken people from Dianamis
18 (phonetic), folks in this room, almost everybody
19 that's been impacted some how by this case. Just look
20 around. Wayne Schmidt -- we lost one of them. He was
21 sitting over there. When you talk cross-cutting
22 issues, we made it a point to try to keep some
23 consistency on some of those inspections, so, we
24 freshize (phonetic) or mixed in, but, Wayne Schmidt,
25 who was on the 95/003 inspection, also led three of

1 our problem identification resolution inspections.
2 So, he could track very well the issues and, even
3 personnel and different pockets of what he was hearing
4 at the licensee. One other gentleman in the back is
5 Dave Lou, he's down in rotation at headquarters. He
6 was a branch chief. When I talk about the red
7 finding, I just wanted to highlight a lot of the work
8 that he did. He was division director safety as a
9 branch chief.
10 Next slide, please. This is just an
11 agenda slide. I will take you -- Our goal is not to
12 take you through three plus years of history, but,
13 once again, to apply some of the aspects of Randy's on
14 Indian Point. I will just spend a little time on
15 performance history and, the bulk of time, on two
16 charts that you have in there, on how the action
17 matrix was applied.
18 Next slide. Once again, plant data, unit
19 1 is the old -- old plant up there, on the left there,
20 out of seven spent fuel pools, there's all the spent
21 fuel is in one of the seven old pools there. I just
22 mention that, that does still raise some interest with
23 the people there and, they're looking at dry cast
24 storage for all these units in the next year or so.
25 Year two and three, near identical plants,

1 but, once again, as Con Edison was the owner early
2 own, a reminder, they sold unit 3, put up the fence
3 and that really affected issues between those plants,
4 unit 2 and unit 3. Unit 3 was on the watch list in
5 the '80s time frame with their own issues and
6 problems. Unit 2, since then, in late -- early '90s,
7 has had significant issues also. Not much
8 communication across those two sites, between Con
9 Edison and NIPA, in the history. But, pretty much
10 identical sites.
11 Next slide, please. As I mentioned, why
12 is this important. I just want to highlight that
13 Cannon was making a difference even prior to ROP.
14 We've had a lot of factors that have come into play
15 since then, that deregulation, we've had a new owner.
16 But, the inspection findings that the region was
17 pushing in late '90s, '96, 7, time frame, really put
18 a thumb nail on this plant. They were working
19 themselves through low result scores and, a couple
20 confirmatory action letters. Some of the plant events
21 that you have there over the '96, '97 time frame,
22 there were about eight plant trips and/or four
23 shutdowns. These were for issues, main steam safety,
24 relief valve problems, inoperable pressurizer, code
25 safety valves. They had repetitive DV50 circuit

1 breaker problems. This might bring back some
2 memories. Hub mentioned off-speed pump roots and
3 issues. We're seeing that at Point Beach now, in
4 another region. Talk about precursors.
5 This plant, in the '97 time frame, had
6 three main feed red valves failed to close on demand
7 and, they found out that it was grit that was left
8 over from working the high pressure turbine in the '95
9 outage. And, it affected a high pressure -- a heated
10 frame pump in that outage, but, they never tracked it
11 all the way to the feed red valves and caused an issue
12 then, in '97. Over that time frame, you had about a
13 half -- $500,000 in civil penalties from '97 to 2000,
14 that were levied pre-ROP.
15 One of the issues as we talk about this,
16 when we went into the ROP, was what would happen when
17 ROP started? Would they all of a sudden be all green
18 in the eyes of the public and/or, even the NRC?
19 I'll go to the next slide. One of the
20 ways we dealt with that and, Tracy, you might have to
21 use a little red mouse there. I think it's up top, to
22 help along.
23 That yellow finding on a mitigating system
24 -- This chart, first off, just to start, this chart up
25 top, explanatory notes follow, I should have taken it

1 off of your slide. This chart does get sent out on
2 our six month annual assessment letters. We send out
3 our assessment letter, a chart like this for the
4 licensee to track and, then, on inspection, plan for
5 the next year.
6 The yellow finding there in that first
7 quarter of the ROP in 2000, you'll see the note at the
8 bottom of the page, 8/99 event was pre-ROP. It was
9 not an official yellow finding. This was the issue
10 from the August '99 complicated plant trip that they
11 had. They locked up safety buses, one diesel, also,
12 had a separate problem. They ended up running a
13 battery down, went into an unusual event for losing
14 about 75 percent of their annunciators.
15 MEMBER ROSEN: When was the steam generator
16 rupture?
17 MR. HOLIAN: I'll touch on that next. I'm
18 going to get that next. February 2000.
19 So, that yellow finding was an issue that
20 we put in a commission paper and, we documented it.
21 Here's a plant that's pre-ROP, but, we have a lot of
22 significant equipment issues. If we were to color it
23 as a problem, it would have been yellow, as risk. It
24 was never finalized because it was a pre-ROP issue.
25 But, it eventually got tied to the very similar issues

1 that are in the steam turbine two failure. So, I
2 might have mentioned and highlighted that.
3 Go over a couple of columns there. You
4 had the event, the tube failure -- I'm sorry. The
5 bottom of the slide, I did add some items to the slide
6 that we send out. These arrows at the bottom of the
7 page, I put in just for your reference. It's a time
8 line of significant events or milestones at Indian
9 Point. There's the steam tube failure event.
10 It was a lot of work done on that issue
11 and event, not only an equipment issue with tubes that
12 they had missed in the '97 outage, but, also,
13 corrective action, they had some indicators, once
14 again. In the '97 outage time frame a more thorough
15 assessment of their corrective action process and
16 looking at, even, some of the CR's that they wrote
17 would have pointed to issues with that. That ended up
18 as a red finding in quarter three.
19 Back onto the EP area. In the event of
20 steam tube failure, they did eventually, first
21 degraded cornerstone for them was three white findings
22 resulted to the -- as a result of the February 2000.
23 It dealt with emergency response, organization,
24 accountability. Once again, their augmentation of
25 staff during the event. And, then, they had some very

1 difficult problems with joint news that have carried
2 on, even again lately in our last drill here to a
3 lesser degree.
4 Finally on that, we did carry those late
5 findings, you'll see. We had to face ourselves with
6 them, even going past the four quarters. We looked at
7 that. We targeted a remedial drill in June of 2001
8 time frame and, they did put some -- Con Edison did
9 put some resources in that area and, also, you know,
10 Entergy was just coming in at that time at Indian
11 Point 2. But, Con Edison did a put a lot of resources
12 in there. We were able to clear that degraded
13 cornerstone.
14 MEMBER APOSTOLAKIS: Are these inspection
15 findings or performance indicators?
16 MR. HOLIAN: You do have a couple of
17 performance indicators, where you have a PI there. I
18 wasn't going to touch on all of these. I'll take
19 questions, though. You did have a yellow PI that was
20 related -- You had one on reactor trip frequency. The
21 very integrity was related just to the tube failure,
22 itself. You'll track RCS leakage, so you have a tube
23 failure of a hundred 20 degrees. It kicked itself in
24 as a yellow, just for one quarter.
25 You had -- You had another white PI for

1 diesel unavailability there. You had one for reactor
2 trip frequency.
3 Go ahead.
4 UNIDENTIFIED SPEAKER: What's MDC stand
5 for?
6 MR. HOLIAN: I'm sorry. Down at the bottom
7 of the page, that's the matrix columns. And, once
8 again, they entered a red finding by itself, will put
9 in you multiple degraded cornerstone. So, that's
10 multiple degraded cornerstone. DC is degraded
11 cornerstone.
12 MEMBER APOSTOLAKIS: Both these whites --
13 COURT REPORTER: Speak up.
14 MEMBER APOSTOLAKIS: These are what,
15 inspection findings, right?
16 MR. HOLIAN: Yes, they are. We had an
17 extra fourth one there. We were tracking a white
18 right as the ROP started. They had a drill and
19 corporate team, where they missed making
20 classification at times. We have one white finding,
21 right as it started there. Then, you had three white
22 findings that came in as a result of our inspection,
23 our augmented inspection team, result. And, by the
24 way, the HRS was briefed about the August time frame
25 in 2000, two AIT's that we held. We had the briefing

1 at the same time, we came down with the two AIT team
2 leaders, Ray Larson and one of them moved down to
3 headquarters now. But, we briefed both the AIT for
4 the steam tube failure and the August '99 event.
5 White findings, as I mentioned, I don't
6 want to go into specifics again, but --
7 MEMBER APOSTOLAKIS: White now is the
8 determination if it's white depends on some
9 quantification, doesn't it?
10 MR. HOLIAN: Yes. In the emergency
11 preparedness, it's not such a quantification in
12 emergency preparedness as risk. It's a quantification
13 of, did they identify the issue first.
14 MEMBER APOSTOLAKIS: See, that's my
15 problem.
16 MR. HOLIAN: Yes.
17 MEMBER APOSTOLAKIS: Is this a white?
18 MR. HOLIAN It's a --
19 MEMBER APOSTOLAKIS: When it comes to the
20 PI, or, even there, we have a problem with it. Let's
21 say, you have indicator systems. I can believe the
22 yellow finding, based on CBF and changes to CBF. When
23 it comes to EP, how much of the white is a white?
24 MR. HOLIAN: Yes. We follow that
25 discussion in the industry. I know they're looking at

1 that now. You heard Randy talking a little bit about
2 there. He was answering what has made a difference on
3 some of the Region 1 plants. He started to give an
4 answer about, in fact, maybe, EP was a strong program,
5 strong to some degree here, but, maybe, he hit it last
6 and, Randy was mentioning that our ROP has picked up
7 and made a difference on some of their EP's. So,
8 there's some truth there. I know they're looking at
9 that and calibrating, where's that white compared to
10 mitigating systems white and the risk it was.
11 MEMBER APOSTOLAKIS: This is --
12 MR. MILLER: George, you try to take all of
13 these things. There's a range on all of these things,
14 as you'll hear Gene talk about the calculation done
15 for the Salem diesel one, where it stands, you know,
16 yellow, white or green. And, you come up with a --
17 with a -- with the best estimate. You stand back and
18 you try to ask yourself, does that seem right? In
19 this case, on those whites, emergency preparedness.
20 At Consolidated Edison, at the time we made those
21 findings, that was white. They had problems. I have
22 no problem with that being a white. They had issues.
23 They lost and had fallen behind in terms of doing the
24 things that they should have been doing on emergency
25 preparedness.

1 So, my sense is, those were valid concerns
2 that we had.
3 MEMBER APOSTOLAKIS: Another issue, I
4 think, is the issue of consistency.
5 MR. MILLER: Sure. Right.
6 MEMBER APOSTOLAKIS: The IE's, the EP's.
7 MR. MILLER: Yes.
8 MEMBER APOSTOLAKIS: Some are based on the
9 list and some are based on, you know, poor judgment on
10 the -- others are PI's.
11 MR. MILLER: The staff is looking at that.
12 The staff is looking at just that issue.
13 MEMBER APOSTOLAKIS: Good.
14 MR. MILLER: What's the right threshold?
15 Are they set properly.
16 MR. HOLIAN: The staff at the region. DRS
17 challenges us on a lot of EP findings.
18 Once again, just a couple more items on
19 this chart. Somebody -- Mr. Rosen, I think you asked
20 earlier about when did -- my special project that the
21 region had put together. We did -- As we took the red
22 finding past full four quarters, once again, that was
23 a significant issue, not only dealing with external
24 stakeholders, but, internal stakeholders. But, that
25 red finding, the first aspect you just had -- I just

1 want to highlight this again -- in the public it was,
2 this is not a red finding. This is not an isolated
3 steam vent tube or, in this case, it was more than
4 steam vent, it was corrective actions and, what we had
5 seen at the plant.
6 But, to the public it was, this is a red
7 plant. This is -- You know, it was very hard to
8 disassociate from that. And, how can a red plant be
9 operated? That was another issue we had to deal with.
10 So, the public, that didn't make sense to them, as you
11 had a red finding of plant. So, that delved into our
12 external stakeholder work load.
13 But, what you had there was, we took it
14 past four quarters. We obviously saw, just as Cooper
15 Plant in Region 4 now sees as they entered in, that
16 they're going to be there for a couple of years, I
17 think. We saw that the issues were longstanding.
18 That 95/003 inspection in January of 2001, a 14 person
19 inspection, inspectors from around the region with
20 contractors highlighted numerous green items and, many
21 broad areas. Once again, engineering, corrective
22 actions, human performance, recognized EP and the
23 fixes that were ongoing, but, recognized that as still
24 an issue.
25 We stepped into a significant inspection

1 aspect at that time. And, so -- But, at that time, we
2 saw that the utility had come in. Con Edison was
3 looking at selling Indian Point 2. We had a lot of
4 issues -- It was about that time, there was a six-
5 month period where I was able to pull back and let the
6 project's organization work with division director of
7 safety a little bit more. And, then, you'll see at
8 the end of the year as we get into an operator recall,
9 a new yellow finding. We started stepping back up.
10 Randy and I split the plants in RDP just
11 for item emphasis. I would maintain the Entergy
12 plants to continue to track.
13 MEMBER ROSEN: You have an operator recall
14 high failure rate. But, you also have mitigated
15 systems. What was that about?
16 MR. HOLIAN: I'm sorry. Mitigating
17 systems, yellow?
18 MEMBER ROSEN: You have two yellows in
19 mitigating systems.
20 MR. HOLIAN; Yes. We had -- The one yellow
21 is the one I've been tracking the whole time. That
22 yellow was not an official yellow. That was the
23 August '99. We tracked it and when we talked about
24 the red finding, we talked about the red and yellow.
25 We kept -- The issues from the August '99 were

1 equipment issues. They had the tap changer nuts.
2 They had diesel settings not set right. They had some
3 human performance errors in there. Those track very
4 well with the issues in the red. And, we kind of --
5 We coupled those together as findings and, that's what
6 that is. The second yellow is the operator recall.
7 MEMBER ROSEN: Mitigating systems.
8 MR. MILLER: Yeah. Those operator recall,
9 operator recall falls in that category. You're going
10 to talk about the multiple findings and so on. What
11 we did to establish themes, so that we didn't end up
12 piecemealing.
13 MR. HOLIAN: That's part of what I was
14 getting right there. The red and yellow findings, it
15 was, as we looked at closing the findings. We
16 mention, again, precedent setting issue on Indian
17 Point 2, what does it take to close a finding? They
18 replaced the steam generators. Some people said the
19 utility. We replaced the steam generators, closed the
20 red finding. And, that was a simplistic view back
21 here in 2000.
22 You see internal NRR, where we've got a
23 plant to fix, the Ebb and current (Ph) inspection by
24 the next inspection. Is that enough to close the red
25 finding? We had themes, as I mentioned in these. We

1 put them on annual assessment meetings and, in the
2 95/003 inspection, that dealt with those areas I
3 mentioned. Weaknesses in engineering design, human
4 performance and corrective actions. And, it was
5 substantial improvement that we wanted to see in those
6 areas, similar to what Cooper is now patterning
7 themselves after IP2, to close those findings.
8 So, as it turns out when we go to the next
9 chart and let's just go over there now. You had the
10 red finding open for nine quarters. You had the
11 yellow finding and operator recall open for seven
12 quarters. The white findings in EP for open for at
13 least six quarters. And, you're tracking a white
14 finding now in control room fire wall, that probably
15 will be open for about --
16 MEMBER APOSTOLAKIS: How do you decide what
17 to close. You mention two or three --
18 MR. HOLIAN: I mentioned two or three?
19 MEMBER APOSTOLAKIS: Well, you said some
20 people argue that --
21 MR. HOLIAN: Yes. We didn't take those
22 first two.
23 MEMBER APOSTOLAKIS: You didn't take them.
24 MR. HOLIAN: No. We didn't take those two.
25 Part of what we added in feedback forms to NRR in that

1 were better criteria especially for a plant coming on
2 --
3 MR. MILLER: Wait, there has been
4 recognition that -- And, we've been learning all along
5 in the ROP. There's been recognition that the
6 guidance needs to be more explicit with respect to
7 what we learned from Indian Point and other sites
8 since then, about how you close out these findings.
9 That it's unrealistic to think that somebody can get
10 into a level of performance that causes them to
11 multiple degraded cornerstone and expect that we can
12 snap your finger and in short order be cleared, you
13 know, of those issues. It's not realistic,
14 especially, when you're talking about a spectrum of
15 issues and not a discrete issue. And, so, we've
16 learned a lot and that's now being reflected, I
17 believe -- Roy's not here now -- in the guidance.
18 MR. HOLIAN: Yes, it has. Some of the
19 words we used even in our assessment letters, where we
20 were looking for substantial improvement in these
21 areas, that was a look at findings, what other
22 findings you had, a lack of, you know, significant
23 findings, operational systems being out of service.
24 And, a lack of, also, the need for in the action made,
25 to use such items as scales for entering information.

1 Some of that guidance has been put into the ROP.

2 MR. MILLER: Brian, if I could emphasize

3 just one thing. This goes to the question that was

4 asked earlier by Mario and some of the other questions

5 this morning. And, that is, how do you avoid

6 piecemealing things and, how do you assure that you

7 are not just, you know, sitting and watching one

8 failure occur, treated it as isolated, move on to the

9 next, ever happening again and again.

10 The program, literally as it was written,

11 would have had us take each of those findings and deal

12 with them each discretely. A big part of our plan

13 identified the cross-cutting themes and our whole

14 effort was less on, did they employ new techniques for

15 any current testing that were more robust. Or, deal

16 just with the specific issues at EP. But, rather,

17 what did they do with the broad area of human

18 performance, design, corrective action and, these

19 themes that we had and, all of our efforts were aimed

20 at tracking progress against those themes, as opposed

21 to follow up on discrete issues.

22 MR. HOLIAN: Once again, a reminder for

23 those who might not have known, we're tracking now the

24 new yellow that cropped up at the end of 2001 in

25 operator recall, four of seven crews failed operator

1 recall and, that has just closed now. And, that
2 finding was kept open, again, with a necessary look
3 back at operator recall at the end of their cycle.
4 The utility did a good job in high-intensity training,
5 pulling crews off of shift. And, it also branched
6 into their initial licensing aspect. We had some
7 separate information from allegations and other areas,
8 but, we team that as a necessary area from when our
9 inspectors were showing us, for verification that
10 their training program was handling both of those
11 areas well.
12 MEMBER ROSEN: Brian, I didn't quite hear
13 what the original recall failure rate was. Did you
14 say it was seven crews?
15 MR. HOLIAN: Four of seven crews.
16 MEMBER ROSEN: Four of seven.
17 MR. HOLIAN: That's correct. That comes
18 out as a yellow.
19 Once again, on this slide, one item as Hub
20 mentioned, not discrete items as you'll see here. We
21 were closing a red finding. You still had a yellow
22 finding open on operator recall at that time. It had
23 been nine quarters. I mentioned Wayne Schmidt on his
24 95/03 inspection, he was on several problem
25 identification resolution inspection. We were able to

1 do those supplemental inspections at probably about
2 eight month intervals over this time frame. So, there
3 were three of those that we did track very well and,
4 also, have some separate design inspections in there.
5 What you have, though, at the -- You're
6 about ready to close the red finding and, you did have
7 another isolated white come up. I call it isolated.
8 It came out of -- Entergy has now come in. They put
9 some significant resources in. They've done their own
10 self-assessment. They, themselves, admit that as
11 they're doing due diligence on a plant like Indian
12 Point 2, they're a little closed out on almost what
13 they're buying. And, they get in there and did a
14 detailed review and, have found out that they had some
15 significant holes in their control room wall. This
16 was a fire boundary. You'll hear a little bit about
17 that from Roy Fuhmeister, in the session later this
18 afternoon.
19 That white finding is still open now. A
20 supplemental has been done. It really goes back to
21 original design, but, it also has a corrective action
22 piece in it. There were some pieces there that they
23 could have and should have fixed that wall better,
24 even when it was identified, even with the new owner.
25 So, what you have here, though, is an issue here, as

1 Hub has mentioned. We look at it in concert for
2 themes. They did show substantial improvement.
3 Somebody asked cross-cutting issues earlier. You
4 heard one of the senior residents. We didn't bring
5 the Indian Point residents in, keep them on the site.
6 But, it was easier to make a cross-cutting issue at
7 Indian Point about a year ago. There were 12 findings
8 of human performance. All had been tagged by the
9 residents through the year.
10 This last end-of-cycle assessment, there
11 were four to five. Still, you have to have a theme,
12 that they're there. It can't just be somebody makes
13 a mistake here and somebody makes a mistake here. So,
14 it is getting a little tougher. There is progress
15 made. We engaged the utility. They recognize that,
16 yes, the red might be cleared, but, they still have a
17 human performance and a corrective action cross-
18 cutting issue, with some progress being made, at least
19 set out in our assessment letters, that, okay, you
20 still have it. We're still following it. And, we
21 recognize that progress when they make it, even in the
22 number of findings.
23 UNIDENTIFIED SPEAKER: Has the ROP matured
24 enough, that we can clearly delineate multiple
25 degraded cornerstone is a regulatory response problem?

1 Can we communicate that in terms of risk
2 communications?
3 MR. HOLIAN: We worried about that, absent
4 the yellow finding coming up on operator recall. We
5 worried about that from a region, because we worried
6 about this plant going from red to green. You know,
7 we worried about it and, rightly so, not only public
8 perception, because if I only had the tube failure red
9 and, at some point, because of the broadness of the
10 issues at Indian Point. Now, if I have an off-speed
11 pump and that causes a red finding, it's a little
12 easier to explain to the public and, a little bit of
13 risk accepted. They had a problem with a strainer
14 and, they fixed that and, that's it.
15 But, on this -- It's not just a tube
16 failure red. It's broad issues that go back to the
17 August '99 event, with equipment and human
18 performance. So, we did worry about that issue and,
19 we were getting ready to face that communication
20 aspect, primarily, to the members of the public. It
21 was more gratuitous than anything that you had a
22 yellow finding and, in this way, you did step down.
23 MR. MILLER: Much of the challenge has been
24 doing the, first of all, doing the right thing on
25 Indian Point. And, the second thing is communicating

1 it effectively. There are a number of people in this
2 room, who can attest to this. We made iterations, or,
3 we produced a document on Indian Point because of the
4 hypersensitivity and the challenge of making clear
5 what our basis is. We're not playing games in this.
6 There is a process. We're following that process.
7 Then, there's some judgment and with respect to those
8 judgments that we're making that we've slaved over
9 and, I think have done a fairly effective job of
10 explaining why we've done as we've done it. As we
11 escalated initially and as we de-escalated.
12 I think that you just have to look at the
13 record. The record is fairly complete. These letters
14 on Indian Point are always longer than the other
15 letters.
16 MEMBER APOSTOLAKIS: So, if I have a red
17 and if you have some important piece of equipment,
18 but, you have already assessed that the fundamental
19 cause was human performance. When do they remove the
20 red? When they fix the equipment, or, when they do
21 something to the human performance problem?
22 MR. MILLER: The second.
23 MEMBER APOSTOLAKIS: The red?
24 MR. MILLER: The second.
25 MEMBER APOSTOLAKIS: Even if they fix the--

1 (Several people speaking simultaneously.)

2 MEMBER APOSTOLAKIS: It was still red.

3 MR. HOLIAN: But, it was very well

4 communicated on that. It wasn't just the tube

5 failure. It was corrective -- As a matter of fact,

6 the violation was a corrective action violations. It

7 wasn't that you had a mechanical failure. You had

8 four tubes that they should have plugged in the

9 outage. So, that corrective action piece, it's a

10 correct description for them to understand the issue

11 and, really, even the public.

12 MR. MILLER: George, if you go back -- if

13 you go back and look at the slides that we used at the

14 many four and five hour meetings in New York, I wish

15 there were many, the public could sit there and see

16 exactly what we were tracking, exactly what we were

17 doing. We always talked about how they're going to

18 fix these generators and at some point, they'll

19 restart the plant. But, these are the issues that

20 we're tracking and, we did that for internal

21 communication purposes, as well as external

22 communication purposes. And, we made it clear from

23 the beginning, that were not going to let it go, until

24 we see -- In fact, we wrote, Brian, didn't we in the

25 letter on 95 '03, we needed to see a substantial

1 improvement on those fundamental issues, before we
2 would clear the record.
3 MEMBER APOSTOLAKIS: First of all, I do
4 agree with you on that's the way it should be done.
5 But, it's not clear to me, how you decide that the
6 human performance issue is closed. How do you decide
7 that the operator recalls is not there any more?
8 MR. HOLIAN: The corrective action -- Let
9 me mention a little bit here. We do have some cross-
10 cutting issues, so, those are still open. I mentioned
11 that -- I said findings. I have a cross-cutting issue
12 is now raised to the issue of the red finding. On the
13 red finding, it was a corrective action violation.
14 We, as I mentioned, Wayne Schmidt was on three
15 corrective action supplemental teams, that went out at
16 about eight month intervals to check progress on that.
17 At any one of those inspections, if we saw adequate
18 enough progress, one, that they were not taking the
19 findings at each one of those inspections and, we
20 said, hey, you're still not doing a good job in a
21 timely method of fixing your own problems.
22 Once again, I already mentioned, if you
23 have 3,000 CR's and they're generating 12 to 14,000
24 CR's. And, still languishing with the back log of
25 issues. Go ahead.

1 UNIDENTIFIED SPEAKER: We still have been
2 running 95/003 as well, supplemental inspections.
3 And, that's really where we found a lot more problems
4 than we knew about on the initial red inspec --
5 initial steam tube 2 failure inspection. So, the
6 supplemental inspection raises some new issues that
7 needed to be dealt with before the red finding was
8 closed.
9 MR. MILLER: But, it was with that 95/003
10 that we established the baseline for all of our
11 oversight. And, everything tracked back to that.
12 That's where we categorized the issues. That's where
13 we said, there are numerous events, but, when you haul
14 it all down, here are the teams we're concerned about.
15 We then refer -- The company put in place a program of
16 improvement that addressed those themes.
17 Now, they established and, here, we're
18 going in a lot of detail at Indian Point, but, I think
19 it's useful for your understanding, generally, how we
20 approach this.
21 They put in place a number of indicators.
22 A lot are leading indicators. There were a number of
23 times that they had, that they were tracking personnel
24 errors rates. They were tracking back logs. They
25 were tracking a whole lot of things. And, part of this

1 oversight, this technical coordination team with Pete
2 Esolgroff (phonetic), who's the branch chief, working
3 with Brian, the resident inspectors, periodic meetings
4 on site to track progress against those indicators.
5 And, here, I'm going to throw at you my
6 mosaic answer again. There is no simple formula that
7 you can use. It was a collection of things. It was
8 their indicators of which there were numerous. It was
9 the inspection findings from the follow-up inspections
10 that were done. There were the management meetings
11 that we did, the site visits. And, in the end, we
12 made a judgment that they had crossed the line and, it
13 was a weight of evidence that they had finally at
14 least substantially addressed the issue, not to say
15 that there aren't continued problems. Not to say we
16 still didn't have cross-cutting issues. It's just
17 they had made enough progress to move them out of this
18 very weighty area of a multiple degraded cornerstone
19 column.
20 MEMBER APOSTOLAKIS: Are you taking them --
21 Are you just eliminating the red, or, you're going
22 down to --
23 MR. MILLER: We had -- The yellow is still
24 out there. We still have the yellow.
25 MR. HOLIAN: At the bottom of the matrix

1 column, you'll see they go from multiple degraded to
2 degraded, because you have a yellow open. But, at one
3 point, you know --
4 UNIDENTIFIED SPEAKER: But, that was sort
5 of a lucky break.
6 MR. HOLIAN: It was gratuitous in a way,
7 that's right.
8 MEMBER APOSTOLAKIS: My question is, not
9 whether another yellow occurred. Do you go from red
10 to yellow or white?
11 MR. HOLIAN: No. You'd have to follow the
12 action. I mean, we faced that early on. I mean, for
13 columns, you do that. Now, you could do a deviation.
14 Just to follow through on the logic here. At this
15 point in 2003, we did do a deviation to the action
16 matrix. As Hub mentioned, it was a minor deviation.
17 But, we did look at seeing that they operated yellow,
18 they were making progress. We had looked a couple of
19 times through that year. We left it open for a final
20 verification on recall results.
21 As we looked at it, we knew we had this
22 white on control fire wall that had design issues. We
23 did a deviation to the action matrix for one
24 inspection and to continue some significant management
25 meetings to track their performance indicators through

1 2003. We almost said, no matter what column you're
2 in, we're still going to do some things here,
3 management-wise. We're going to have you in to look
4 at these performance indicators that we've been
5 tracking for two years and, we want to see that
6 continued progress go on.
7 And, in particular, on the white finding,
8 I'm just going to branch to next, it's tracking,
9 although it's a control fire wall and it's an isolated
10 area, they're tracking multi-year efforts under
11 Entergy now. They go back and re-verify circuit
12 analysis and other things. And, so, we're going to
13 take them through 2003 in a public forum and follow
14 some of that progress.
15 MR. MILLER: Bill Shack just picked up on
16 something that most people have not picked up on and,
17 you said it was gratuitous that you have a finding
18 there.
19 I think that we're making judgments and,
20 we clearly made the judgment that we were not going to
21 close that finding out in four weeks and had an
22 additional five.
23 That yellow were not sitting out there,
24 would we have cleared it even as early as we did?
25 May, maybe not. And, so, there's an element of

1 judgment. We may have held it open just a bit longer,
2 but, we knew we had it there. And, that's not -- That
3 might sound like, you know that's some how
4 inappropriate. But, I don't think it is. I think
5 we're still having to use judgment in this program.
6 MEMBER APOSTOLAKIS: You leave it open as
7 a red?
8 MR. HOLIAN: Yes.
9 MEMBER APOSTOLAKIS: It would never go down
10 to a yellow.
11 MR. HOLIAN: It doesn't give you
12 flexibility to go to yellow. We would have left it
13 open as a red and given the reasons why we left it
14 open.
15 MEMBER APOSTOLAKIS: So, that why it didn't
16 work into the third quarter of '03, is --
17 MR. HOLIAN: That white is a new issue.
18 It's a new issue. That was the control room fire wall
19 right there.
20 MEMBER APOSTOLAKIS: The yellow go to
21 white.
22 MR. HOLIAN: No. That's right. That's a
23 new issue.
24 MEMBER APOSTOLAKIS: It's not the previous
25 one.

1 MR. HOLIAN: That's right.

2 UNIDENTIFIED SPEAKER: That white is a new

3 white.

4 MR. HOLIAN: That is a new white issue. It

5 should track. You know, all four of those should go

6 together on the same line, maybe, to make it more --

7 MR. MILLER: This was an issue that related

8 to corrective action, to be sure. And, there's also

9 an issue that related to design control and, an issue

10 that we had seen roots of in all of these previous

11 events. And, we knew that it was very important for

12 the company to continue to invest the money that

13 they're having to invest, to get a much better handle

14 on the configuration of that plant than they had.

15 And, so, we've held that open and, we'll hold that

16 open to get a little bit more confidence that they're

17 going to see that through with some quality.

18 So, there's still an arc in this. There's

19 still aspects of this being an arc and, we shouldn't -

20 - we shouldn't hide that fact.

21 MR. HOLIAN: Two items, just to follow on.

22 Somebody asked what do the teams look at for human

23 performance early on. One of the aspects, Wayne

24 Schmidt did on his last problem identification

25 resolution team was to have an open trailer down by

1 the waterfront and, you give an open time for any
2 employee to come in to tell you, are you having any
3 issues raising concerns. Are you discouraged from
4 writing condition reports and that. So, that was an
5 aspect that that team looked at on their own
6 initiative, to sample. They sample employees left and
7 right as they're going through the plant and, you ask
8 for interview of people. But, this was an open time,
9 advertised, even, in the newsletter. So, I wanted to
10 bring that up.
11 One other item on this -- on this plant,
12 you talk about human performance issues. They did it
13 for fatality in July of 2002, with a contractor on
14 site. You might have heard of that issue. Control of
15 contractors has been an issue here. And, finally, at
16 the end of the year in 2002, you've probably seen the
17 press before, it's very public security issues that
18 came out through the allegation process. It's still
19 visibly in the press. One individual was on Sunday
20 morning press with the chairman on this, this previous
21 Sunday.
22 So, those issues took a lot of attention
23 by the region. You don't see findings here. In
24 general, those allegations were not substantiated.
25 However, there were a couple of areas that were and

1 we've got public inspection reports on those issues.
2 MR. MILLER: I want to ask a question here.
3 I'm anxious to have you be able to interact with the
4 inspectors. Maybe what we can do, Brian, is just, on
5 the next slide, just give them the real high level.
6 You saw those clips. You read the news. You know how
7 much on Indian Point is in there. The limelight has
8 been crushing. The impact on the region and, maybe,
9 that's the main --
10 MR. HOLIAN: Yeah. I didn't want to spend
11 time on the charts, just to walk you through it. But,
12 once again, that oversight, stakeholders. Obviously,
13 very involved public up there, you've heard that River
14 Keeper well financed group that continues to issue
15 items, very much taking on reports, the track two
16 reports, end of year report. They continue to put
17 brochures out. The NRC said this. The NRC, how can
18 you say this? Congress -- Statement counties, folks
19 had a congresswoman at some of the meetings list a
20 conditional report that says, reactor protection
21 system is not white or bright. How can you say the
22 plant's safe when somebody faxed me this to my office.
23 Very visible issues that we've had to deal with up
24 there.
25 MEMBER APOSTOLAKIS: I think the second

1 bullet should be special. I think two out of the
2 three eminent --
3 MR. HOLIAN: Next slide. Once again, much
4 interaction with what we call the technical
5 coordination team. Early on in this process, we were
6 asked by Union Christian Scientist, why didn't you put
7 Indian Point 2 in the old 350 process, similar to what
8 Davis Besse is in now. That is something that we
9 looked at square in the face when they were replacing
10 their steam generators in that lengthy eight month
11 outage after the tube failure. For a while, you
12 remember, they were going to operate with the old one,
13 still. And, we were working with NRR that we looked
14 very carefully up to re-start on that aspect and, what
15 we needed.
16 At that point, we made this technical
17 coordination team, involved a lot of people here. We
18 still use it with formal meetings with the EDO rep and
19 research and insert and NRR available as needed.
20 Once again, much still to come. We have
21 had our own independent oversight. There's been two
22 GAO reports, both on EP. There have been two IG
23 reports, a very extensive one on the steam tube
24 failure and, one just recently that took through a lot
25 of this history and said, kind of, where was IP2 under

1 the salt process and that. We're tracking it well
2 through the ROP and, it's a very good report. Brings
3 up the corrective judgment system allegation that I
4 just mentioned.
5 Next slide, please. Ongoing challenges
6 from here. We do still have these cross-cutting
7 issues that we have been tracking. Performance has
8 been better. Site integration between Indian Point 2
9 and 3 is taking quite a bit of management's attention
10 and, it is something that we're watching as it impacts
11 both of those cross-cutting issues. I mentioned the
12 design basis initiatives. And, finally, site security
13 EP. Site security they do have a force on force
14 exercise coming up that will get a lot of press here
15 in the coming months. Emergency preparedness, you
16 probably are aware that FEMA has that, but, is working
17 very closely with us and, we anticipate some action by
18 FEMA shortly.
19 MR. MILLER: We're not going to lie to you.
20 You raised a question about what impact does a problem
21 plant have on a region and, I will tell you that every
22 person in this room has been touched in significant
23 ways, as much as we have attempted to utilize schemes
24 that try to wall people off and have a dedicated group
25 and the like. This has consumed this region. And, it

1 is the sort of thing that, I think, that's known. I
2 know it's known throughout the agency that when these
3 kind of things occur, regions have to be given help.
4 And, we have to step up and ask for it, certainly.
5 But, I'm getting, right now, enormous help. The
6 chairman, personally and, the commission, more and
7 more. You've seen the current situation is something
8 that certainly goes beyond what we can deal with,
9 alone, here in the region. That's Indian Point.
10 This point, Wayne -- Need a break, or,
11 just keep plowing through?
12 MEMBER SIEBER: Yeah. Why don't we take a
13 -- Why don't we take ten minutes.
14 (Whereupon, a recess was taken.)
15 MR. LANNING: I have about 30 years with
16 NRC. I was first at headquarters in a number of
17 positions, most offices at headquarters. I've been in
18 the region here for the last ten or 12 years.
19 In my presentation, I'm going to address
20 some of the issues and challenges that were overcome
21 in the inspection program in the region. Then,
22 discuss some of the inspection findings that made a
23 significant difference in improving licensee
24 performance and overall safety.
25 We completed the -- We had an oversight

1 program at each of the 18 sites. This was a
2 significant accomplishment. You're probably saying to
3 yourselves, wasn't that the expectation? Well, the
4 answer to that is yes. But, this effort required
5 extraordinary efforts and respective sacrifices, to
6 overcome a number of the challenges that we had to
7 overcome in order to complete the program.
8 The most significant challenge is the
9 scheduling and starting of inspections, which is a
10 complex, multi-dimensional task. As background, each
11 year, we plan and staff about 1,800 direct inspection
12 hours at a single unit. This includes both resident
13 and region-based hours. On average, for all plants in
14 the region, we plan and staff about 30 team
15 inspections, with a team of three or more inspectors.
16 In addition, we license about a hundred operators a
17 year, which requires another, about, 15 teams to
18 complete that effort. And, those hours are not
19 included in the baseline hours.
20 This year, because of the 9/11 event,
21 we've had an additional 15 teams to do, the security
22 hours. So, if you add all those up, we had to plan
23 and schedule about a little more than one team a week
24 in this region. Even with a stable number of
25 qualified staff, this effort -- It's a huge task.

1 We've already talked about staff turnover and the most
2 adverse impact to maintaining resident inspection
3 coverage and, staffing of teams.
4 Randy showed you a slide of loss of
5 resident inspector staff. What he didn't tell you
6 was, when you lose one resident inspector, that
7 results in a domino effect of at least three other
8 changes in the staff, typically, five other staff
9 changes and, it can be as many as seven, depending on
10 where does staff come from, where does staff go,
11 promotions and so forth.
12 But, the point is, when you lose or change
13 20 plus inspectors, resident inspectors in the region,
14 it creates a crisis in planning and staffing of the
15 inspection program and, when it's put in jeopardy, it
16 won't get the program done.
17 We've already talked -- Back to my slide.
18 We've already talked about external demands. I won't
19 say anything more about that, but, just remind you
20 that there's a significant cost associated with those
21 external demands and, it directly impacts our ability
22 to get the inspection program done.
23 We've already talked about the additional
24 impacts to the region due to the -- to a plant in
25 degraded cornerstone. Not all regions have a plant in

1 multi-degraded cornerstone. Another significant
2 impact on our ability to complete the oversight
3 program.
4 Another impact of the events of 9/11 was
5 a security inspection program was changed completely.
6 They've issues three orders now to reactor licensees.
7 Associated with the first order is additional
8 inspections to complete. And, those are not just
9 limited to security inspectors. They include
10 emergency preparedness and operations aspects. So, we
11 need to identify staff to do those inspections, in
12 addition to what we had already planned.
13 The implementation of the determination
14 process are significant challenges we've gone through
15 implementing the program. We'll say more about that
16 later. Go in more details and provide some examples.
17 The following slide, significant events,
18 the region response. Re-staff these reactor
19 inspection teams with our best inspectors.
20 Independent of what they were scheduled to inspect.
21 But, nevertheless, we've had six of these this year
22 already, special inspections. And, that presents an
23 additional challenge to us to get the program done.
24 MEMBER ROSEN: Excuse me. How many plants
25 are there and how many units are there?

1 MR. MILLER: Twenty-six units at 17 sites.

2 MEMBER ROSEN: And, you've got six special

3 inspection teams.

4 MR. LANNING: Yes. Recently.

5 MR. MILLER: Seventeen. Are you talking

6 about fiscal year or calendar year?

7 MEMBER ROSEN: Fiscal year.

8 MR. LANNING: I think you now have a good

9 appreciation of the impact of staff turnover. I want

10 to speak briefly on the coping measures that we had to

11 take in order to deal with the transition of staff

12 and, other of those demands on the program.

13 You asked earlier about out use of

14 consultants or contractors. We did, for the past

15 year, for example, we have used contractors primarily

16 on engineering team inspections, safety system design

17 inspection. We've used contractors on seven of nine

18 of those inspections. So, that was one way that we

19 coped for missing qualified inspectors.

20 We've gotten a lot of support from

21 headquarters and other regions, that's been in terms

22 of both staff and contractors. NRR oversees the

23 support contract that provide us the contractors. We

24 have expedited the basic qualifications of those

25 inspectors. We've already talked about that somewhat.

1 The matter of fact is, by giving these people
2 basically qualified earlier, they start immediately
3 carrying some inspection.
4 We encourage staff to use overtime. Our
5 overtime numbers significantly increased. We delayed
6 inspections to cope. We delayed teams, spent one
7 fiscal year into the next. And, a lot of that is
8 based on the fact that we had hired a number of
9 experienced staff in anticipating getting those staff
10 qualified, so we could pick up the extra burden the
11 following year.
12 Finally, we made very effective use of
13 examiners. As part of that, we have been very
14 successful in convincing all Region 1 licensees to
15 develop their own initial operator licensing exams.
16 That saves us about 400 hours per exam. And, because
17 our inspectors are cross-qualified, in other words,
18 they're also certified examiners and qualified
19 inspectors, we were able to use some of those
20 examiners in performing some of the inspections. And,
21 they're particularly helpful in providing site
22 coverage.
23 But, it wasn't always good, because the
24 deregulation and consolidation, the new owners almost
25 immediately scheduled additional operator training

1 classes and, they were larger, larger than what they
2 had been with the prior owner. So, when you get a
3 larger number of examinees, it requires additional
4 staff effort and ...
5 Next slide. I think we've already covered
6 this pretty well. What we've done in terms of hiring
7 more staff than the budget calls for. Let me mention
8 the fact that we reached out and rehired a retiree
9 and, we're close to hiring a second one. The first
10 one was both an examiner and inspector. The second
11 one is a very experienced SRI team leader. So, that's
12 -- that has certainly helped us cope for some of the
13 challenges we face.
14 While we're on this slide, let me just
15 stress just a little bit, you asked about skills and
16 whether or not we track a member of staff after we
17 needed to do the ROP program. Well, I'm passing
18 around an update. And, we've been doing this for a
19 number of years. And, what we've been doing is, we've
20 been assessing what it takes to get the ROP done.
21 We've been assessing what skills are needed. And,
22 we've been comparing that and identifying various
23 improvements based on the skills of the staff that we
24 have. And, this is an evolving process and we've been
25 doing this and, it helps us to anticipate losses, if

1 you will. Anticipate areas where we need additional
2 expertise.
3 And, what you have there is, the first
4 sheet is just talking about sort of how many we need
5 internally and, that's just for the allocation of FTE
6 among the branches in the division.
7 The next page talks about team
8 inspections, more or less. How many FTE is required
9 to do team inspections and which branches are coming
10 from. We in DRS sort of rely on matrix organization.
11 So, that's why you see the responsibility is
12 distributed among several branches.
13 The third page there, we start talking
14 about inspection activities to areas in the ROP. What
15 we've done there is, is listed most of the areas in
16 the ROP, how much DIE, FTE is required to do that
17 inspection. How many staff needed to do it, how many
18 we have. And, whether or not some of those staff will
19 be eligible for retirement, either early, no, or late,
20 within the next year. So, this helps us to staff, to
21 manage and to make sure that we have enough qualified
22 staff to do the reactor oversight program. But, you
23 asked the question.
24 The next slide. We have overcome a number
25 of challenges in implementing the SDP and, there are

1 still challenges. But, most of these challenges are
2 included in the ongoing SDP improvement program. And,
3 I'm sure we've gone over that and know what some of
4 the areas are. And, there's been a number of problems
5 in the SDP's for emergency preparedness,
6 implementation and fire protection, but, we already
7 know that.
8 What you probably don't know is that we in
9 Region 1 have been a strong supporter of the changes
10 to those SDP's. For example, me and Pete were on the
11 forefront, because we had such a large number of EP
12 findings. So, we've had a very important role in
13 helping headquarters change the SDP's.
14 The SDP process is complex. You know,
15 considerable efforts are needed to define the input
16 parameters for doing a risk assessment. It's pretty
17 to multiply those out in the end. But, it takes
18 significant resources, both pedicel and risk wise to
19 be able to define the inputs for doing the risk
20 assessment. And, later on, we'll show you some
21 examples of --
22 MEMBER SHACK: Are there some parts that
23 you think work well? You know, when you say SDP, that
24 covers a lot of ground.
25 MR. LANNING: I think, you know, to speak

1 boldly a second. The SDP processes work well. We've
2 been able to assess the risk significance of --
3 MEMBER SHACK: Does it need more work?
4 MR. LANNING: Sure. This is Gene Cobey.
5 He's one of the regional SRA's.
6 COURT REPORTER: Microphone, please.
7 MR. COBEY: The SDP is what Wayne is
8 referring to, there's a brief there, phase 1, phase 2
9 and phase 3. In general, it's recognized that the
10 significance termination process in this area has been
11 effective, but, there are some challenges that have to
12 be addressed. And, the area in which it's been most
13 effective, which is the question I'm trying to answer
14 here is, the phase 1 process. It's a screening
15 process which is designed to separate the wheat from
16 the shaft. Okay?
17 Ninety-five percent of inspection findings
18 are screened out in the phase 1 process and, it does
19 so appropriately and efficiently. The phase 1 process
20 has been effective in the safety area.
21 For most of the discussion about
22 complexity comes into play is when you transition from
23 phase 1 into either phase 2 or phase 3. Okay? And,
24 that is the area, really, that's the subject of this
25 aspect of the discussion. Okay?

1 MR. LANNING: The risk assessments are
2 assumption, you know, what assumptions you make, how
3 you assess the success criteria, what's the root
4 cause. All those things play an important part in
5 doing the risk assessment. Inspectors, you know, the
6 initial envision was the inspectors were able to be
7 able to use the SDP on their own, to do their
8 analysis.
9 But, what we're finding out is that they
10 get two opportunities to do that, they're fewer and
11 greater that we can find these to evaluate and, it's
12 a type of process that you need to work through to be
13 familiar with. So, what does that mean? It means
14 that the SRA's are required to complete analysis on
15 phase 2. And, we're doing that and, that seems to be
16 working well.
17 As we go through the --
18 MEMBER ROSEN: That means, you take the
19 residents out of the process.
20 MR. LANNING; No. Not at all. Not at all.
21 The residents provide the technical part, if you will,
22 for doing this risk assessment. They are -- They have
23 the knowledge of the systems. They have knowledge of
24 history, so forth and so on. They have an important
25 role in doing this risk assessment.

1 MR. MILLER: They're also not neophytes
2 when it comes to -- That's for the schools. They've
3 had it and they can do it, it's just, can they do it
4 alone. Can they, with authority, go through that
5 process and --
6 MEMBER ROSEN: This guy can do it in a
7 flash --
8 MR. LANNING: That's exactly right. They
9 are not cut out of the process. Actually, it's done
10 more in a mentoring role. I work closely with them.
11 I provide them assistance and guidance and, they're
12 certainly not cut out of the process. When we go
13 through the next presentation on significant
14 determination process, the case study of Salem, you'll
15 see that both myself and Roy will keep you in the
16 discussion. Roy was the team leader for the
17 inspection. Okay? He was involved from the
18 beginning, all the way through to the final
19 dispensation and most of the risk work was done by --
20 MEMBER ROSEN: That will make sense.
21 MR. LANNING: As we go through the SDP
22 process for assessing risk significance, we do gain
23 insights from these PRA's. In addition, we benchmark
24 our tools against the licensee PRA. And, we have
25 identified shortcomings in their PRA's, such as some

1 of the laws they're are using, some of the theories
2 they're using.
3 So, as a result, we know that there is a
4 spectrum of quality in licensees' PRA's. And, we know
5 that for those on the lower end of the spectrum, the
6 weaker PRA's, it takes a lot more time to complete the
7 risk assessment.
8 We were very influential -- I'd like to
9 calim all the credit, but I know I can't do that.
10 But, we were very influential in increasing the
11 quality of one licensee's PRA in this region. Based
12 on our comments as we did risk assessments of his
13 findings and bench marking, this licensee expedited
14 their efforts to redo their PRA.
15 UNIDENTIFIED SPEAKER: As a matter of fact,
16 George, our recent letter on PRA quality, I don't
17 think we put this in through that letter, as a reason
18 why we thought the PRA quality should be improved,
19 because it certainly facilitates the inspection and
20 the assessment of significance. In other words, it
21 makes the NRC's job more effective, more efficient.
22 MEMBER APOSTOLAKIS: Okay -- I --
23 UNIDENTIFIED SPEAKER: I don't think we
24 called this one.
25 MR. LANNING: Okay. The next slide lists

1 a number of green findings we've had in the region in
2 the last couple of years.
3 UNIDENTIFIED SPEAKER: Are you using any
4 slougher models?
5 MR. LANNING: We do use slaugher models,
6 yes.
7 UNIDENTIFIED SPEAKER: Do you find they've
8 been satisfactory?
9 MR. LANNING: Yes. Yes. And, we can talk
10 more about that in the round table this afternoon.
11 UNIDENTIFIED SPEAKER: In the next
12 presentation, I'll talk about slaugh models. I will
13 also answer any questions asked at the round table.
14 UNIDENTIFIED SPEAKER: I don't think this
15 requires a lot of addition explanation. But, I do
16 want to make the point that our SDP results have
17 always been timely and have been challenged by the
18 licensees.
19 MEMBER ROSEN: That's for this region,
20 right?
21 UNIDENTIFIED SPEAKER: That's just for this
22 reason.
23 MEMBER ROSEN: That's not necessarily true
24 of the other regions.
25 UNIDENTIFIED SPEAKER: I don't know for

1 sure.

2 MR. MILLER: I think that -- One thing

3 that's bothered me is the sense that some how it's bad

4 for some change from the initial assessment and the

5 final. And, I know you're not suggesting that I know,

6 in fact, has come up from time to time, we've had one

7 case, I think, there we've had -- at least one case,

8 I know of, where we reduced the significance. In

9 fact, I think that was in the EP area. But, we're

10 open to the fact that these might change and we're

11 trying to, from the very start on these, to come up

12 with the right answer.

13 Erring, if we're going to err on the little of the

14 side of, you know, firmness, if you will, but, I think

15 it's dangerous to compare regions, because every case

16 is different. And, how effective the licensees are

17 working with the region, there are a whole lot of

18 things that enter into this. And, I know people have

19 tried to make this comparison, but, I think that's

20 something you have to be real careful about. I'm

21 proud of our SRA's and our technical staff. They've

22 come to good answers and document their basis. And,

23 there hasn't been a lot of argumentation, ultimately.

24 MR. LARKINS: This is different than what

25 we heard last year. The main reason was that the

1 score models were not as complete, or, as inclusive as
2 the licensees' PRA's.
3 MEMBER ROSEN: Last year we heard, when we
4 were in Region 2, that the significance determination
5 process phase 2 was taking an inordinate amount of
6 time of residents and the SRA's and, that, in fact, it
7 was having some impact on the willingness of
8 inspectors to draw findings, if it was a marginal
9 case. Because, they knew that they'd be chewed up in
10 this process for months, or something.
11 MR. LANNING: It's still resource
12 intensive. I mean, if I didn't make that point
13 strong, I'll make it again. Applying the SDP is still
14 resource intensive. I want you to get to the boundary
15 conditions, but, also, to communicate to the licensee
16 and resolve those issues and so forth. It's working.
17 I'm trying to cover time.
18 MEMBER ROSEN: Okay. I'd like to pose a
19 question for the next question, because I want to talk
20 about it.
21 MR. LANNING: Next slide. We'll talk about
22 some of the more difficult inputs that we had to
23 evaluate in order to do the risk assessment. And, I
24 was, you know, more pass -- to go through these
25 things. You've heard about -- It took us a

1 considerable time to establish the failure rate for
2 the tube failure. And, also, complete the large
3 release frequency assessment. We're going to get into
4 experience. You get into is a leak uncovered and so
5 forth. But, that took us a long time. I'm really
6 simplifying this and trying to save some time.
7 But, those two problems alone, that took
8 us months to arrive at an acceptable answer. And,
9 we've had two significant diesel failures recently in
10 Region 1. One is Seabrook, where you've had failure
11 catastrophically. The other one at Salem and, Gene's
12 going to talk about Salem a little bit more in detail.
13 But, at Seabrook, the uncertainties and the -- and the
14 duration of the exposure time, what the root cause for
15 the failure was and, that fact that the failure
16 occurred during an outage resulted in some significant
17 challenges as to how we handle that. So, I think,
18 also, Seabrook was one of the more contentious SDP
19 results.
20 The previous chart showed that we had
21 seven greater than green findings in emergency
22 preparedness. Three of those involved the alert
23 notification system, or, Sovriegns (ph), mixed among
24 various things. Also, indicated that the EP, SDP was
25 one of those that we've been on the forefront of,

1 trying to modify that. But, the generalized the basic
2 problem with the SDP, initially was over-estimate the
3 significance of the event. So, we had to work with
4 headquarters to resolve that and make it more
5 realistic.
6 In addition, the EP has additional
7 challenge of coordinating with FEMA. FEMA has
8 approved many of those alert notification systems.
9 So, we had to do a lot of coordination with those
10 issues.
11 Next slide talks about the fact that we in
12 the region believe we have highly motivated staff and
13 we have them focus on what's important to safety. I
14 think we talked about most of those things already.
15 And, I won't draw on those.
16 Let me just elaborate on the very last one
17 a little bit. We place a very high priority, emphasis
18 on continuing to develop our staff. This is such an
19 important resource. You can view that a number of
20 ways.
21 But, one that's really been very effective
22 for us and really has increased staff capability is,
23 we've provided this advanced SRA type, it's really PRA
24 type training for inspectors. And, that gets into
25 some statistics and so forth that they wouldn't get in

1 one week. And, we found that that's been -- that's
2 paid back the time it's taken to train those folks in
3 terms of being able to explain the risk and why it's
4 important and, why we're focusing on such things. So,
5 this is a footnote there.
6 Finally, I want to get to highlight some
7 inspection findings. You know, these made a positive
8 impact on safety. At Nine Mile Point, the inspectors
9 identified a precursor involving the reactor building
10 close (inaudible) system. They were -- They were
11 effective in ensuring that the licensee took adequate
12 corrective actions to ensure that the system could
13 perform a safety function and, not become a transient
14 initiator. Historically, this licensee had taxed the
15 system, hadn't really looked at the recall condition.
16 And, the inspectors logged down part of this system.
17 This system is in the bottom dry well. Moderately
18 high area. An area that's not frequently traveled.
19 Inspectors did those.
20 MEMBER ROSEN: Why are we looking at these
21 pictures?
22 MR. LANNING: I want to explain this in
23 just a second. That's a system. That's a safety
24 system you're looking at. That's the one we're
25 talking about. Yes. Let's just go through those

1 pictures real quickly.

2 This is the piping, a threaded safety

3 system. It was badly corroded. You know, we believe

4 the information that this was broken, really, by

5 bending the pipe in one's hand. It was that close to

6 failure. Now, the failure of this system has been

7 resolved in a loca (ph) in loss of high pressure

8 ejection. It's a very significant event, if it

9 occurs.

10 The second picture, this one here, this

11 shows another view of the piping connection there.

12 And, the third picture shows what the residents found

13 after they did a walk down, after the licensee says,

14 we've completed corrective actions. We've done the

15 conditions. Everything's okay. They went back and

16 found the system was leaking. They made a difference.

17 The residents found that they were doing

18 preventive maintenance on the main steam isolation

19 valves prior to doing the surveillance test, they were

20 pre-conditioning, essentially. Consequently, the

21 surveillance test could merely provide information.

22 Another good finding.

23 We had a team there that found that --

24 this engineering inspection, that there was inadequate

25 flow through some safety related tubes. Now, because

1 the finding was made in the wintertime, when the lake
2 temperature was cold, the system remained operable.
3 But, had this been found during the summertime, it
4 would have been a much more significant finding.
5 Millstone -- I'll skip those two and add
6 one. At TMI, we had an HP identified that the
7 licensee had found floric acid in a fan cooler and
8 they hadn't adequately dispositioned its source. We
9 started asking questions and, as a result, the
10 licensee took prompt action to characterize an
11 unidentified leak in the container.
12 Now, what this show, not only did the
13 inspector make a difference, but, it also showed that
14 he, apparently, had learned a lesson, much better than
15 this licensee had. Made a difference. And, there's -
16 - We can go on and on about inspection results and
17 what the inspections have found.
18 MEMBER ROSEN: Where was the leak at TMI?
19 MR. LANNING: Well, it turned out to be in
20 a another part, a make-up part of the system. It was
21 not from the head. But, it wasn't until the licensee
22 would know that for sure. We could not rule out the
23 fact that was not a leak to the head.
24 All right. I'm going to stop.
25 MEMBER LEITCH: Wait a minute. Nine Mile

1 Point number one, those pictures, it looks like it's
2 scheduled 40 screw pipe. That's not normal.
3 MR. LANNING; You're right. That's not
4 normal, but, that's what it was.
5 UNIDENTIFIED SPEAKER: Actually, that was
6 one of the problems -- when you cut down the wall of
7 the pipe and, then, they had a general erosion in it.
8 It erodes through it. That was the source of the
9 problem in the system.
10 UNIDENTIFIED SPEAKER: Why is it so
11 corroded on the outside, leaking continuously?
12 UNIDENTIFIED SPEAKER: I suspect, it's the
13 humid atmosphere and the fact that --
14 UNIDENTIFIED SPEAKER: It was cold water.
15 (Several people talking simultaneously.)
16 MR. MILLER: Where we are in the agenda
17 right now is, that Gene Cobey's going to make a
18 presentation on SDP and, the round table will follow
19 that. But, what I want to do is, I want to step away
20 along with my colleagues here from the table and,
21 allow the staff to come forward who are involved in
22 round table. They're sitting out there, we can flow
23 right into Gene's presentation and, I think there may
24 even be an opportunity to have the staff, as well,
25 participate in that presentation.

1 MR. COBEY: Good afternoon. Today, the
2 purpose of this presentation is to give you a
3 perspective, if you will, of how typical issue is
4 processed through inspections and all the way to
5 completion to the characterization of the issue. Give
6 you an idea of what is involved and the challenges
7 that the staff facts.
8 Today, we're going to use the Salem Unit
9 1 catastrophic failure of the One Charlie (ph)
10 Emergency unit generator turbo charger, to give you
11 this perspective. It will be our case study example,
12 if you will.
13 The specific discussion about the
14 inspection will be given by the team leader, Mr. Roy
15 Fuhmeister, to my left here. And, basically, Roy led
16 the inspection team and was involved with the
17 technical work all the way through this process that
18 we already went through before. I'll turn it over to
19 Roy now.
20 MR. FUHMEISTER: Okay. There's a --
21 There's a picture coming around and that picture shows
22 the actual turbo charger mounted on the front end of
23 the diesel generator. So, that's where it's located.
24 This is a picture of the exit wound, if you will. The
25 turbo charger air inlet is here and, this is the inlet

1 housing coming down from the roof. They have a red
2 rubber wrapped around and strapped down with about a
3 12 inch diameter host clamp. The turbo charger
4 compressor lost a blade. It came out through here,
5 knocked of -- you can see the imprint here from the
6 host clamp, knocked off the host clamp, impacted right
7 here. And, this is a little pipe nipple sticking out.
8 And, it knocked a half-inch pipe plug out of the
9 threads as it came out.
10 Based upon the rotating speed and the
11 diameter, we figure that this blade came out doing
12 something just over 600 miles an hour. This is the
13 blade lying on the floor where they found it, finally.
14 It is precipitation of cast stainless steel alloy and,
15 you can see the one corner is bent up here. This
16 gives you an idea of how big that chunk of metal was
17 coming out.
18 This is the compressor for the turbo
19 charger. Here's where the blade came out and was
20 fatigue fracture along the filler at the root of the
21 blade. You can see that this is in two pieces. The
22 lower portion is cast aluminum and, the upper portion
23 is the cast stainless steel alloy. And, you can see
24 here where the blade damaged several others as it was
25 leaking.

1 MEMBER LEITCH: Step back, so we all can
2 see.
3 MR. FUHMEISTER; You can see here several
4 other blades that were impacted as it came out and,
5 they're bent and twisted a little bit.
6 All right. The time line here, it started
7 out in late August, early September of last year. The
8 resident inspectors had a concern and they were fixing
9 a fuel oil leak on the 1R cylinder, again. This was
10 about the fourth time in five months, that they were
11 repairing that fuel oil leak. And, that's where we
12 really got started is, with that, we evaluated that
13 through the manual chapter 8.3 process, which is how
14 we determine -- it's a procedure that determines how
15 we respond to an event.
16 The concern was that this engine may have
17 been unable to perform its functions since April time
18 frame and, that had the potential to be risk
19 significant. And, when we went through the process,
20 it told us we should be doing a special team
21 inspection.
22 As we were getting ready for that
23 inspection on Friday the 13th, surprisingly enough,
24 the diesel generator failed during a surveillance
25 test. Monday, the 16th, we reported on site. We were

1 on site for one week. We observed the activities of
2 the licensee's root cause evaluation teams. They had
3 two teams going. One for the turbo charger failure
4 and, one for the fuel oil leak problem. We identified
5 a number of issues and, we left at the end of a week,
6 because we were actually getting ahead of their root
7 cause team. We found that we were asking questions of
8 their engineers before the root cause team and, root
9 cause was getting kind of our left overs, if you will.
10 So, we came back to the region and waited
11 for them to complete their root cause evaluations.
12 The second one arrived in December of last year. We
13 exited on the inspection on the end of January. We
14 got the report out and we completed SDP evaluation
15 and, finally, this past month, we got the final issue
16 of the white finding.
17 MEMBER LEITCH: Roy, that was primarily due
18 to the length of potential inoperability?
19 MR. FUHMEISTER Yes.
20 MEMBER LEITCH: The length of time?
21 MR. FUHMEISTER: Yes. The reason for the
22 special inspection?
23 MEMBER LEITCH: Yeah. The reason for the
24 white finding.
25 MR. FUHMEISTER: Actually, I'll go through

1 the characterization process in a moment. But, the
2 initial characterization of the potential significance
3 which led to the special inspection was due to the
4 assumption that the diesel generator was incapable of
5 doing its function from approximately April through
6 September. We did a couple of sensitivity studies
7 based on the assumption, whether it had just an
8 increased higher failure rate, or, whether it was
9 truly unavailable for that entire period of time.
10 But, it all indicated that potential risk significance
11 was higher than our threshold for doing reactor
12 inspection. Because it was a repetitive failure, it
13 met the criteria in our management directive to do a
14 reactor inspection.
15 MEMBER LEITCH: But, that decision was
16 based on the fuel oil --
17 MR. FUHMEISTER: Right.
18 MEMBER LEITCH: That was based on the fuel
19 oil leak, not the subsequent turbo charger failure.
20 UNIDENTIFIED SPEAKER: This was added to
21 the scope of the inspection because it occurred in the
22 retesting phase, subsequent to the fuel oil.
23 MR. FUHMEISTER: We actually went back and
24 modified our analysis to include turbo charger failure
25 to see how it affected it and whether or not we needed

1 to raise the special inspection to higher level.
2 Okay? And, we determined that the risk significance
3 was higher than the diesel failure, but, it didn't
4 warrant a further elevated reactor inspection, such as
5 a ultimate team inspection.
6 UNIDENTIFIED SPEAKER: We fatigue these
7 things to failure in our testing program, is that the
8 idea?
9 MR. FUHMEISTER: I'm sorry?
10 UNIDENTIFIED SPEAKER: We see these things
11 to failure in our testing program?
12 MR. FUHMEISTER: When we reported to the
13 site on September 16th, the initial word from the
14 licensee was that this was the first turbo charger
15 failure and, by Friday, they had determined that there
16 were four prior turbo charger failures in service.
17 These are Alcoa diesel generators. These are the only
18 Alcoa diesel generators in nuclear service in the
19 United States of America, which have experienced
20 failures of the turbo charger in service.
21 UNIDENTIFIED SPEAKER: That is not the only
22 Alcoa --
23 MR. FUHMEISTER: They're not the only Alcoa
24 diesels in nuclear service, but, the only ones that
25 have experienced turbo charger failures.

1 UNIDENTIFIED SPEAKER: They're also a
2 unique design for the turbo charger standpoint.
3 MR. FUHMEISTER: They're the only Alcoa
4 engines using this particular turbo charger model.
5 After the 1998 failure, they had a failure
6 on blading on the turbine end of the turbo charger
7 that was determined to be the result of reverse
8 engineer blades provided someone other than the
9 original supplier. That was determined to be a
10 vibration induced fatigue failure and, they decided
11 after that, that they would take vibration readings
12 and track the vibration on the turbo chargers.
13 Unfortunately, they never established a
14 common operating point to take the readings at. So,
15 any time they ran the engine, they went out and took
16 turbo charger vibration readings. So, since the
17 readings were taken at different engine loads, you
18 couldn't compare the data.
19 UNIDENTIFIED SPEAKER: Different speeds.
20 MR. FUHMEISTER: It provides different
21 speeds on the turbo charger at different loads.
22 MEMBER SIEBER: I take it, there is a
23 resident of frequency somewhere in the operating
24 phase.
25 MR. FUHMEISTER: At normal full power, this

1 turbo charger turns about 17,000 RPM. With the engine
2 at idle, they figure somewhere around 2,000. During
3 the 110 percent overload run, the turbo charger is
4 turning about 19,000 RPM. So, it will change the
5 vibration significantly, depending upon the engine
6 load.
7 We started looking back through the
8 history. We found that after the 1990 failure, the
9 1990 failure was attributed to fatigue and it was a
10 failure on the compressor end. After that failure,
11 they decided that they would, every four refueling
12 cycles, take the turbo charger out and do non-
13 destructive examination of the turbine and the
14 compressor, to see if there was any indication of
15 cracking. They wrote the procedure. They never
16 scheduled or actually performed the procedure.
17 The subsequent failure was 12 years later
18 and, that would have been four operating cycles on all
19 of the engines. So, they never actually performed the
20 corrective action that they planned.
21 MEMBER ROSEN: Why?
22 MR. FUHMEISTER: Part of it was because
23 they changed the computer system for their work
24 planning and scheduling and, it didn't get put in the
25 new computer system.

1 MEMBER ROSEN: Why?

2 MR. FUHMEISTER: They still don't know. It

3 fell off the end of the world, quite honestly. They

4 lost it.

5 MEMBER ROSEN: How many other things have

6 they lost?

7 MR. FUHMEISTER: Four that we've

8 identified. Four that we have identified.

9 MEMBER ROSEN: If they don't know how they

10 lost it, how many more activities did they -- have

11 they lost? Can they provide us a certain percentage?

12 Just a thought.

13 MR. FUHMEISTER: So, as a result, we came

14 to a conclusion that the corrective actions for

15 previous turbo charger failures had been ineffective

16 at preventing additional subsequent failures. And,

17 it's important that it's characterized that way,

18 because we need something -- you need a performance

19 issue before you can venture a significant

20 determination process. So, depending upon how you

21 characterize the issue makes a difference whether you

22 can or can't do an SDP.

23 MR. COBEY: What Roy's alluding to is a

24 subtle difference in the process that was referred to

25 earlier. When you have an event such as Peach Bottom,

1 okay, had a trip, it was complicated by multiple
2 equipment failures. Okay. We determined what the
3 condition core damage probability for that event was
4 and, if I remember, it was in the low, either minus
5 six order of magnitude. Okay? But, the equipment
6 problems that occurred, if there was a underlying
7 performance deficiency associated therein, those
8 underlying performance deficiencies were then
9 independently processed through the SDP and their risk
10 significance evaluated separately.
11 The SDP evaluation risk significance of
12 performance deficiencies, whereas, management
13 directive 8.3, if you will, goes to -- establishes a
14 process by which we evaluate the significance of
15 events. So, we, in this particular case, for Salem,
16 initially coming in, we evaluated the significance of
17 the event. Okay. We decided that a special
18 inspection was warranted. As part of that special
19 inspection, we had a charter task item to evaluate the
20 significance of the condition, which we did. It just
21 so happens that the performance deficiency in that
22 particular case was directly linked to the underlying
23 conditions, so, the end analysis was the same
24 analysis, wherein, Peach Bottom, they were not. Okay?
25 So, we process on to the SDP. The

1 inspection staff has developed a performance
2 deficiency and they engage the SRA's in the region.
3 Basically, the first thing you have to do is, you have
4 to take the performance deficiency and translate it
5 into assumptions that can be used for the analysis.
6 All right.
7 The first assumption is, why did the turbo
8 charger fail? Well, it failed due to a fatigue
9 failure of the inducer blade. Now, there's still a
10 lot of uncertainty about what caused the fatigue
11 failure, but, we do know a fatigue failure occurred.
12 What we can assume is that the failure mode, since it
13 was due to fatigue, was a later function of the
14 cumulative run hours of the machine immediately prior
15 to the failure. Okay? It's not a good assumption for
16 the life of the machine, but, for the period of time
17 immediately proceeding the failure, since the fatigue
18 is a cyclic failure mode, that's roughly equivalent to
19 the cumulative run hours.
20 From this assumption, we would deduce the
21 period of time in which the diesel would not have
22 fulfilled its mission. So, the next step is or we
23 have to determine is, what is its mission? Well, the
24 diesel generator's mission is to provide emergency AC
25 and power given of off-site power. Okay? So, we have

1 to figure out, well, what's the mission time for the
2 diesel?
3 The way in which we did that is, we used
4 a methodology that's inherently built into the spar
5 models. And, that methodology is, it takes each of
6 the loop classes, plant center, grid related in severe
7 weather and, determine what the recovery probability,
8 the 95th percentile of recovery with a five percentile
9 non-recovery is in time. So, for plant center at
10 Salem, that would be about two and a half hours. For
11 grid related, it's about six hours. And, for severe
12 weather, it's about 85 hours.
13 And, then, it takes an infrequency weights
14 those time periods based on the probability of each of
15 those loop classes. And, that frequency weighted
16 average is approximately 14 hours for Salem Station.
17 So, we said, okay, the diesel generator
18 mission time is 14 hours. So, we know that the diesel
19 would have to have run for 14 hours to fulfill its
20 mission in PRA space. So, we have to determine now
21 the period of time proceeding to the failure of which,
22 if a loop were to have occurred, it would not have
23 been able to perform its function or run for 14 hours.
24 MEMBER ROSEN: A hypothetical, not the
25 worst. The average --

1 MR. COBEY: That's correct.

2 MEMBER ROSEN: The average.

3 MR. COBEY: The frequency weighted average,

4 if you will.

5 MEMBER ROSEN: Which is not a real thing.

6 It's fiction.

7 MR. COBEY: It's a PRA modeling technique.

8 MEMBER ROSEN: It's an analytical fiction,

9 which is used to facilitate the analysis.

10 MR. COBEY: That is correct. It's, I

11 guess, an inherent uncertainty built into that.

12 So, we actually looked at the run times of

13 the machine immediately prior to the failure and,

14 because of the recurring fuel oil leaks that we had

15 actually initially gone out to look at, they have had

16 multiple runs, about four runs in the ten days leading

17 up to the failure, of various lengths of time. So,

18 they accumulated 14 hours of operation on the machine

19 in approximately 11 days leading up to the failure.

20 That's atypical. Had they not had this performance

21 issue associated with the fuel oil leaks, it would

22 have been months prior that they would have

23 accumulated the 14 hours of run time on the diesel by

24 normal surveillance operation. Okay?

25 So, we determined that this 283 block of

1 time was the period in which, if a loop occurred, that
2 the diesel generator would not have been capable of
3 performing its function. And, lastly, our assumption
4 was that because it was a catastrophic failure of the
5 turbo charger, they would not have been able to
6 recover that machine, if another loop occurred.
7 Is a screening process -- And that
8 screened us to Phase II, because we determined that
9 the diesel is not capable of fulfilling its function
10 for greater than the tech spec allowed outage time for
11 that machine, which is approximately 72 hours for the
12 tech spec'd AOT. And the enclosure time was 283
13 hours. It kicks you to Phase II.
14 We performed a Phase II SDP evaluation of
15 this using the SDP notebook, which has been revised
16 recently. The benchmarking activity has been done.
17 So we felt comfortable that that SDP notebook
18 accurately reflected the operation of Salem. It
19 indicated the risk significance of this finding was
20 white, due to internal initiators.
21 In review of the benchmarking activities,
22 we identified that the diesel generator was one of a
23 few components at Salem that the notebook under
24 estimates the risk of. So there is the potential,
25 based on the benchmarking activities, that the risk

1 significance could have been yellow, due to this
2 finding. So we decided that we needed to perform a
3 Phase III evaluation of this condition, which we did.
4 So we used the NRC SPAR model, Rev. 3.02,
5 which was a relatively recently issued revision to the
6 SPAR model, to perform our Phase III analysis. And,
7 George, hopefully, this will go a little bit to
8 answering your question about how we use the SPAR
9 model, because this is typical of how we do it.
10 And we ran a condition assessment,
11 assuming the one Charley emergency diesel generator
12 was not capable of fulfilling its function for 283
13 hours, using that model. We got the results from that
14 model and we evaluated the results to determine
15 whether they made sense.
16 In that process, we identified a number of
17 things that we needed to address. The first thing was
18 that the loss of off-site power initiating event
19 frequencies and recovery probabilities were outdated.
20 Okay. They were reflective of new rev. 1032 values,
21 which have been updated over the past couple of years,
22 most recently by new Reg. CR-5496, which is the new
23 reg which evaluated loss of off-site power events from
24 1980 to 1996.
25 The conclusion reached in that new reg was

1 that these events occur less frequently than what was
2 previously assumed; however, the recovery is much more
3 protracted. Okay. So we modified the NRC SPAR model
4 to include plant-specific data for Salem, from new
5 Reg. 5496.
6 The second thing that we had to address
7 was the rec cooling pump seal behavior. Salem, on
8 three or four rec cooling pumps has low temperature O-
9 rings in the seal packages, in the second stage. And
10 according to the Rhodes (ph.) model, that this would
11 result in failure of the seal package in approximately
12 two to three hours, due to high temperature. The
13 second stage would fail, you get high BP across the
14 first stage, which would result in its failure, and
15 the third stage, which is not a pressure retaining
16 boundary, would ultimately fail.
17 So, if you did not recover AC power and
18 provide cooling for the seal package within two hours,
19 the certainty of the reactor cooling pump -- there is
20 a certainty of the reactor cooling pump seal failure.
21 So we updated the model to include the Rhodes model
22 for reactor cooling pump seal failure.
23 MEMBER APOSTOLAKIS: Is that a diverse of
24 your accepted model for a cooling pump seal failure?
25 MR. COBEY: NRC Office of Research

1 specified that the Rhodes model for Westinghouse
2 pumps, actually, for all PW air pumps, is the one that
3 we were going to use. These were Westinghouse pumps,
4 so the Rhodes model, at this point in time, is the
5 model that the NRC has endorsed. There's some
6 question about whether it's appropriate for reactor
7 cooling pumps with other seal packages, such as Byron
8 Jackson, etc. But since we didn't have to deal with
9 that, in this particular case, it was not an issue.
10 MEMBER ROSEN: And Salem has no capability
11 of cooling seals with -- with a blackout?
12 MR. COBEY: Not at this particular time.
13 They had actually installed a -- or after this
14 failure, but between now and then, they've installed
15 a cross-tie to the opposite unit, to allow the
16 positive displacement charging pump to provide cooling
17 to the seals.
18 What's interesting is they haven't
19 incorporated it into the station blackout procedures,
20 they've only incorporated it into the fire procedures.
21 And there are some reasons behind that. So, even
22 today, even though they have this cross-tie capability
23 procedurally for a station blackout, they -- they
24 don't use it. It would only be for a fire scenario
25 that they need to cool the seal packages. And -- and

1 there's some reasons that they've identified, that
2 they're reluctant to do that until they've finished
3 their evaluation.
4 But, I think the answer to your question
5 is, at the time, no.
6 MEMBER APOSTOLAKIS: Gene?
7 MR. COBEY: Yes, sir?
8 MEMBER APOSTOLAKIS: This was done on the
9 basis of -- was it not?
10 MR. COBEY: Yes.
11 MEMBER APOSTOLAKIS: You had one going --
12 filing for the initiating frequency.
13 MR. COBEY: That is correct.
14 MEMBER APOSTOLAKIS: Okay. Now, if one
15 could use themselves in this -- uncertainty, in the --
16 the failure of the initiating of -- so on -- a number
17 like 8.64 -- to -6 could become -- to the -5, could it
18 not?
19 MR. COBEY: Oh, most certainly.
20 Absolutely.
21 MEMBER APOSTOLAKIS: Would they still be
22 worried?
23 MR. COBEY: Well, you're -- you're raising
24 a very interesting question and one I was going to get
25 to a little bit later.

1 MEMBER APOSTOLAKIS: You will --

2 MR. COBEY: Okay. And, unfortunately,

3 when -- when you talk about these things, we use point

4 estimates, okay. Right now, our tools do not allow --

5 UNIDENTIFIED SPEAKER: Unfortunately.

6 MR. COBEY: Okay. Do not allow meaningful

7 uncertainty analysis. It's beyond the capability of

8 the tools. But from a -- from a theoretical --

9 MEMBER APOSTOLAKIS: Did you use SPAR --

10 MR. COBEY: Yes, I did.

11 MEMBER ROSEN: It's the SPAR tool you're

12 talking about that you don't have --

13 MEMBER APOSTOLAKIS: So you don't have the

14 capabilities --

15 MR. COBEY: As they currently exist,

16 because not all the parameters in the SPARs have

17 distributions. Some of them are only point values.

18 And so you're somewhat mixing apples and oranges.

19 There -- it's my understanding that

20 Research has on its list of things to do in the next

21 fiscal year as part of the next iteration with the

22 SPAR models is to address the uncertainty aspect.

23 But once you've got an analysis and you

24 can do the uncertainty calculation as part of the SPAR

25 model, then you have to determine how you're going to

1 implement the result. If you get a result, say, of
2 8.6, even/minus 6, per year, Delta CDF, with a 5th in
3 the 95th percentile say at 7, even/minus 7 --
4 MEMBER ROSEN: Right.
5 MR. COBEY: -- to 2.4, even/minus 5, what
6 are you doing to call it? Are you going to call it a
7 yellow because at the 95th percentile, it was in the
8 yellow, or are you going to call it white. So there
9 is a lot of --
10 MEMBER ROSEN: It's not up to us to tell
11 you what to call it. It's up to you to tell us what
12 to -- what to call it.
13 MR. COBEY: Exactly. Exactly, so, I'm --
14 MEMBER ROSEN: In other words, you're
15 supposed to assess the uncertainty and factor it into
16 your decision.
17 MR. COBEY: You're exactly right.
18 MEMBER APOSTOLAKIS: Let's not forget,
19 though, that the mean may move. You are not going to
20 get the same mean.
21 MR. COBEY: Oh, exactly right.
22 MEMBER ROSEN: That's right.
23 MEMBER APOSTOLAKIS: So the mean, itself,
24 can be above the 10 to the -5, in which case, both of
25 you have a good argument to saying that it's yellow.

1 But, in the other case, where you have, say, 15
2 percent mobility, that it's in the yellow region, then
3 -- but, you know, the thing, today, though, has been
4 that we don't want any formulas. We don't want any
5 rules to give them. It's really the judgment of
6 experts that decides, you know. And I think that's
7 what they would have to do, to consider, you know,
8 what the whole thing means and whether it's
9 appropriate to take action.
10 MEMBER ROSEN: What you're going to have
11 to do when you do that is consider the sources of the
12 uncertainty.
13 MEMBER APOSTOLAKIS: The source, yeah --
14 MEMBER ROSEN: And make the judgment based
15 upon your beliefs.
16 MEMBER APOSTOLAKIS: Exactly.
17 MEMBER ROSEN: You know, about the
18 uncertainties, individual uncertainties --
19 MEMBER APOSTOLAKIS: Exactly.
20 MEMBER ROSEN: -- that add -- that roll up
21 to the answer.
22 MEMBER APOSTOLAKIS: It seems to me that
23 we, yeah, we were remiss in that part of -- the SDP
24 depends a lot on this --
25 MEMBER ROSEN: This is where the agency --

1 MEMBER APOSTOLAKIS: -- but I understand
2 you're getting rebuttal, so --
3 MEMBER ROSEN: So you need me to write a
4 refile? Shall we write a revision to the letter?
5 MEMBER APOSTOLAKIS: Huh?
6 MEMBER ROSEN: Write an addendum to the
7 letter.
8 MEMBER SHACK: I don't think so.
9 (Simultaneous speech)
10 MR. COBEY: This is -- this is based on
11 1174, George, the comparison is with the mean.
12 MEMBER APOSTOLAKIS: Yeah, but the mean,
13 itself, can be moved.
14 MR. COBEY: Well, he has to find the mean.
15 But, I mean, if he has the distribution, he can find
16 the mean.
17 MEMBER APOSTOLAKIS: But I think, also,
18 Gene is raising an interesting question. What if you
19 have a significant part of the distribution --
20 MR. COBEY: Correct.
21 MEMBER APOSTOLAKIS: -- about the 10 to
22 the -5, I mean, you have to discuss it.
23 MR. COBEY: That's right. You have to --
24 I think you have to provide that.
25 MEMBER ROSEN: It's true, it's true.

1 MEMBER APOSTOLAKIS: -- included in the
2 decision making process. It's never --
3 UNIDENTIFIED SPEAKER: Yes, that's true.
4 MEMBER APOSTOLAKIS: -- let's do that.
5 MEMBER ROSEN: If you do an integrated
6 decision process, you eventually discuss the sources
7 of -- before you make the decision.
8 MEMBER APOSTOLAKIS: Which they're already
9 doing in more cases, I mean --
10 MR. COBEY: Yeah. And we actually -- we
11 actually did a little bit of discussion on certainty
12 and I'll get into how we dealt with that a little bit
13 later.
14 MEMBER ROSEN: Gene, while you were doing
15 the fumbling around in the licensee's PRA, I mean with
16 the PRA, wasn't the licensee telling you what the
17 answer was?
18 MR. COBEY: Actually, in this particular
19 case, I'll -- this licensee is a little bit unique.
20 They take a position that the SDP is the NRC process.
21 They're not going to do their own evaluation. Okay.
22 And what they did do was they responded to each of my
23 questions. And I attempted to engage a utility to
24 make sure that I had the right risk contributors to
25 the right reasons, okay. Were my sequences valid?

1 Were my cut sets meaningful, etc.? And they provided
2 me feedback. However, they did not do their own
3 analysis for me to review, to risk inform me -- my
4 analysis. Okay.
5 UNIDENTIFIED SPEAKER: Do they have a PRA?
6 MR. COBEY: Yes, they do. And --
7 UNIDENTIFIED SPEAKER: Oh, that's the --
8 MR. COBEY: Let's say, when I get to this
9 next bullet, I think you'll see a --
10 MR. MILLER: I have to interject one
11 thing, because, if this -- that's true, what Gene
12 said, those are strong statements, that they chose not
13 to do their own PRA.
14 Management spoke to us, spoke to me,
15 personally, the highest level of recently, and I -- I
16 think that, to be careful here, that may not be their
17 current approach. But -- continue to be their
18 approach.
19 MR. COBEY: I don't think they'd be happy
20 with the outcome of this case.
21 MR. MILLER: Okay, defaulting to us and
22 not being active in this.
23 MR. COBEY: So one of the things that we
24 found, when we started looking at our results, were
25 our emergency AC power success criteria in the SPAR

1 model was they needed two of the three emergency
2 diesel generators to be successful for providing
3 emergency AC power, given the loss of off-site power
4 event. And that was predicated --
5 MEMBER ROSEN: Excuse me. Excuse me.
6 Doesn't that violate the single -- criteria?
7 UNIDENTIFIED SPEAKER: They have three.
8 MR. COBEY: No, any -- they require --
9 MEMBER ROSEN: -- two of three pieces?
10 MR. COBEY: Two of three. They had three.
11 Their buses are incrementrically loaded. But they --
12 their EDG (ph.) success criteria, as well as ours, was
13 that they needed any two to be successful.
14 MEMBER ROSEN: I didn't realize they had
15 three. Okay, fine.
16 MR. COBEY: Excuse me. So, we were
17 getting station blackout sequences at a much higher
18 frequency than what the utility found to be
19 acceptable. And they -- they were under the belief
20 that even though that is what their model reflected as
21 well, that they needed two of three emergency diesel
22 generators for success, they though in LOOP cases, or
23 loss of off-site power cases, they really only needed
24 one. And the reason is because that success criteria
25 is predicated on needing service -- two service water

1 pump trains to provide adequate cooling.

2 Well, in a loss of off-site power event,

3 they only need one service water pump train to provide

4 cooling, if they get isolation of the non-essential

5 service water loads from the essential service water

6 loads. Well, because of the asymmetrical loading of

7 the buses, they either need the Bravo train or the

8 Alpha and Charley train to get that automatic

9 isolation.

10 So we modified the success criteria in our

11 model to say they needed either the Bravo or the Alpha

12 and the Charley emergency diesel generators to be

13 successful, given a LOOP, rather than just any two

14 diesels. Okay. And that did make a fair

15 significance.

16 Well, needless to say, that was indicative

17 of their PRA. That was the level of their PRA. They

18 had found previously that level of detail to be

19 acceptable, just the most conservative, any two of

20 three, until it was not in their benefit. But they

21 never have gone back and revised their PRA, by the

22 way.

23 So they were -- that yielded a result of

24 approximately 8.6, even/minus 6 per year, Delta CDF,

25 for internal initiating events.

1 So the next phase in the SDP process is to
2 evaluate the contribution to external initiators. And
3 this is quite a bit more difficult to do because of
4 the relative lack of information compared to internal
5 initiators. And the way we did this is we started
6 with seismic. Because the performance deficiency
7 involved the emergency use generators, the initiator
8 of concern is a seismically induced LOOP, or loss of
9 off-site power.
10 Well, actually, this is one of the first
11 seismic induced initiators of concern, because the
12 insulators in the switch yard are -- have the lowest
13 HIP (ph.) book value, if you will.
14 However, we determined that for the Salem
15 station, due to its location, the likelihood of a
16 seismically induced LOOP was approximately three
17 orders of magnitude lower than the likelihood of a
18 randomly occurring LOOP for the Salem stations. So we
19 screened that issue out qualitatively because, while
20 it was a contributor, it was about three orders of
21 magnitude less of a contributor than internal
22 initiating events.
23 So we moved on to high winds, floods, and
24 other external initiators, and used a similar
25 argument. There are high winds, floods, other

1 initiators, which ca induce LOOPs, but their
2 likelihood is more than four -- four orders of
3 magnitude less than a randomly occurring LOOP.
4 Therefore, they were not significant.
5 Then we moved on to fire events.
6 Initially, the licensee indicated that there were no -
7 - no fire induced loss of off-site power scenarios at
8 the Salem station. This was documented in their IP-
9 EEE submittal to the NRC.
10 One thing that we identified shortly after
11 they gave that information to us was that they had
12 done an evaluation in June of 2002 to support a fire
13 route removal project, which had concluded that there
14 were nine fire zones in their station that had fire
15 induced LOOP scenarios. Okay.
16 That information had not been translated
17 from the engineering group that performed the
18 evaluation to the risk staff, who could have
19 incorporated it into their risk analyses tools. So
20 the engineers or PRA staff were unaware of that
21 information, until we raised it to their attention.
22 So they had no input, if you will, as to the risk
23 contribution due to fire -- these fire scenarios and
24 these fire events.
25 We attempted to pursue it, but they did

1 not have the information by which we could do the
2 evaluation, mitigates system, equipment cable routing,
3 frequency of the fires in that particular area,
4 severity factors, etc.
5 So, what we were able to determine is,
6 qualitatively, these fire scenarios were a
7 contributor. How much, we didn't know. It was
8 uncertain in an upward direction.
9 So, at this point, we've concluded that
10 internal initiators are approximately 8.6, even/minus
11 6 per year, an increase in core damage frequency, and
12 fire events are a significant contributor, but we do
13 not know how much.
14 The next step is to evaluate large early
15 release frequency. The Salem station has a large dry
16 containment. And for large dry containments, the
17 initiators are a concern for large early release
18 frequency or inner system locus (ph.) steam generator
19 tube rupture. Because for findings associated with
20 the emergency diesel generator or loss of off-site
21 power scenarios, LERF was not a contributor, and we
22 were able to qualitatively screen large early release
23 frequency out.
24 So that leads us to our conclusion. What
25 we did to establish our conclusion is we went through

1 each of the input assumptions and we did sensitivity
2 studies. We evaluated the impact of including the --
3 the more recent new Reg. 5496 data for loss of off-
4 site power initiating VEN (ph.) frequency and LOOP
5 non-recover failure probability, determined what the
6 impact was there.
7 We determined what the impact was
8 associated with including the Rhodes model. When we
9 went through each of the assumptions, we evaluated
10 each assumption by changing the parameter to gain a
11 sensitivity for how large a shift you would see in the
12 mean --
13 MEMBER SHACK: What was the alternative to
14 the Rhodes model for the leak sealing -- seal leak?
15 MR. COBEY: There was a -- a built-in
16 assumption in the SPAR model. It's based on old data,
17 and it was a previous -- that I think they assumed the
18 failure rate of .2 and .8, if I remember correctly.
19 And we could have -- and we just went with base for
20 our model evaluation in that case.
21 In this particular issue, the licensee had
22 the same Rhodes model values in their model, because
23 they recognized that three of the four pumps had low
24 temperature O-rings.
25 The licensee had also asserted that they

1 should get recovery credit to manually isolate the
2 service water valves in the event that they only had,
3 say, the Alpha diesel available, that the operator
4 could go out and shut the other valve that would be
5 power to the Charley diesel or the Bravo diesel
6 manually.
7 We chose not to give them that credit in
8 the analysis for a number of reasons. We didn't feel
9 that the -- their chance of success was likely at all.
10 But we did a sensitivity study to determine what would
11 be the impact, if we did give them credit. And what
12 we found was that the -- by manipulating each one of
13 these parameters, the mean range, if you will, shifted
14 from about 70, even/minus 7 per year, on the low end,
15 to almost 2, even/minus 5 per year on the high end.
16 Okay. And then with most of them all being in the
17 lower direction, low even/minus 6.
18 And then we said, well, on top of that, we
19 have this uncertainty associated with the fire, okay,
20 that's going to shift it up. Well, what do we know?
21 New Reg. 6544, which was done as a study to inform the
22 ASP (ph.) program about external initiators, has
23 indicated that the risk contribution due to fire
24 events is roughly on par with other internal
25 initiators for this type of scenario.

1 So, if we looked at all of those things in
2 balance, those sensitivity studies, and applied our
3 best judgment, we thought that a white
4 characterization of this finding was most appropriate.
5 And that's what we concluded.
6 MEMBER ROSEN: What if -- what if you were
7 going to recharacterize it, you would recharacterize
8 it higher, rather than lower, am I correct, in what
9 you say? If it were to be recharacterized based on
10 some of the things that are excluded and the
11 uncertainties?
12 MR. COBEY: No. We actually included that
13 as part of our decision making process, when we did
14 conclude white. We felt that given the uncertainties,
15 when we went through each one of them and looked at
16 them, that with the exception of the fire, most of the
17 other uncertainties were in the downward direction.
18 The only one which you could argue was in
19 the upward direction was not giving them the credit
20 for the diesel generator modified success criteria and
21 saying they just needed two of three, which we felt
22 was overly conservative. And we felt that what we
23 ended up giving them was reasonable. And but we went
24 ahead and left it at -- in the sensitivity study of
25 needing any two, and that's what gave us the low

1 yellow characterization.

2 So when we looked at each one of those and

3 tried to put them in perspective and establish

4 confidence on each assumption, we came up strongly in

5 the white characterization and we felt that that was

6 appropriate. That's how we went forward and that's

7 how we dealt with uncertainty in this case, given our

8 lack of ability to -- to deal with it in a quantified

9 manner.

10 So what's that tell us? Well, as Wayne

11 indicated earlier, we have challenges when we

12 implement the SDP process. This is a typical case,

13 okay. It's not indicative of all cases, but it's

14 typical.

15 The typical challenges we see are

16 characterization of performance deficiencies. This

17 starts with the inspector. They have to not only just

18 identify a violation, if you will, but they have to

19 put that violation in context and determine what the

20 consequences of that violation are, so that it can

21 then be translated into, if you will, as assumptions

22 in to the risk analysis, which ultimately characterize

23 the significance of a performance deficiency. Okay,

24 that is the charge of the inspection staff, okay.

25 And the inspection staff is, you know,

1 works very hard at trying to do that. That's where I,
2 if you will, provide assistance and help --
3 MEMBER SHACK: Now, he has to do that even
4 for the I analysis?
5 MR. COBEY: That's correct. That's right.
6 And in the old process, pre-ROP when you had
7 enforcement, you'd have to -- you had a violation, you
8 went to a supplement in the enforcement policy, it was
9 Severity Level I, II, III, or IV. Okay. You just
10 can't stop there now. You have to determine, okay,
11 I'm this violation, what does it mean? Does it mean
12 I have a loss of safety function? If so, under what
13 conditions, etc.? So that they can then be evaluated.
14 Okay, so that's a challenge for the inspection staff.
15 The second thing is, given that, you have
16 to establish --
17 MEMBER SHACK: Well, did you ever do one
18 where you gave it to three inspectors and found out
19 they did the I analysis, we all got the same answer?
20 MR. COBEY: Where they would -- where they
21 would establish different consequences?
22 MEMBER SHACK: Well, they would -- the
23 characterization, the performance deficiency, I
24 assume, if you had the same characterization or the
25 performance deficiency, you get the same answer, I was

1 sort of figuring, whether you --

2 MR. COBEY: Actually, I've never done that

3 as a trial. But what we've done in Region One, to try

4 and establish some commonality consensus is all

5 inspection findings that are green or above, even if

6 there's green in Phase I, go through the SRA. So

7 that's a Region One, PRS policy, and that's to

8 establish consistency within the division. And I know

9 some of the other regions don't do that, but we do

10 that because we think it improves our process.

11 MEMBER SHACK: Thank you.

12 MR. COBEY: And it also mentors and helps

13 raise the level of performance, if you will, of the

14 inspection staff.

15 MEMBER SHACK: Well, what's -- what's the

16 frequency then of false negatives in the -- in the

17 Phase I screening?

18 MR. COBEY: False negative?

19 MEMBER SHACK: You call it green and it

20 really isn't. I guess it's not -- it's very difficult

21 to tell since you have so damn few higher than green

22 anyway.

23 MR. COBEY: I wouldn't say that we have

24 the information to say.

25 MEMBER SHACK: Yeah. You'd be sitting

1 here for a long time before you'd know that.

2 MR. COBEY: We actually, in this region,

3 do have an example where we had different people do it

4 and came up with similar results. With the -- .2

5 control room wall a year ago, Jim Trappe was a senior

6 act RENOS (ph.) at the time, and he and I both did an

7 SDP analysis on that wall, using the fire protection

8 SDP. We used a little bit different assumptions and

9 boundary conditions and we both came up with similar

10 results.

11 MR. TRAPPE: And Phase I is a fairly

12 simple -- what is it, greater than the LCO and less

13 than the ICO, so it's very unlikely that you'd have

14 any -- any differences in the people coming in.

15 MR. COBEY: Assuming you had the same

16 performance deficiency going in.

17 MR. TRAPPE: Right, yeah.

18 MR. COBEY: And that's the difficult --

19 that's the challenge.

20 UNIDENTIFIED SPEAKER: You've got, I

21 think, a different event, that's why you'd quite

22 likely come up with a different --

23 MR. COBEY: The next area that's a

24 significant challenge is quality of NRC and licensee

25 PRA tools. Okay, this goes to SPAR models. The SPAR

1 models are getting better. They're much -- these rev.
2 3.01, 3.02 models are much better than the 3-I models
3 which are light years above the rev. 2 models. But
4 there are still issues with them.
5 Okay, we use them every day. Most of, in
6 the past, they were recognized as being used for ASP
7 analysis, for those type of purposes. But in the
8 regions, we use them everyday to evaluate the
9 significance of findings and to evaluate events that
10 occur at the plant, to determine whether or not we
11 need to respond -- inspection in accordance with our
12 management directives. So quality of NRC tools is
13 very important to us.
14 UNIDENTIFIED SPEAKER: Now, do you have a
15 3.01/3.02 model for every one of your plants?
16 MR. COBEY: No, I do not.
17 UNIDENTIFIED SPEAKER: You don't.
18 MR. COBEY: I have those for about half
19 the plants in the region and the rest are 3-I's. And
20 I expect by the end of this calendar year that I
21 should have 3.01 or 3.02 models for all the plants in
22 the region. It's my understanding also that in next
23 fiscal year, Research is going to be starting a
24 project for the next iteration of SPAR models, but
25 what's going to be budgeted and how much is going to

1 be within the scope has yet to be determined. We're -
2 - we're lobbying, of course, for as much as we can
3 get.
4 The second piece of this is licensee PRA
5 tools. Because this is not -- you can't go into a
6 silo, and sit down with a SPAR model, and come up with
7 a risk result, and want to take it to the bank. What
8 you want to do or what I want to do is I want to
9 compare it against the results of the utilities model,
10 which should be more detailed, more complete, compare
11 the results and see if I get similar results for the
12 right reasons or the same reasons.
13 If so, then I have a higher degree of
14 confidence that the characterization is appropriate.
15 If not, I need to understand why the differences
16 exist.
17 And, quite frankly, every -- for every
18 time the SPAR model has an inadequacy, I find that
19 usually there's one found in the licensee's model. So
20 we have a concern that while we have a PRA quality or
21 spectrum of PRA quality in this region, we have some
22 that are better than others, even the ones that are
23 better, you know, when you go through reviewing cut
24 sets, as you would in this type of evaluation, you
25 find issues.

1 So this is an ongoing issue for us, quality of
2 PRA tools.
3 The next bullet is lack of tools to
4 evaluate the risk significance of external issues.
5 This is a major issue for us. In the significance
6 determination process, we're required to evaluate the
7 risk contribution to the external initiators. Yet,
8 most facilities in this region, we have a few that
9 have fire PRA's and -- PRA's, but they're -- they're
10 the minority, you know.
11 Region Four has more facilities that have
12 this, at Diablo, Psalms (ph.), or the testing South
13 Texas project, etc. Okay. In Region One, most of our
14 facilities do not have this level of information.
15 And so when we get to evaluating the
16 significance of these type of issues, we don't have
17 internally good tools and the licensee doesn't have
18 good tools, either.
19 The next bullet is treatment of
20 uncertainty in SDP risk analysis. We alluded to that,
21 earlier.
22 And, lastly, is this bullet about licensee
23 support for the SDP process. We've done a number of
24 these evaluations in this region and the timeliness
25 and the effectiveness of the process is significantly

1 driven by the cooperation, if you will, of the
2 involved utility. Because it is a -- it is an effort
3 that involves the input from the utility to
4 effectively get through the process in a timely
5 manner.
6 A lot of the times, it involves
7 engineering calculations on their part to validate
8 changes to their models, etc., testing, take a -- take
9 a condition that existed, while it did meet design,
10 well, what would it really work. So they take it out
11 to a lab and test it, and they provide you those
12 results.
13 That type of cooperation and how well they
14 provide that information significantly affects the
15 timeliness and effectiveness of our SDP evaluation of
16 the condition.
17 And I guess that's all I had prepared.
18 I'm certainly prepared to answer any questions that
19 you'd like to ask.
20 MR. ROGGE: All right. I guess we're
21 ready to move into the roundtable. The roundtable
22 participants fill in the holes that's left -- we were
23 thinking we would start with some brief introductions
24 so you know who we were -- and we've arranged on the
25 way to the bus for you to stop -- by the way, to start

1 the introductions, I'm John Rogge, currently the
2 Acting Deputy Director advisal -- Deputy Director of -
3 - I work for Randy Blough -- the agency reporting two
4 years, prior to that five years -- half my time has
5 been in Region Two and half in Region One.
6 In Region Two, I was senior resident --
7 Jim?
8 MR. LINVILLE: I'm Jim Linville, Chief of
9 the Electrical Branch in Region One. I have oversight
10 of matters of electrical, also fire protection, meter
11 inspections. I've been in the region 23 years. The
12 last couple, in the Division of Reactor Safety.
13 Twenty years before that, I was a senior resident --
14 inspector and branch chief in the Projects division,
15 had most of the plants in the region at one time or
16 another. Before that, I worked for a couple of years
17 for an architectural engineer and was in the Navy for
18 a number of years before that.
19 UNIDENTIFIED SPEAKER: One thing I'd like
20 to add relative to this Salem case study we just
21 presented on the white finding, in a way, that was
22 kind of confirmatory of our previous concerns that
23 were -- that lower threshold relative to performance,
24 particularly relative to the corrective action
25 program.

1 It so happens the very week that Roy's
2 team was there, I had another inspector there doing a
3 follow up or a 95001 supplemental inspection to a
4 white PI for a number of down power transits, which
5 followed on the heels of a previous one for a number
6 of trips at the other unit at Salem.
7 And also, at the same time, Roy was
8 embroiled in doing an extensive SDP evaluation of
9 relative to that fire protection issue that had to do
10 with a fire wrap cross-tie, which is a long-standing
11 fire protection issue there. And after an extensive
12 analysis, that issue turned out to be green, relative
13 to the operability of their CO2 systems.
14 But all of those had the current
15 corrective action issues associated with them. So, at
16 the end of the year, we had a significant cross-
17 cutting issue, because of these recurrent corrective
18 action issues. And we were in the process of
19 developing this, when it didn't come until later where
20 they actually had a white finding, the issue -- this
21 year and actually put them in the singulatory response
22 column.
23 But we had a lot of indications of, you
24 know, the --
25 MS. WALKER: I'm Tracy Walker. I'm the

1 Communications Coordinator for Region One. I have
2 about 21 years experience in the industry. I was in
3 the shipyard for about 4 1/2 years as a shift test
4 engineer, and then I've been in the region for about
5 16 1/2 years, most of that time as an operator
6 licensee examiner. I've spent some time in
7 enforcement. And, most recently, I've been in the
8 Division of Reactor Safety, mostly doing fire
9 protection inspections. I'm also one of the people
10 that did go through the advanced PRA training.
11 So one of the points that I wanted to
12 make, following up on some of the things you talked
13 about, is the importance of the characterization of
14 the performance deficiencies. We've talked about it
15 in detail with respect to how it impacts the SDP
16 process, but also when we were talking about Indian
17 Point (ph.) and how we were characterizing the Red,
18 you know, the issues that led to the Red finding --
19 it's a key part of our assessment process on how we
20 characterize those performance deficiencies at the
21 individual finding level and then as we work up
22 through and were assessing those things, that we have
23 a good handle on what that is and what we're
24 assessing, so that we know how to quantify its --
25 determine its significance and also how -- how we're

1 going to follow up on it, when we're going to decide
2 the licensee's made sufficient progress and back off
3 a little bit.
4 MR. PINDALE: I'm Steve Pindale. I work
5 in DRS, okay. And I've been with the NRC for about 19
6 years. Last five, I've been in DRS, in meeting and
7 participating in PIR inspections, that's the problem
8 identification and resolution problems, and the design
9 inspections. And prior to that, I was in DR key
10 (ph.), and I worked in various sites as -- in the
11 resident inspector program -- Beaver Valley and all
12 the plants in New Jersey.
13 MR. SCHMIDT: I'm Wayne Schmidt. I'm the
14 other SRA in Region One, along with Gene. We work in
15 DRS. I've got 23 years experience in the industry, as
16 a shift test engineer for about 6 years. After that,
17 I was in the resident program for 14 years as a senior
18 resident inspector. And I've been in DRS here for
19 three years, leading team inspections mostly.
20 And I had the -- the honor, I guess, if
21 you will, of being on the team that identified the Red
22 finding, and also leading the team that closed the Red
23 finding at Indian Point. So that was one -- one thing
24 here was consistency. You know, we had the residents
25 all the time, but we also had consistency within the

1 region here, within DRS, to understand the issues
2 there, and get them addressed, and get them closed.
3 MR. FUHMEISTER: I'm Roy Fuhmeister. I'm
4 a senior reactor inspector in the Electrical Branch.
5 I spent 28 years now in power plants. I spent five
6 years in a Navy nuclear power program. I spent a
7 couple of years as a start-up test engineer, at a
8 commercial reactor construction site. And next month,
9 I'll have 18 years in the Nuclear Regulatory
10 Commission.
11 I've been a region-based inspector. I
12 have been a construction resident inspector. I've
13 been an operations resident inspector. And I did a
14 short stint as the allegation coordinator for Region
15 One.
16 The last couple of years and throughout
17 almost the entire ROP, I've been very heavily involved
18 in the fire protection inspection program. I am right
19 now involved also with the fire protection SDP rewrite
20 project, working with the scenario development group.
21 And the one point that I wanted to make is
22 that the significant determination process is not a
23 plug and chug. You can't just open it and get the
24 result. You have to apply it with a certain amount of
25 reasonableness, and you have to be realistic when you

1 use it.

2 MR. BLOUGH: I'm Randy Blough, previously

3 introduced. On his way out the door, I handed George

4 something he had asked for, which is some copies of

5 sample assessment letters that deal with cross-cutting

6 issues. And I also included a couple that Seabrook

7 special team inspection report cover letters that led

8 up to that. And they're marked in the margin with --

9 Steve, you may be interested in this, based on

10 questions you were asking -- how we characterize the

11 actual issue within the cross-cutting harrier (ph.).

12 So I have copies for the rest of you of those.

13 UNIDENTIFIED SPEAKER: Thanks.

14 MR. LORSON: I'm Ray Lorson. I'm the

15 Performance Engineering Branch -- the Division of

16 Reactor Safety. My branch is involved with

17 inspections in several areas, including the problem

18 identification and resolution team inspections, the

19 in-service inspections that we perform at -- outages,

20 the -- inspections, and also maintenance rule

21 inspections.

22 I've been with the NRC about 11 years.

23 Prior to that, I was with the -- Rangers. Most of my

24 time within the NRC has been as a resident inspector

25 and as a senior resident inspector at several Region

1 One sites, including Salem and Seabrook. And I've
2 been involved with some of the issues you've seen up
3 on the display, today, including the diesel -- both
4 Salem and Seabrook, also Indian Point --
5 MR. COBEY: Gene Cobey. I was introduced
6 earlier. I didn't tell you what my background was.
7 I have about 15 years of nuclear experience. I was a
8 regional inspector in the Division of Reactor Safety
9 in Region Three for several years doing engineering
10 type inspections. I was a resident, then senior
11 resident at three sites -- and I was a senior at Byron
12 (ph.) station. I was a senior reactor analyst after
13 that in the inspection program branch in NRR on one of
14 the gains, if you will, for all the losses to NRR. I
15 came out here about a year ago to fill an opening here
16 in Region One.
17 As an SRA in Region One, reported to the
18 Director of the Division of Reactor Safety. We
19 provide technical assistance. We perform all the risk
20 assessments of events and conditions in the region.
21 But one of our most important aspects is
22 to, if you will, provide risk insights to management
23 staff on how to risk inform the ROP at an inspection
24 level, characterization level, and the decision making
25 level.

1 To give you an example, one of the
2 initiatives of the agency, the mitigating systems
3 performance index, which is undergoing a pilot, I've
4 been one of the two Region One representatives on that
5 working group. I'd like to believe that I've heavily
6 influenced that pilot.
7 So we are -- the SRA's are involved in a
8 number of aspects of regional operations besides just
9 characterizing the significance compliance. And if
10 you have any questions on an SPI, I'll be glad to
11 provide you my insights there.
12 UNIDENTIFIED SPEAKER: Following its
13 development and with some interest.
14 MR. COBEY: I'm sorry?
15 UNIDENTIFIED SPEAKER: I say we're
16 following its development with some interest.
17 MR. CRLENJAK: I'm Jack Crlenjak. I was
18 previously introduced. I'm the Deputy Director of the
19 Division of Reactor Safety. I've got about 33 years
20 of experience in the industry, 6 years in the Navy, 3
21 years with industry also in the Navy programs, working
22 for Westinghouse, and about 23 years with the NRC.
23 I've worked in both Regions Two and One.
24 I've spent 17 after years in Region Two, some of that
25 time as a senior resident in two different facilities

1 there. And also held management positions in both
2 divisions in that region. And I've been here about
3 six years now as a deputy director.
4 MR. WELLING: My name is Blake Welling.
5 I'm resident inspector at Limerick. I've been with
6 the agency eight years. Prior to Limerick, I was
7 resident inspector at Peachbottom. And before the
8 NRC, I worked as a shipyard engineer, submarine
9 officer, and a nuclear safety assessor for DOE.
10 I'd be happy to provide any insights with
11 regard to MSPI, mitigating system performance index.
12 Limerick was one of the pilot plants for that -- that
13 effort.
14 MR. HANSELL: Sam Hansell. I'm the senior
15 res inspector of Susquehanna. I have 23 years -- 25
16 years nuclear experience, 13 with the NRC. I spent
17 time in the US Navy at the power program, both an NRC
18 licensed senior reactor operator and reactor operator
19 at Little Creek generating station. I've been a
20 resident inspector at Three Mile Island, Limerick, and
21 also at Susquehanna. And I started my career in the
22 region as an examiner DRS and also a DRS inspector.
23 I was on the Peachbottom special
24 inspection team. I have some insights there, if you'd
25 like. I can share those with you either now or later.

1 MR. TRAPPE: My name is Jim Trappe. And
2 in keeping with the Indian Point 2 theme here, today,
3 I worked at Indian Point 2 for ten years as an SRO.
4 That was before they had the Red finding.
5 (Laughter.)
6 MR. TRAPPE: I've been here 15 years. And
7 I currently -- I was an SRA, like Gene. Gene is my
8 replacement. And I recently got promoted to be a
9 branch chief. And I supervise the resident inspectors
10 at Nine Mile Point.
11 And I would like to share something with
12 you. We've got these pictures here, and I'm a little
13 embarrassed because that's -- that's one of the plants
14 I supervise the residents at, is Nine Mile Point. You
15 can see water coming out of the lakes and that's not
16 a good thing. And it's certainly not the first time
17 it happened.
18 So one of the things we did after the
19 event kind of cooled down a little bit is, is we said,
20 you know, well, how did we miss this and why didn't we
21 see this before? It, you know, it started leaking in
22 May and then it leaked again in December -- they tried
23 to start up, it leaked again in December and they had
24 to shut down. So, you know, it had a long history --
25 and we went in and we did a self-assessment.

1 The residents did a self-assessment, said
2 how did you miss this thing? And one of the things
3 they said to me was, well, it was the reactor building
4 closed cooling water. And those familiar with PWR are
5 saying, well, that's not a very important system. And
6 in those --
7 MEMBER ROSEN: Those familiar with what?
8 MR. TRAPPE: Reactor building closed
9 cooling water. And typically at most PWR's, that's
10 not a very important system, you know, it's not safety
11 related. It really doesn't have a -- it cools the
12 containment coolers, containment coolers, and then,
13 you know, you might have to shut down if it doesn't
14 work. But, but it's not a real safety issue.
15 And what we found through -- through
16 Gene's work and -- digging into this system is, well,
17 okay, if you lose the system and all the water empties
18 out of it, you have five recert pumps, and the recert
19 pump seals need this water to keep them cool, to keep
20 them from rupturing. It's almost like a PWR issue
21 now.
22 And what we didn't realize is that if the
23 piping is sound, you have natural convection and the
24 seals will keep cool, so the pumps don't have to run,
25 but you've got to have the water in the pipes.

1 And what happened is these leaks are real
2 low in the containment building, you don't have water
3 in the pipes, the seals are going to rupture. And the
4 problem with a Nine Mile Point -- of PWR is you have
5 ISO condensers, which are the greatest invention ever,
6 right? It's -- open up a valve and the ISO condensers
7 work. But if you have a small Voca (ph.), the ISO
8 condensers don't do you much -- you can't get the --
9 of the ISO condensers and the ISO condensers come out
10 of the picture.
11 The other system that -- that you can
12 inject into the core is the feed water system, so they
13 have something called a high pressure cooling
14 injection, which is really nothing -- nothing more
15 than a feed water system. And lo and behold, the
16 cooling system for the feed water pumps is -- this was
17 the same system.
18 So now you lose the feed water pumps,
19 you've got the leak, you've -- the leak -- system, and
20 now you're kind of out of luck -- so one of the things
21 that the residents found during their self-assessment
22 was, hey, you know, these systems, some of these
23 systems, we just need to be a little more risk
24 informed. And we've done some corrective actions to
25 make that happen, so --

1 MEMBER ROSEN: What do the licensee's
2 PRA's say about that system?
3 MR. TRAPPE: The licensee's PRA, there was
4 a lot of issues with the -- with the seal -- Gene can
5 express that better, but --
6 MR. COBEY: We actually went through the
7 same timeline process, if you will, with a different
8 example, of course, with Nine Mile. We went through
9 the same set of steps. When we interfaced with the
10 utility, and that utility actually performed a risk
11 analysis of this condition.
12 We disagreed with them on a couple of
13 important assumptions. And as a result, we got
14 different outcomes.
15 MEMBER ROSEN: You're going in a different
16 direction. What I was asking does the licensee have
17 a PRA?
18 MR. TRAPPE: Yes, it does.
19 MEMBER ROSEN: If it does, can it rank
20 systems by their importance at the system level?
21 MR. TRAPPE: Yes. Yes.
22 MEMBER ROSEN: And if it did, did they
23 have RBCCW high on the list?
24 MR. COBEY: Actually, no.
25 MEMBER ROSEN: To which question?

1 MR. COBEY: Yes for the first two and no
2 for the latter. And the reason is, is because this
3 isn't a failure mode that is within the PRA, the pass
4 and failure of the piping system.
5 MR. TRAPPE: Pass and failures of pipe
6 would have a very low frequency. You wouldn't expect
7 this to happen. But now that the system looks like
8 this, you start -- remember, PRA's are based on -- and
9 design. The assumptions are is that the pipe isn't --
10 MEMBER ROSEN: No, no, no. If you say
11 you're not going to take reactor vessel failure,
12 that's a presumption, an assumption based on the fact
13 of all the extensive things you do to preclude reactor
14 vessel failure in the code, inspection, condition
15 monitoring, etc., etc. The same thing applies to
16 RBCCW. You say you're not going to get a failure in
17 RBCCW --
18 MR. TRAPPE: But let's take -- if I look -
19 - vessel failure frequency, I'm sure it's fairly low.
20 Yet, the condition of Davis (ph.) -- vessel, it was
21 probably somewhat understated. It would be the same
22 analogy.
23 MEMBER ROSEN: Yeah.
24 MR. COBEY: Say it had to be CLC in their
25 PRA, they had a -- role, they did not have this

1 particular failure mode captured within their PRA,
2 okay? So when we included this particular failure
3 mode in and evaluated the significance, they got a
4 result that was just below the green light threshold.
5 We got a result in the middle of the white order of
6 magnitude. And the reason was a couple of difference
7 in assumptions that we made.
8 But going into this, neither the NRC SPAR
9 model, nor the licensee PRA, captured a failure mode
10 of pass and failure of the system due to this
11 chemistry problem and erosion problem within the
12 reactor building closed cooling system.
13 MEMBER SHACK: And is that because it's
14 screened out with the low frequency of the pipe --
15 MR. COBEY: Basically, a pass -- passive
16 pipe failures typically have -- if you were to put
17 them in, they would truncate out, anyway, so they
18 don't get put in, in the first place, in most PRA's --
19 MR. TRAPPE: And we talked about PRA
20 uncertainty, you know, and these kind of uncertainties
21 really play into it. You can play with the numbers,
22 but it's this kind of stuff that's really --
23 MEMBER ROSEN: George, who is gone, would
24 say that's a model uncertainty.
25 MR. TRAPPE: Model uncertainty, yes.

1 MR. ROGGE: Okay. At this point, is there
2 any questions you want to ask?
3 MEMBER LEITCH: I had a question about the
4 cardock (ph.) system at Peachbottom. I guess a few
5 months ago there was an accidental -- thank you. I
6 had a question about the cardock system at
7 Peachbottom. A few months ago, there was an
8 accidental actuation in the diesel generator building.
9 And I believe we were led to believe down there,
10 yesterday, that -- that automatic -- that the cardock
11 system had been taken out of automatic. It was still
12 available for manual operation, but not automatic.
13 And they were compensating for that with -
14 - with fire watches, roving fire watches. And I'm
15 just wondering is that a common problem throughout the
16 -- the industry and fire protection systems, is one
17 question. And the other question really is what is
18 the -- in the ROP, what is the licensee's motivation
19 to make corrective actions to that system? How do we
20 influence him to promptly make corrective actions, or
21 do we? I don't know if that's in your area, Roy, or
22 whoever wants to deal with it.
23 MR. FUHMEISTER: Actually, what we have
24 found is most places we've looked at carbon dioxide
25 suppression systems, we found problems. The -- there

1 is not a lot of impetus, really, to fix that.
2 Millstone 3 has had their cable spreading room CO2
3 system locked out now for a little bit over four
4 years. They've had compensatory actions. And a lot
5 of them are now actually coming in with submittals to
6 allow the operation of the system in a degraded mode,
7 because it can serve the function of suppressing the
8 fire until the brigade arrives to extinguish the fire.
9 Salem is in the process of writing that
10 submittal right now, so that they can continue with
11 their CO2 system in its degraded condition.
12 MR. HANSELL: That came -- at Peachbottom
13 is the diesel's air intake comes from the room,
14 itself.
15 UNIDENTIFIED SPEAKER: The room, itself,
16 right.
17 MR. HANSELL: They have a cardock -- the
18 diesel -- not going into the diesel, itself -- air
19 intake for the engine is outside --
20 MEMBER LEITCH: But it does auto trip?
21 MR. HANSELL: Right.
22 MEMBER LEITCH: It would have auto tripped
23 on a cardock's initiation.
24 MR. HANSELL: Yes. I think most -- take
25 the air in from the outside assume that they can run -

1 -

2 MEMBER LEITCH: Yes.

3 MR. HANSELL: -- cardock initiation within

4 itself still function okay.

5 MEMBER LEITCH: True.

6 MS. WALKER: To address the second part of

7 your question about the motivation for the licensees

8 to fix these systems?

9 MEMBER LEITCH: Right.

10 MS. WALKER: I think the fire protection

11 area in the ROP, I think, is one of the areas that

12 really has benefitted from the ROP. Where the fire

13 protection area in the past, we were very limited by

14 the licensee basis and what we could, you know, if a

15 licensee put compensatory measures in place, they were

16 -- they were following their tech specs or the fire

17 protection program, there was little that we could do.

18 But now, with the ROP, and we can go in

19 and if we can find a performance deficiency associated

20 with the issue, and it's risk significant, which in a

21 fire protection area, a lot of times these are,

22 Millstone 3 is a good example. They were taking all

23 the compensatory measures that -- that they're

24 supposed to. But we actually found a problem with

25 their compensatory measures.

1 Because that system was so risk
2 significant in the fire area, we were able to, in
3 effect, put some pressure on them to get those
4 corrective actions taken.
5 MEMBER LEITCH: And that shows up as or
6 could show up as an inspection finding then? I mean
7 it's not a -- there's not --
8 MS. WALKER: Yeah, you know, it goes back
9 to, you know, you have to have the performance
10 deficiency for it to be an inspection finding. In the
11 Millstone 3 case, the problem with the CO2 system,
12 itself, didn't have a performance deficiency
13 associated with it. We looked at it real hard, but it
14 didn't.
15 But, we also looked at everything
16 associated with that system, and that's what the ROP
17 allows us to do.
18 MEMBER LEITCH: Yeah.
19 MS. WALKER: And in doing so, we did find
20 a problem with their compensatory measures, and that
21 they were -- that they needed to address it, and put
22 some pressure on the licensee to keep it moving to get
23 that done.
24 UNIDENTIFIED SPEAKER: There's one other
25 piece to that is it's also a potential aspect they'd

1 be pulled into the cross-cutting area, in terms of
2 problem identification and resolution, if they choose
3 to live with a specific degradation for an extended
4 period of time.
5 UNIDENTIFIED SPEAKER: Right.
6 UNIDENTIFIED SPEAKER: We may -- they may
7 find that mentioned in their annual assessment letter
8 as a -- as a significant cross-cutting issue. That
9 might be one of the examples.
10 MEMBER LEITCH: Okay. Good, good.
11 MEMBER ROSEN: I promised to ask a quick -
12 - this question to the resident from Peachbottom,
13 yesterday, because he gave me his answer. And that
14 question is what activity or activities, this is
15 really to the, you know, the reactor inspectors, what
16 activity or activities would you inspect to get a
17 handle on safety -- you know, we just went through a
18 new --
19 MR. PINDALE: I can address that from the
20 problem identification inspection. When we do the
21 biannual team inspection, that's a specific piece of
22 the -- the inspection procedure. And it has,
23 actually, there's a number of ways that we would look
24 at it.
25 One is we look at the condition reports or

1 whatever the mechanism that reported that the licensee
2 identifies problems with. We'll look at those, and
3 we'll interview people that initiated them and -- and
4 evaluated them, and get a feel for, in the interviews,
5 how they feel about the safety culture. Are they
6 reluctant to initiate a condition report? Is it well
7 received by station management, and questions such
8 like that, by the people that are involved in
9 initiating and evaluating the condition reports.
10 And then another piece is that we look at
11 the employee concerns program. And in there, we'll
12 get a feel for the types of items that are evaluated
13 or processed through the system, and try to assess
14 actually why they're in there versus going through the
15 -- the typical or normal program.
16 So it's a number of issues, including
17 looking at paper, looking at different programs, and
18 then kind of stepping back to try to evaluate if
19 people are reluctant to initiate condition reports.
20 MEMBER ROSEN: Okay.
21 MR. SCHMIDT: And we -- we also get a
22 portion of it by sitting in licensee meetings, just,
23 you know, during team inspections, usually there's one
24 or two person -- or one or two people a day that sits
25 in on licensee meetings and listens to the way they

1 conduct meetings. And you can get a good sense for
2 are they having a joint effect on the people during
3 the day. And we do talk to a lot of people, that
4 can't be understated.
5 Like I've mentioned, you know, just
6 walking around the plant, we'll just kind of grab
7 people and talk to them, and, you know, how are things
8 going? That's a -- that's a great question to ask
9 somebody. And they generally do open up and you get
10 some good insight.
11 We did try something at Indian Point, I
12 guess it was last summer. We kind of had it
13 publicized in their -- in their internal newspaper, if
14 you will, that the NRC would be willing to just, you
15 know, if you had any questions about the NRC, if you
16 had any issues and you wanted to talk to us. So we
17 had some open time set up where people could just come
18 down and talk to us, much the same as if we were the
19 resident inspectors, but it was the team. So we had
20 two or three people in an office, for a couple of
21 hours a day, during the team, to -- to see if anybody
22 came to talk to us.
23 And we did get some people coming to talk
24 to us. And in most cases, that was -- it was kind of
25 a positive feedback type thing.

1 MEMBER ROSEN: Any other answers --

2 MR. HANSELL: I had Susquehanna,

3 Susquehanna from '99 to 2001, they've had the highest

4 number of allegations in the region. We're top five

5 in the country. So I set up the allegation program

6 and inputs going into the program. We then compared

7 the allegations to what the employees in the term

8 program were saying.

9 Interestingly enough, the employees and

10 supervisors coming to us with allegations had -- had

11 a comment being, one, our employees concern program is

12 not working, because it does not keep issues

13 confidential.

14 Two, the issues that we go to with the

15 employees concern program is getting right back to the

16 same manager who we've initially voiced a concern and

17 it wasn't dealt with barely.

18 And, three, a number of people raised an

19 issue as far as being worried about intimidation,

20 retribution, if they raised an issue within their own

21 -- and they came to us in confidentiality.

22 So that's where we start and also look at

23 any OI investigations. Again, at Susquehanna, there

24 was a number of harassment issues, there's a long

25 history there, so understand that history can give you

1 an idea of how -- how did the employees feel about the
2 plant, their supervisors, their management, and then
3 be able to deal accordingly with our inspection.
4 MEMBER ROSEN: Thank you. Anything else -
5 -
6 MR. FUHMEISTER: I like to look at --
7 MEMBER ROSEN: -- we haven't heard yet?
8 Roy?
9 MR. FUHMEISTER: Okay. I like to look at
10 their evaluations of deficiencies. If I see they are
11 trying to pencil with it, you know, or trying to
12 explain why it's okay, trying to justify everything,
13 rather than saying, hey, this is a problem and it
14 needs to be fixed, then I get concerned.
15 Also, if I go to a facility and they want
16 one of their licensee people to sit in on every time
17 I talk to one of the plant engineers or one of the
18 workers, I get a little concerned.
19 MEMBER ROSEN: One of those sea lawyers,
20 present to the -- extensive or oppressive presence of
21 too many sea lawyers. Anything else?
22 MR. LORSON: Just a final comment. I
23 think everything you heard were all facets of the
24 program that are captured in our plant status module,
25 and it basically requires the resident inspectors to

1 do a wide variety of activities, to kind of kick the
2 tires of the plant, if you will. And I think Wayne
3 hit on it when he talked about going to the meetings
4 and just immersed in what's going on at the plant.
5 And from that, you can draw pretty quickly a sense of
6 where the safety culture is at a particular facility.
7 MR. WELLING: And typically residents
8 within that plant status module will attend what's
9 often a daily meeting, where plant management or some
10 level of review goes on for condition reports, problem
11 reports, anything that goes into the corrective action
12 process. So we get a sense of what things are
13 identified, the level, and the level of probing, at
14 least within that initial disposition meeting, you
15 know, trying to understand the issues and what
16 approaches might be taken to get to the bottom of
17 that.
18 MEMBER SIEBER: I guess the follow on and
19 perhaps more important question to ask in this regard
20 is what is hypothesized, that you get the feeling that
21 there is a bad safety culture at a facility, that has
22 not yet revealed itself in significant performance
23 problems. So the question becomes what should the
24 agency do, if anything? Any ideas?
25 MR. TRAPPE: I have my own, you know, view

1 on this. I've kind of bought into the -- a white
2 finding, for me, is an extremely, an extremely low
3 pressure. And I -- I put it in relative terms. At
4 Calvert Cliffs, the CDF is approximately 10 to -4. A
5 white finding can be low as 10 to -6. So that's
6 almost equivalent to operating Calvert Cliffs from now
7 till Friday.
8 MEMBER SIEBER: Right.
9 MR. TRAPPE: So if I'm really fearful of
10 operating Calvert Cliffs from today till Friday, then
11 I should equally be concerned over a white finding.
12 And that's kind of -- that's kind of where I am.
13 So I'm under the impression that white
14 findings are very low threshold. They're very
15 predictive. So I would expect to see, before I see a
16 licensee really, you know, headed down the pike, my
17 guess is, is that if you -- you know, a number of
18 white findings, then we'd have plenty of time before
19 they're really a safety concern to turn that around.
20 That's just how I look at the ROP.
21 MEMBER SIEBER: Well, I wondered about
22 that a little bit, because we went to Davis Bessy
23 (ph.) not too long ago, before their problems, and
24 they had mostly all greens. They were in Code 1, a
25 nice plaque on the end of their turbine. And so if

1 now everybody is saying that the safety culture is
2 deficient there, did they not recognize it while the
3 problems were going on? Or do you have to have some
4 kind of event for a better than white finding in order
5 to be able to say you've got a safety culture issue
6 and we need to make some kind of regulatory response?
7 MR. LINVILLE: Well, I -- I guess I don't
8 think we really had that many white findings in the
9 quantitative area, the mitigating systems area or
10 initiating events area.
11 MEMBER SIEBER: That was an initiating
12 event.
13 MR. LINVILLE: And yet -- and yet I think
14 we've seen symptoms before those have occurred in a
15 number of places. We've done three inspections on
16 losses off-site, special inspection teams on losses
17 off-site power and diesel generator problems at -- at
18 Salem or at Seabrook in the last few years.
19 At Salem, we saw a number of white PI's
20 and fire protection issues before we saw the white
21 finding there. So I think you'll see symptoms. One
22 is a lot -- everybody identifies problems now, but
23 it's more what do they do about them and do they have
24 recurrent problems is a key -- key thing to look for,
25 I think.

1 And when you're having recurrent special
2 team inspections or the frequent white PI's, I think
3 you're -- it's only time until you get that white
4 finding. So I think you can start seeing it. And
5 that's why I think the cross-cutting issues that we do
6 are very important to early identification --
7 MEMBER SIEBER: I think -- I think the
8 approach that Region One is taking is a good approach.
9 And apparently it's well communicated throughout your
10 organization. So, you know, I feel more comfortable
11 today than I did two days ago, while I was getting
12 prepared to come here. And so that's -- that's
13 congratulations to all of you for understanding the
14 issue and having sufficient leadership throughout your
15 organization to communicate that far and wide, so that
16 your folks know what to do and how to respond.
17 Somebody else wanted to say something?
18 MR. CRLENJAK: Yes. I'd just like to add
19 one onto what Jim said. I think one of the -- one of
20 the indicators, too, that we key on, and I know that
21 I've keyed on in my career, is the repetitiveness of
22 certain problems.
23 All licensees, utilities have problems,
24 but I believe when you have the right culture, you're
25 going to have a problem and normally they'll jump into

1 it, the management, the workers will work on it, the
2 engineers will get into that problem, and they'll
3 normally solve it.
4 It's when you start seeing the
5 repetitiveness of the same problems come in over and
6 over again that really, you know, causes us to home in
7 on certain issues or certain licensees, certain
8 organizations of licensees, and ask, hey, what's going
9 on here.
10 And I don't know a lot about Davis Bessy,
11 other than what I've read, but I know that they had
12 the repetitive problem with the coolers. And, you
13 know, that would be something that I think, you know,
14 most people would key in on and say, okay, this is the
15 second time, this is the third time, what's going on
16 here, how come it keeps on happening.
17 So I think that's a pretty good indicator
18 in the area of culture and how -- how a licensee and
19 how their people attach those repetitive problems.
20 MR. BLOUGH: Jack, one part of your
21 question was building on Steve's, where you said how
22 do you get a gauge for the safety culture, and then
23 you were saying then how do you wrestle with what to
24 do about it --
25 MEMBER SIEBER: That's right.

1 MR. BLOUGH: -- if you have a concern in
2 that area. So I guess you got a couple of opinions.
3 I'd just be curious if other inspectors wanted to --
4 MR. SCHMIDT: I've got the -- one key
5 thing that -- that I know has been successful from a
6 team inspection standpoint is, going in, you have a
7 fairly fresh set of eyes, experienced eyes
8 nonetheless, and you're going in, and if you can find
9 problems with systems that the licensee just doesn't
10 even really identify or understand, that's a real good
11 key. And we had that, several of those examples here
12 in the recent past, where, you know, it leads you to
13 believe the licensee isn't really looking real hard at
14 their equipment and trying to understand the problems
15 they do have.
16 MEMBER SIEBER: Having done some
17 contractor work in the inspection area, I found that
18 sometimes the top management or senior management may
19 not know, but the workers seem to know. And so when
20 you're asking the question, you start to ask through
21 the full range of the organization, and you can find
22 where the disconnects are. And when you find these
23 communications disconnects, to me, that's a prime
24 indicator of a safety culture that's dysfunctional.
25 MR. ROGGE: That's a -- that's a good

1 point, because we talked about -- site visits before,
2 when Hub was talking about them, but all the
3 inspectors do is the job of keying on some of these
4 safety culture items. But then when we do the site
5 visits, there's a lot of emphasis on the senior
6 resident, who also has to communicate these ideas to
7 the visiting inspectors as to what they read for that
8 organization's site visits. I know we get it out to
9 agenda.
10 But we go through almost every manager in
11 the organization. Part of the safety culture is
12 understanding who is actually running the plants, what
13 do they think, what are their priorities. And the
14 plant tour, where we go through and pick up people
15 that are in the plant to see if there is a disconnect
16 between what management is saying and what -- what the
17 deck plate is saying.
18 I was involved with IT, too, for a short
19 period, and there was a huge gap between what
20 management said and what the deck plate said. And you
21 see that at plants as they're getting into trouble and
22 coming out, it tends to come together. And you see
23 the -- it takes time -- site visits and the way we
24 take that information, and we allow it to inference us
25 the next time they have an event, if we know who they

1 are, how they react, and we sort of temper our
2 response with that information.
3 MEMBER BONACA: In some previous visit, we
4 had some other regions, and this was the early time of
5 the revised reactor oversight program, one thing that
6 we got was that inspectors liked it; however, they
7 felt that the significance of termination process and,
8 you know, the administration of the ROP was keeping
9 them -- was a challenge to their time, was keeping
10 them away from the plant, was -- was keeping them very
11 busy.
12 What's your feedback now? Clearly, there
13 is, you know, they were expressing also some growing
14 pains, as well as a couple of years ago. Has this
15 changed? Do you -- do you feel the same kind of
16 pressures?
17 MR. PINDALE: I can take the first part.
18 And I think that the pressure is reduced. I think
19 that's how I would characterize it, too, is -- is the
20 growing pains with learning a new process.
21 And I had them. I think, with going
22 through it, you learn more, it becomes easier, and --
23 and we use the SRA's extensively. I was involved with
24 the Nine Mile Point inspection, the RBCCW system, and
25 Gene was on the team. So that -- that helped us to

1 focus on the performance issues.

2 So I think it's gotten a lot better. I

3 don't feel that we have any restriction to look at

4 different areas. What we do is we -- we screen a lot

5 of things. Again, this is in the PIR arena, that we

6 screen, you know, hundreds of condition reports to

7 look for any common thread or repeat failures, and

8 then we assess it that way using the ROP.

9 But, I would still characterize it mostly

10 as growing pains.

11 MEMBER BONACA: Now, one thing that the

12 RES is working on, trying to identify additional

13 performance indicators, maybe this other, you know,

14 like -- are you satisfied with the -- with the PI's

15 that are in the system right now or do you encourage

16 the development of some other PI's?

17 MR. HANSELL: I guess as far as

18 performance indicators go, we always question why

19 looking at a record once -- look at, identify, and

20 only not un-identify, we look at plant problems. Most

21 plant shutdowns are related to unidentified leakage in

22 the reactor vessel. So to take a PI and only look at

23 identified didn't make sense to us and we -- feedback

24 form to get it changed, but didn't have much success

25 so far.

1 MEMBER BONACA: Okay.

2 MR. FUHMEISTER: I'm going to go out on a

3 limb here. I kind of liked the revised oversight

4 program. This --

5 UNIDENTIFIED SPEAKER: Well, some other

6 people would --

7 MR. FUHMEISTER: I've been doing fire

8 inspections now since 1996 and the revised oversight

9 program has opened up a lot of areas where we never

10 used to go. We never used to look at the design and

11 testing of gaseous suppression systems. We never used

12 to look at post fire shutdown procedures. We never

13 used to look at the design of a post fire shutdown.

14 And we can get into that now.

15 And, you know, if -- if we find a problem,

16 we can pursue it under the ROP, you know. It's not,

17 well, we got a comp measure, so it's done. As an

18 example, if -- if a utilities fire brigade failed

19 every unannounced drill they ever held, that would not

20 be something we could pursue under the old program as

21 long as they retrained and redrilled every one of

22 those crews. But that's a significant performance

23 deficiency and I can pursue that now in the ROP.

24 MS. WALKER: And so in answering the

25 question about the SDP and how much time it takes,

1 fire protection is an area where, I think, we're
2 really experiencing some growing pains. But, I think,
3 the benefits that we've gained from what it allows us
4 to do in the -- the front end and what it opens up for
5 us to do, and how it allows us to focus on things that
6 are really important, and even when it does take more
7 time at the back end to actually come up with that
8 specific color, I think we feel it's worth it.
9 MEMBER BONACA: Good
10 MR. FUHMEISTER: Yeah. And the amount of
11 time the SDP takes is somewhat dependent upon what it
12 is you're evaluating. For instance, we spent a couple
13 hundred hours looking at the CO2 system for Salem.
14 And the reason it took so long is because we had to
15 develop 27 separate fire scenarios, and we had at
16 least 6 sequences for each of them. And when we went
17 in and used information from the IP-EEE, when we went
18 back to the utility and said, okay, this is what we
19 think the results are, he says, oh, no, it doesn't
20 really work like that, it's really this way.
21 So, again, the -- the quality of the -- of
22 the licensee's probablistic safety assessment tools
23 can seriously impact that.
24 MR. SCHMIDT: And one thing I'll add from
25 an SDP task force or task group recommendations, Jim

1 Trappe was on the task group, and there were some
2 recommendations or some -- some problems, I think,
3 that inspectors had relative to the ease of use of the
4 Phase II notebooks and, you know, how much -- if you
5 only use it one time a year, how proficient can you
6 actually be in using it?
7 And we are taking some steps with NRR to
8 come up with a solution to the Phase II notebooks, so
9 it gives the inspector both the answer and risk
10 insight that they can use to -- in planning the
11 inspection.
12 MEMBER BONACA: So you do have some
13 ability of feeding back your experience to
14 headquarters, but the comment I heard before, however,
15 that, you know, you made a suggestion there and really
16 wasn't answered.
17 MR. HANSELL: Yeah. No, we provide the
18 feedback.
19 MEMBER ROSEN: The feedback has been
20 provided as far as -- program sense.
21 MEMBER BONACA: Yeah.
22 MR. COBEY: Because that's just an
23 isolated case and it's -- it's still an open issue.
24 MEMBER BONACA: Right.
25 MR. COBEY: Yeah, that issue has not been

1 resolved -- performance indicator. Actually, I --
2 been talking briefly performance indicators in
3 general, if you don't mind. I think your question was
4 are we satisfied with the set of performance
5 indicators that we have. And I think before, you
6 know, I provide any perspective on that, step back a
7 minute and look back at when we were originally
8 transitioned to the ROP.
9 We didn't have any performance indicators.
10 So what did we do, we took the ones that pre-existed,
11 indicators the industry reported to IMPO, etc., and
12 said, okay, we're going to use these because they're
13 the best available. We know they're not perfect, but
14 we're going to use these until we endeavor to find
15 things better, which I believe the Office of Research
16 has been working on in the interim and they have
17 developed an MSPI. They've also developed this new
18 industry initiating LANs (ph.) performance indicator
19 that's coming down the pike, etc.
20 So I think the answer is, no, I don't
21 think we're wholly satisfied that the performance
22 indicators are really telling us the right things,
23 that they're truly indicators of where performance is
24 not as good as it should be and we ought to engage.
25 There are issues with them. Some of those are more

1 obvious than others. Some of the indicators have
2 holes, like Sam mentioned.
3 So I would have to say I don't believe
4 that we feel comfortable that the set of indicators
5 that we have now are necessarily the set we should be
6 going for with in the future. I still think we're in
7 a state where they're the best available and we're --
8 the agency, I guess, is now -- is endeavoring to
9 produce better indicators.
10 I know Davis Bessy -- task forces, I
11 guess, there's some indicator associated with barrier
12 -- that may be developed in the future. So I'd have
13 to say, no, I don't think we're satisfied. But, yeah,
14 this is the right set going forward. But I think it's
15 still the best set that we have.
16 MEMBER ROSEN: Are you hoping that the
17 MSPI's will be developed and become ready to supplant
18 what's in there for the mitigating systems indicators?
19 MR. COBEY: I think that the MSPI
20 initiative was good initiative at the start, for the
21 reasons I just alluded to. But I think the MSPI,
22 having gone through the six-month pilot, the results
23 from the pilot have provided us information that --
24 that is telling us that we need to seriously look at
25 its construct and make and address the issues that

1 have been identified.

2 There's a whole litany of technical issues

3 that have been identified as a result of the pilot, as

4 well as the non-technical but implementation issues.

5 So I would say, at this point in time, while obviously

6 it's premature to judge the outcome because we're

7 still in progress, but if we don't make those

8 fundamental changes that need to be made, whatever

9 they happen to be, to address those issues, I don't

10 think it would meet the success criteria that's

11 currently constructed.

12 Now, can it meet the success criteria, if

13 it's changed? Possibly, but it's too soon to tell.

14 But in retrospect, I still think it's a good

15 initiative to try and improve the performance

16 indicators that we have.

17 And so that's kind of the 30-second

18 version on MSPI, I mean, that certainly there is a lot

19 more to it than that. But that's, I think, where

20 we're at.

21 MEMBER SIEBER: I look at the performance

22 indicators as a supplement to the inspection program,

23 the real meat of the ROP is the restructuring of the

24 inspection manual and the inspection program, the way

25 it's run, today. And so all these various facets,

1 these aspects work together to come up with a balanced
2 performance base, risk informed way to look at
3 licensee performance.
4 And I don't know that whether we have the
5 right balance, I don't know whether we can improve the
6 PI's or not. I think we can. On the other hand, and
7 I know that the SPP process is not complete and the
8 last one is going to be fire protection next year, and
9 I'm eager to see that happen, because I think that's
10 an important one.
11 And if you look at the risk profile of a
12 lot of plants, you've got a third into the risk
13 assigned to operating the plant, a third of the risk
14 assigned to the plant when it's shut down, and a third
15 of the risk assigned to fire. And so we've got to pay
16 attention to shut down modes and fire mode, in
17 addition to what everybody likes to do, which is the
18 operating plant mode.
19 So I think that what we -- where we're
20 going now is a refinement and trying to achieve
21 balance. And the kinds of things that you folks are
22 doing, I think, are aiding that process, and I'm glad
23 to see it, that there is active interest and -- and
24 knowledge at the region level.
25 Anybody else has any questions or

1 comments? Sir?

2 MR. MILLER: No, I just -- moving forward,

3 I don't want to cut off the inspection hearings.

4 MEMBER SIEBER: Well, I think that we're

5 drawing to a close, if we don't have anymore

6 questions. I can tell you on behalf of the ACRS and

7 the Plant Operations Subcommittee that the last two

8 days have been interesting. And our meeting with you

9 has been a rewarding meeting, and gives us some -- a

10 more complete view of what happens in the regions, and

11 the kinds of projects and advice we give will

12 certainly reflect what we've learned here.

13 And so I think this has been a good

14 meeting for the ACRS and I'm going to allow our ACRS

15 chairman to address that. But before I do, I want to

16 thank everybody for well done presentations and for

17 your attendance.

18 MEMBER BONACA: Well, all I can do is to

19 echo Mr. Sieber here. It was an extremely informative

20 session, today. Actually, I must say it was the best

21 I've experienced to date. I think it was valuable,

22 also, because in the previous one, we saw the, you

23 know, ROP, you know, the revised ROP in the first

24 steps, and again the growing pains, etc., much less

25 enthusiasm than we have seen today for it. I mean I

1 sense some level of enthusiasm for it. I think that's
2 positive.
3 I think we -- we learned quite a bit about
4 safety culture, never enough, but right now some of
5 the issues that are most important on the table are
6 security and safeguards, safety cultures, and risk
7 inform regulations. So that's why you got so many
8 questions on -- on the issue of safety culture.
9 We have a workshop organized in two days.
10 We try to understand for the industry some more about
11 this issue. And with that, I want to thank you again
12 for the hospitality. And I don't know if any of the
13 members have any additional comments?
14 With that, thank you, again.
15 MR. MILLER: We're very tickled that
16 you've come to visit us. We have articulated through
17 management, you know, some expectations. In many
18 respects, it's easy to talk about those, it's much
19 harder to do. What we can do is encourage and, but,
20 in the end, it's the competence of the people. And,
21 hopefully, in this session here, you've got a sense
22 for the depth of experience, more than --
23 MEMBER BONACA: We sure did.
24 MR. MILLER: -- more than the depth of
25 experience, the thoughtfulness, of the savvy of the

1 people that are here. The issues that are out there
2 that really count are hidden. They're not the ones
3 that we walk into the plant -- it would be nice if you
4 could walk through a plant, and inspect, and find all
5 the issues that are hidden. And many of them, in
6 fact, some of the most insidious ones are very
7 difficult to find, and just give you one.
8 But, if I sit and worry about things,
9 perhaps in this region, especially, where it's an all
10 merchant fleet, it's the potential for
11 self-censorship. It is not what management at the top
12 says. Management at the top will always preach a
13 safety message, and that's genuinely what I believe
14 they intend. It is ultimately what the staffs
15 interpret, and what they do and what they act on.
16 And that's -- we didn't spend a lot of
17 time talking about that, but we're talking about
18 potential pitfalls. And we can give you examples of
19 situations where we've seen instances, so where staff
20 at these plants have done things to help the company
21 out, quote/unquote. And it is the savvy, it's the
22 ability of folks to -- I talked about our being
23 schizophrenic, that both the very technically
24 competent to dig deep, penetrate the technical issues,
25 but also I sort of step back and read -- read the

1 situation.

2 So we hope this has been helpful to you.

3 We're passionate about what we do. I hope that came

4 through, today. A great deal of, you know, conviction

5 about coming to work in the morning, and we think we

6 are making a difference. So again, thank you very

7 much for coming.

8 MEMBER SIEBER: Thank you.

9 MEMBER BONACA: Thank you very much.

10 MEMBER SIEBER: And with that, this

11 meeting is adjourned.

12 (Whereupon, at 5:00 p.m., the hearing was

13 concluded.)

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CERTIFICATE

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission in the matter of:

Name of Proceeding: Advisory Committee on Reactor Safeguards Plant Operations Subcommittee

Docket Number: n/a

Location: King of Prussia, PA

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and, thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.

Jack Burke

Jack Burke
Official Reporter

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

REGION I VISIT
475 ALLENDALE ROAD, KING OF PRUSSIA, PA

June 10, 2003
- AGENDA -

Time	Topic	Presenter	Time Allotted
8:30 - 8:45 am	Opening Remarks	H. Miller, RI J. Sieber, ACRS	15 minutes
8:45 - 9:30	Region I Overview and Challenges	H. Miller	45 minutes
9:30 - 10:15	Region I Organization	J. Wiggins	45 minutes
10:15 - 10:30	Break	-	15 minutes
10:30 - 11:30	Plant Performance in Region I	R. Blough	1 hour
11:30 - 11:45	Indian Point Performance	B. Holian	15 minutes
11:45 - 12:45 pm	Lunch		1 hour
12:45 - 1:45	Inspection Results	W. Lanning	1 hour
1:45 - 2:15	SDP - Recent Example	E. Cobey R. Fuhrmeister	30 minutes
2:15 - 2:30	Break	-	15 minutes
2:30 - 4:15	Reactor Oversight Process Roundtable	J. Rogge	1 hour - 45 minutes
	- Regional Inspectors	R. Fuhrmeister S. Pindale T. Walker	
	- Resident Inspectors	B. Welling S. Hansell	
	- SRAs	E. Cobey W. Schmidt	
	- Management	R. Blough R. Crlenjak J. Trapp R. Lorson J. Linville	
4:15 - 4:30	Closing Remarks	H. Miller, RI M. Bonaca, ACRS	15 minutes

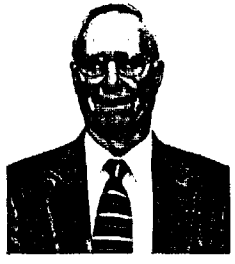
HQ Observers: Laura Dudes, Marvin Sykes, and John Jolicoeur

RI CONTACT: John Rogge, jfr@nrc.gov or (610) 337-5146
ACRS CONTACT: Maggalean W. Weston, mww@nrc.gov or (301) 415-3151.

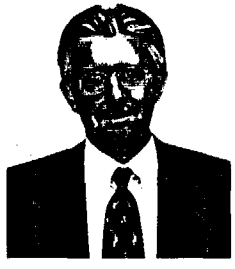
OFFICE OF THE REGIONAL ADMINISTRATOR

Hubert J. Miller
REGIONAL ADMINISTRATOR

James T. Wiggins
DEPUTY REGIONAL ADMINISTRATOR



Robert J. Bores
STATE LIAISON OFFICER



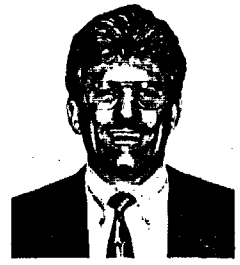
Daniel J. Holody
TEAM LEADER
ORA TECHNICAL PROGRAM STAFF

Karl L. Farrar
REGIONAL COUNSEL

Diane Screnci
SENIOR PUBLIC AFFAIRS OFFICER

Neil Sheehan
PUBLIC AFFAIRS OFFICER

DIVISION OF REACTOR PROJECTS



Randolph Blough
DIRECTOR

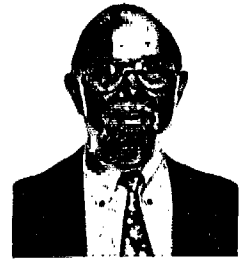
Brian Hollan
DEPUTY DIRECTOR

James Trapp
BRANCH 1

Pete Eselgroth
BRANCH 2

Glenn Meyer
BRANCH 3

Mohamed Shanbaky
BRANCH 4



Clifford Anderson
BRANCH 5

Brian McDermott
BRANCH 6

John Rogge
BRANCH 7

DIVISION OF REACTOR SAFETY

Wayne D. Lanning
DIRECTOR

Richard V. Crlenjak
DEPUTY DIRECTOR

John R. White
CHIEF, RADIATION SAFETY & SAFEGUARDS BRANCH

Richard J. Conte
CHIEF, OPERATIONAL SAFETY BRANCH

James C. Linville
CHIEF, ELECTRICAL BRANCH

Lawrence T. Doerflein
CHIEF, SYSTEMS BRANCH

Ray Lorson
PERFORMANCE EVALUATION BRANCH

DIVISION OF NUCLEAR MATERIALS SAFETY

George Pangburn
DIRECTOR

Duncan White
STATE AGREEMENTS OFFICER

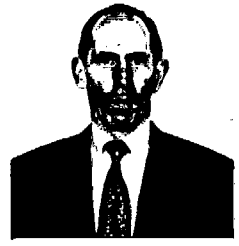
Francis Costello
DEPUTY DIRECTOR

Ronald Bellamy
DECOMMISSIONING AND LAB BRANCH

Pamela J. Henderson
NUCLEAR MATERIALS SAFETY BRANCH 1

John Kinneman
NUCLEAR MATERIALS SAFETY BRANCH 2

DIVISION OF RESOURCE MANAGEMENT



James H. Joyner
DIRECTOR

Judith Royal
HUMAN RESOURCE OFFICER

Robert Gross
FINANCIAL RESOURCES BRANCH

Louis Manning
INFORMATION RESOURCES BRANCH

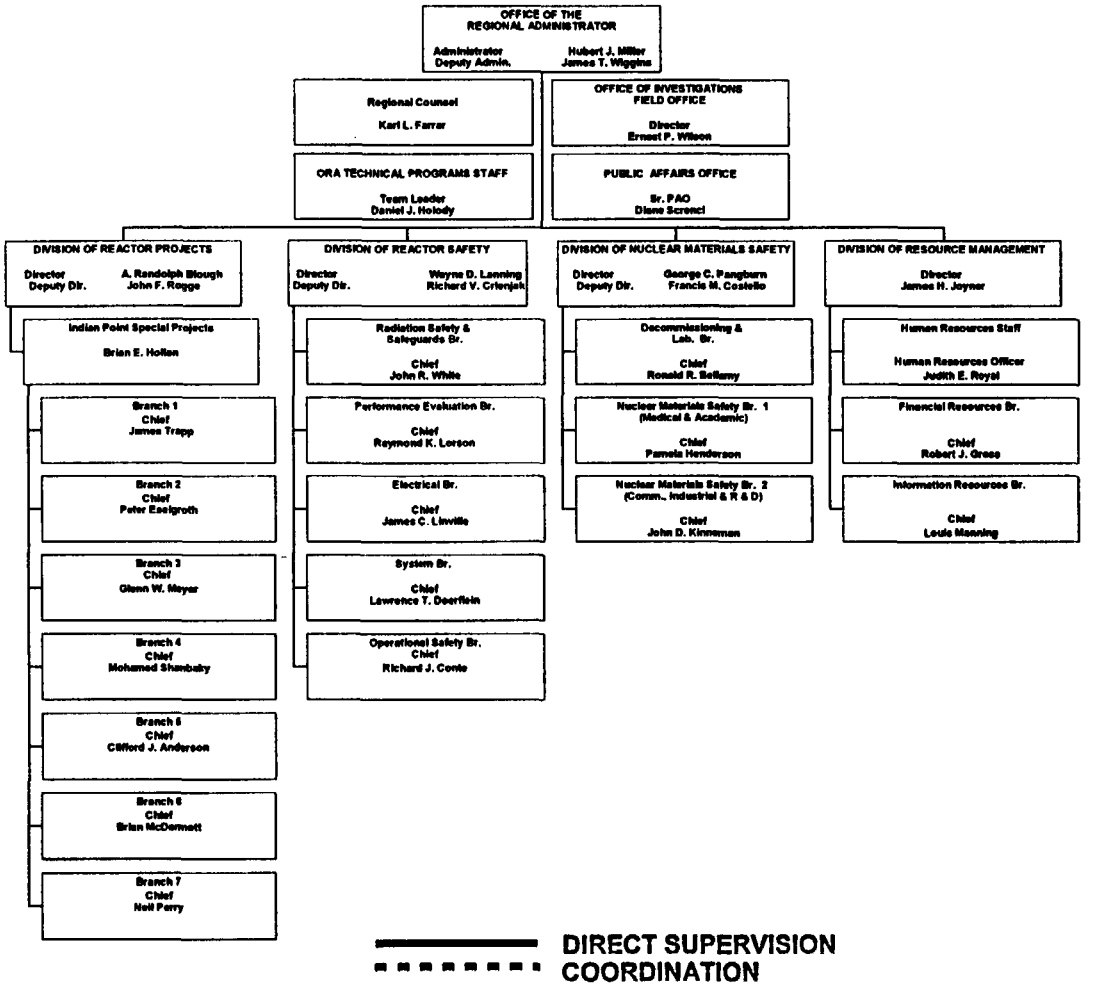
OFFICE OF INVESTIGATIONS
FIELD OFFICE
REGION I

Ernest P. Wilson
DIRECTOR

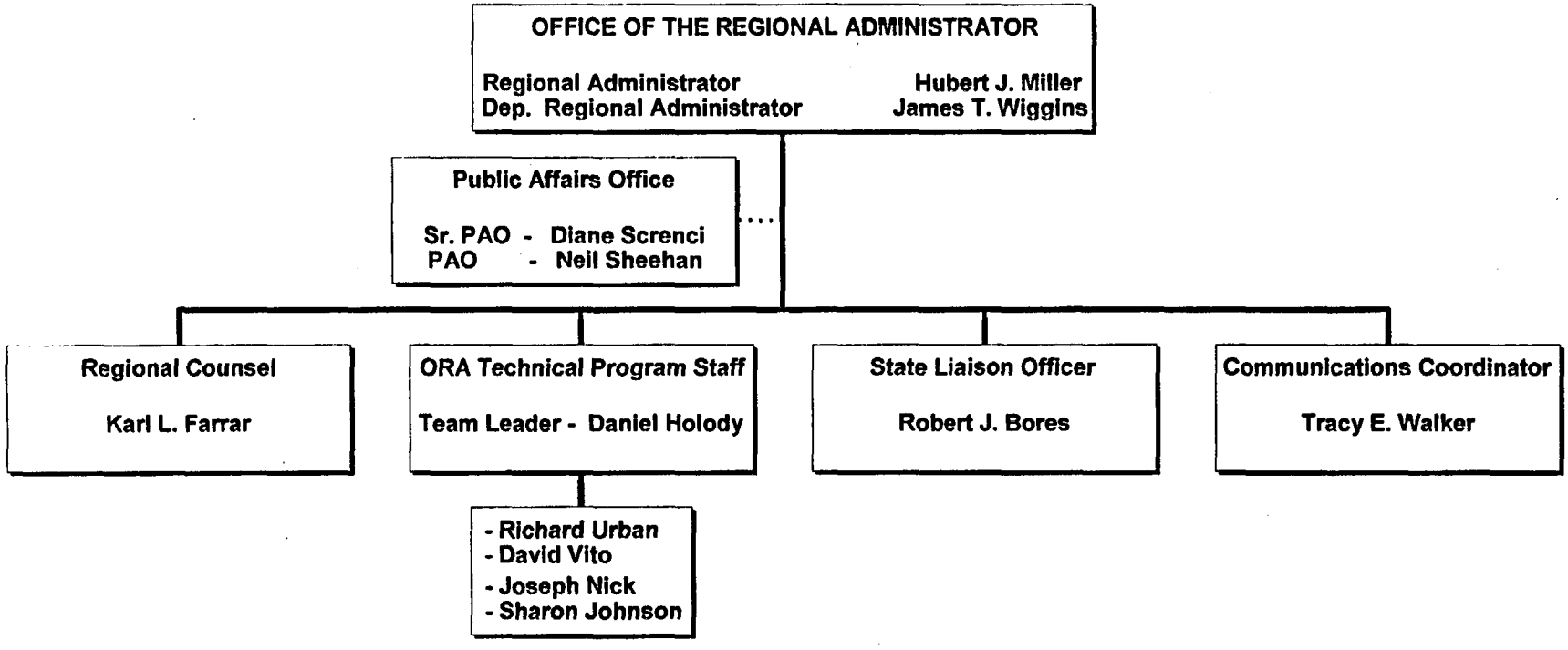
UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I

ACRS Committee on Reactor Safeguards
June 10, 2003

U.S. NUCLEAR REGULATORY COMMISSION
REGION I ORGANIZATION CHART



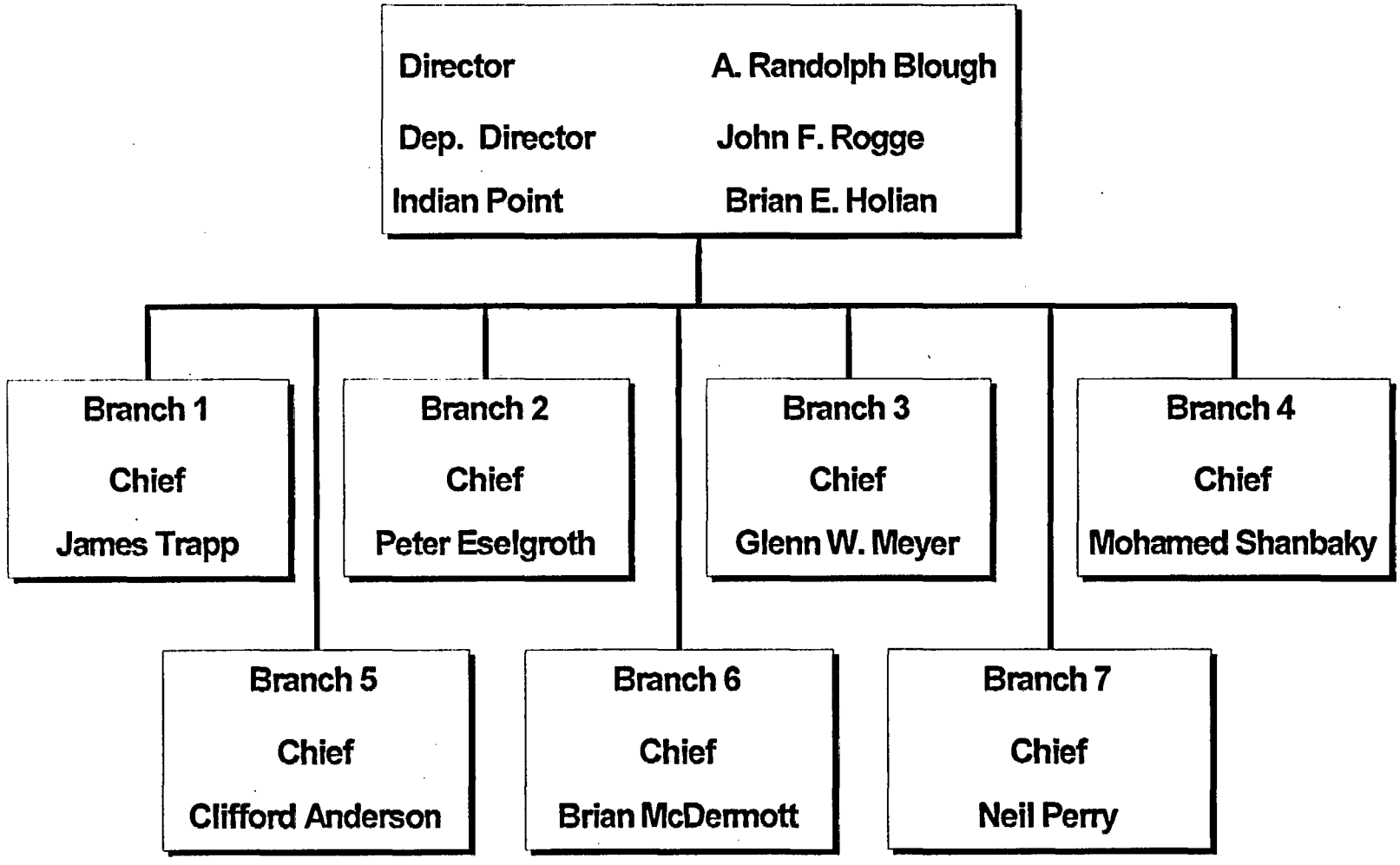
OFFICE OF THE REGIONAL ADMINISTRATOR
Region I Organization Chart



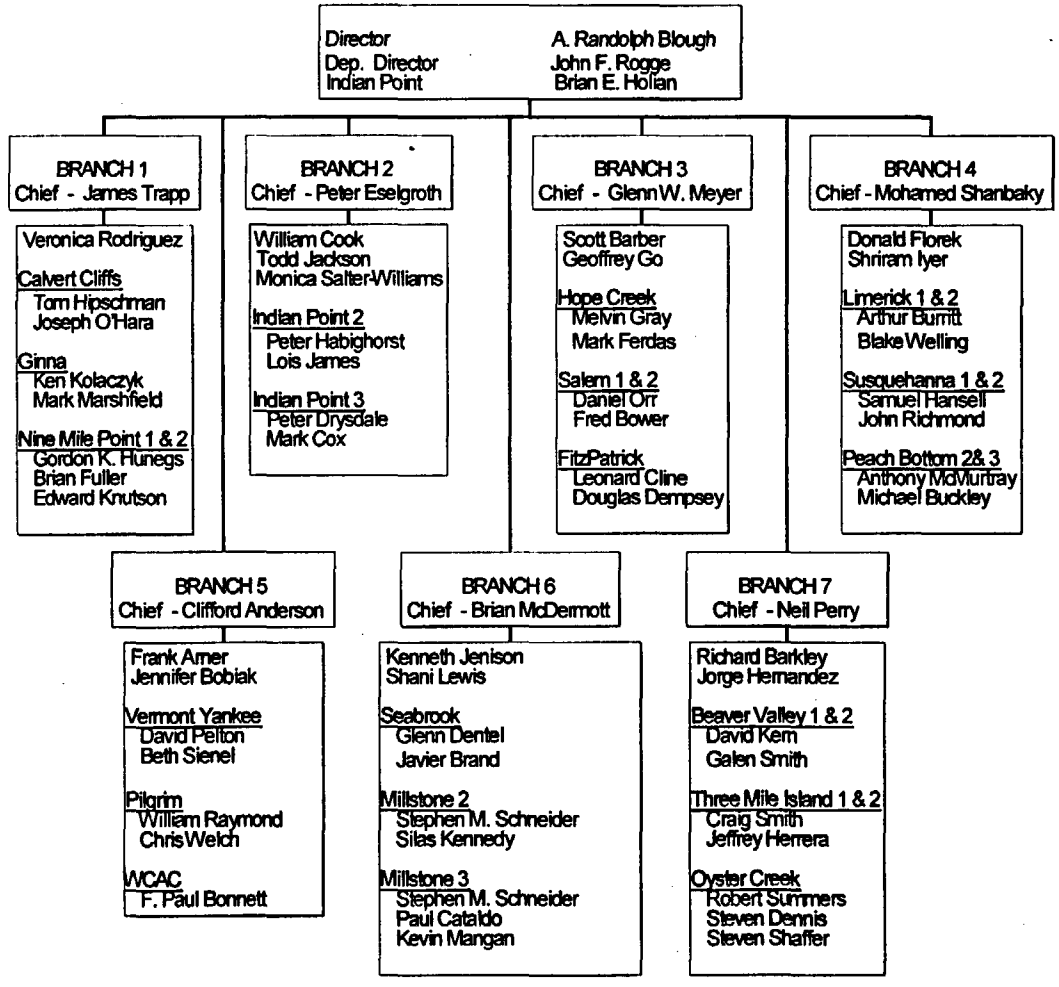
—— Direct Supervision

- - - - HQ Staff

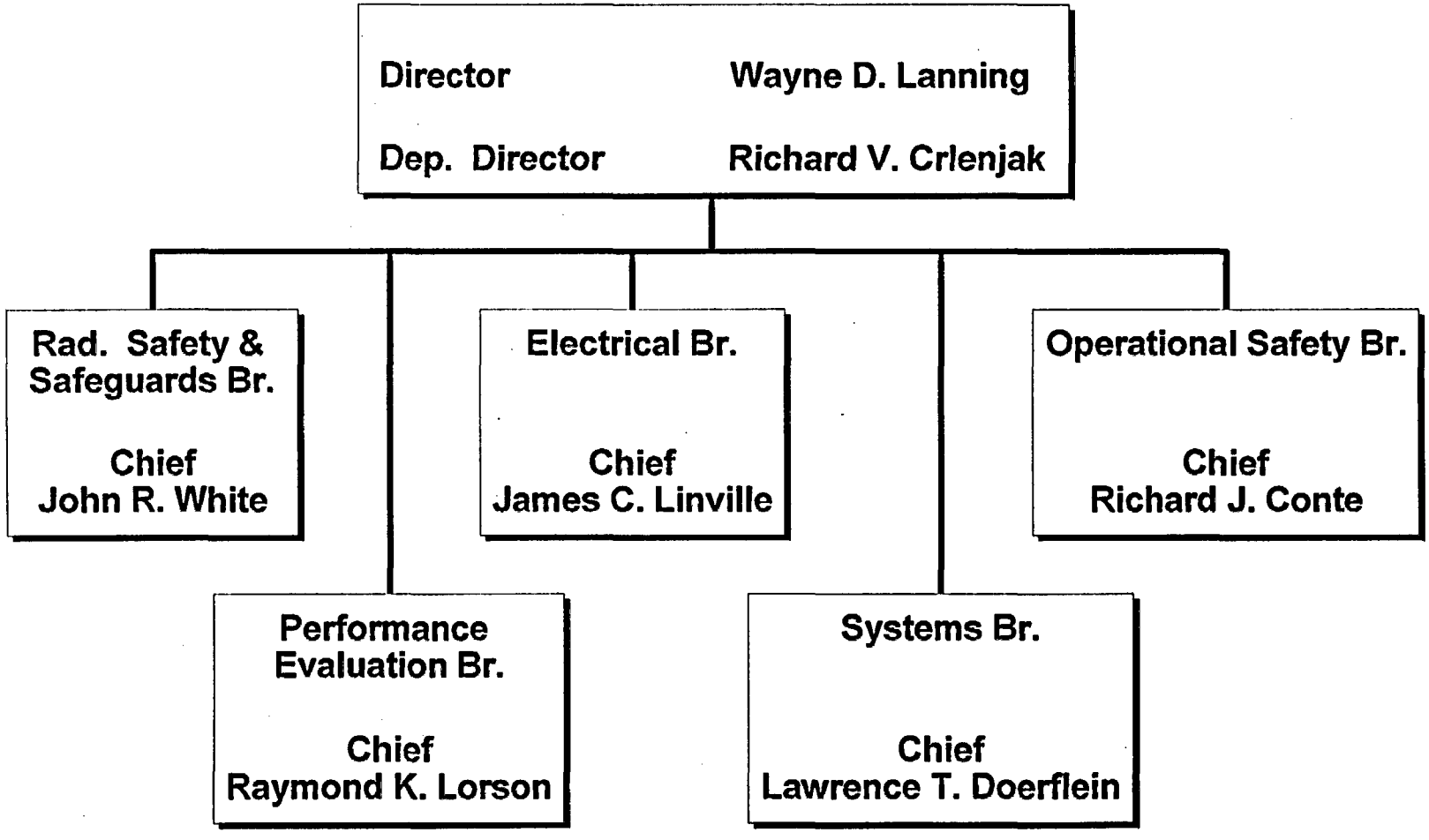
REGION I
DIVISION OF REACTOR PROJECTS
Organization Chart



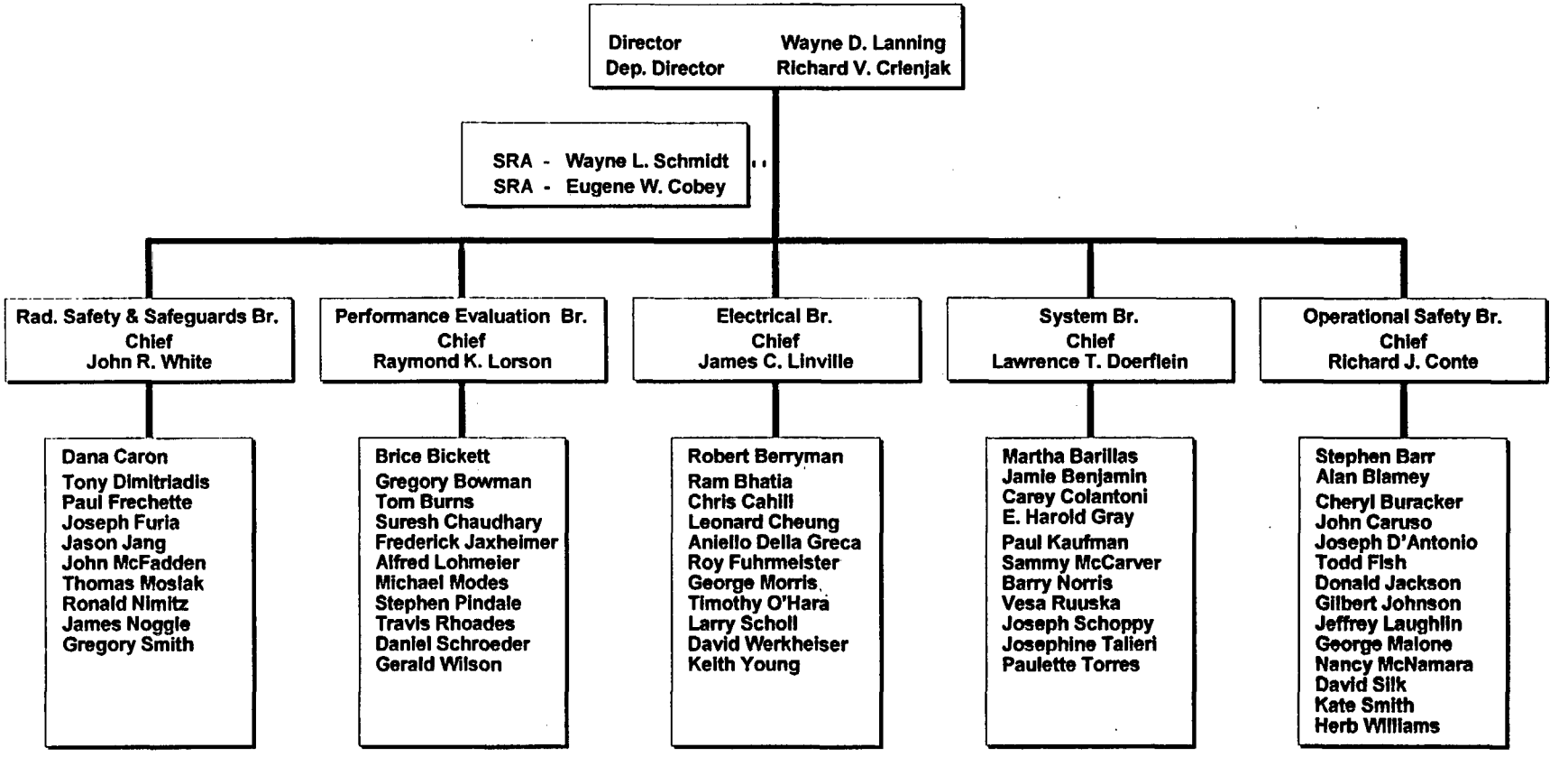
REGION I
DIVISION OF REACTOR PROJECTS
Organization Chart



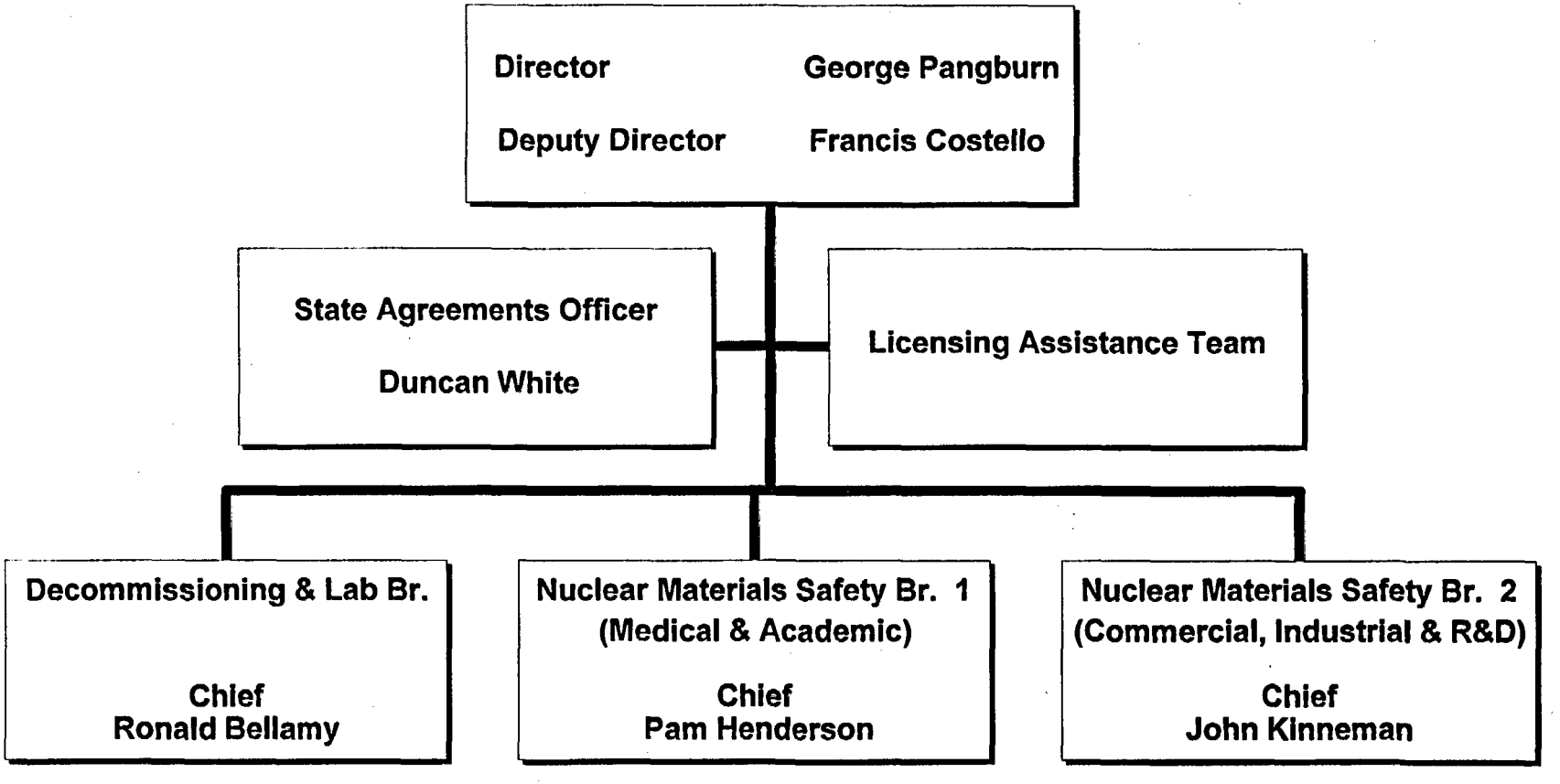
REGION I
DIVISION OF REACTOR SAFETY
Organization Chart



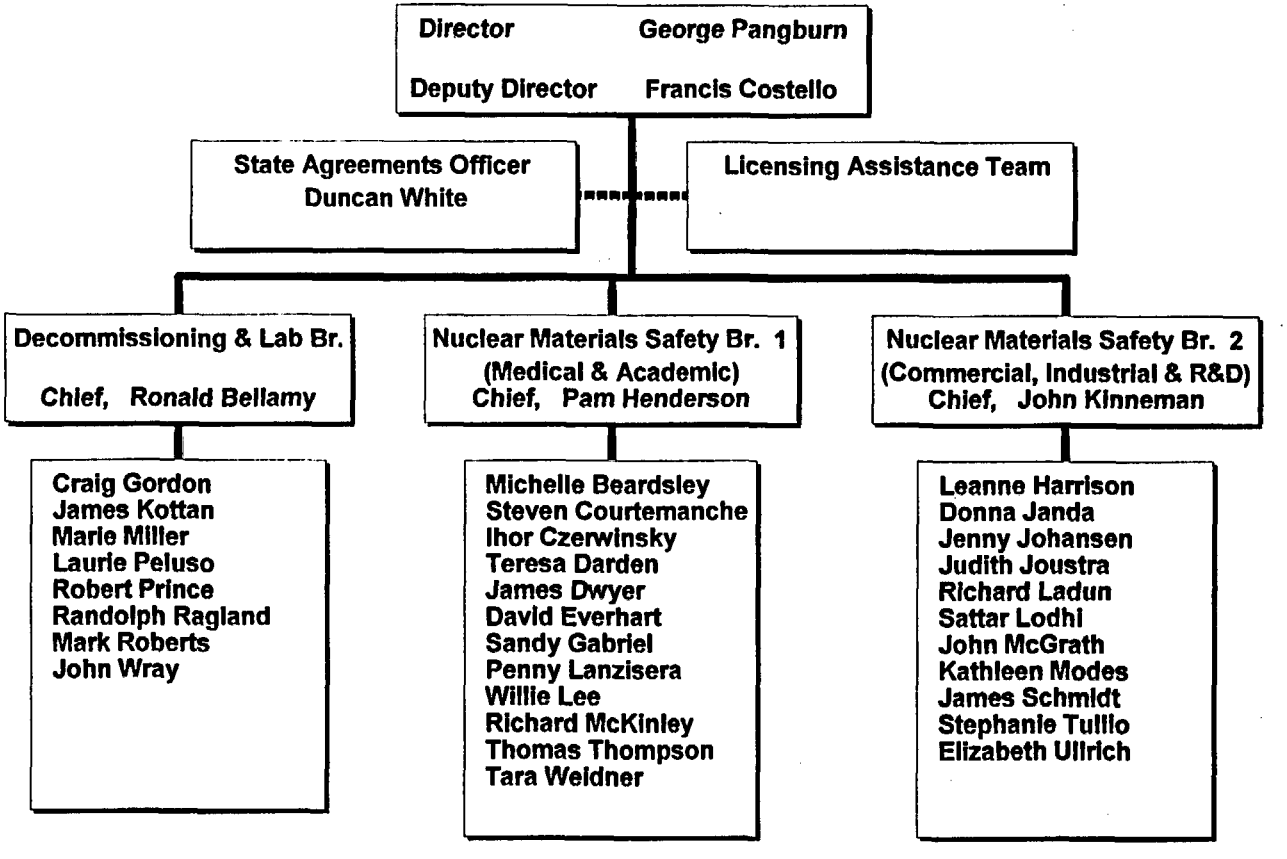
REGION I
DIVISION OF REACTOR SAFETY
Organization Chart



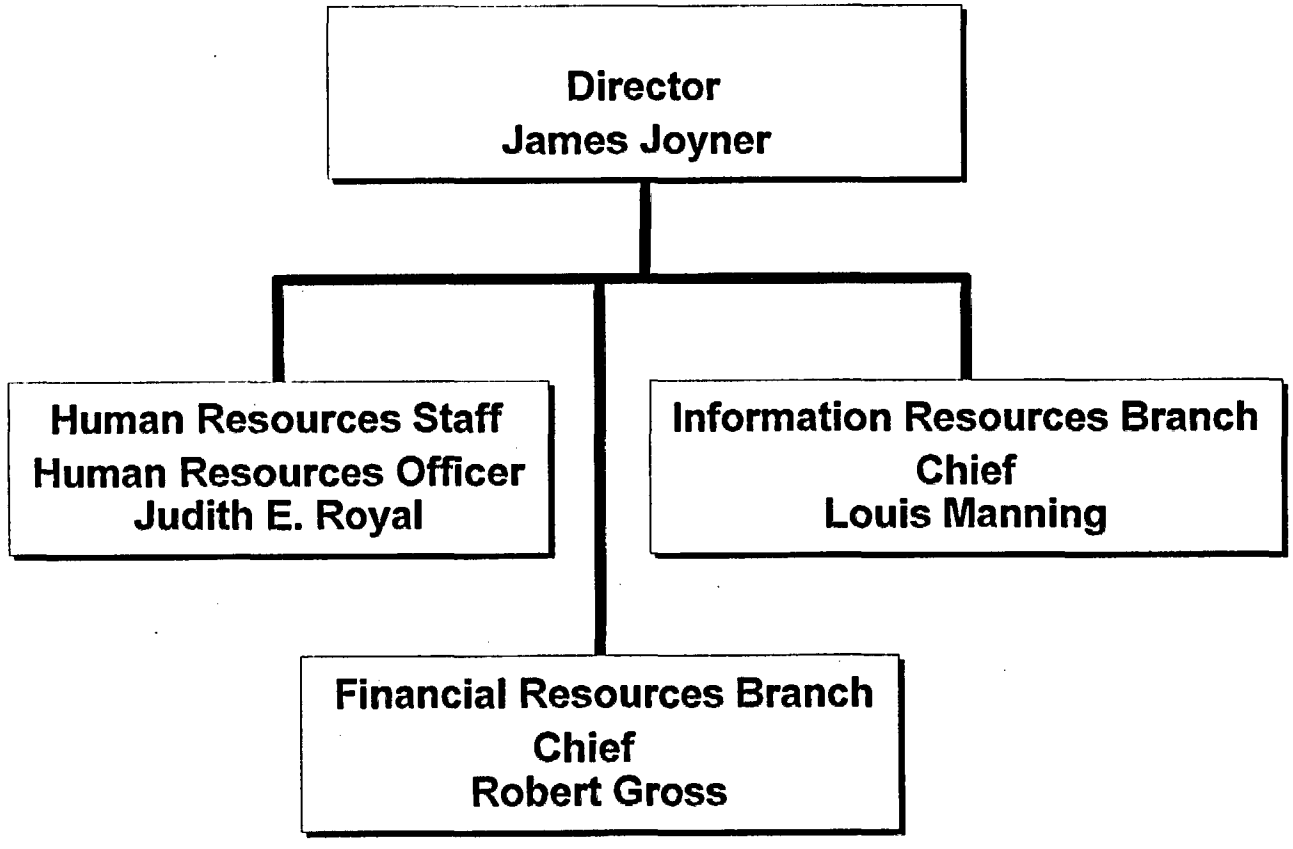
REGION I
DIVISION OF NUCLEAR MATERIALS SAFETY
Organization Chart



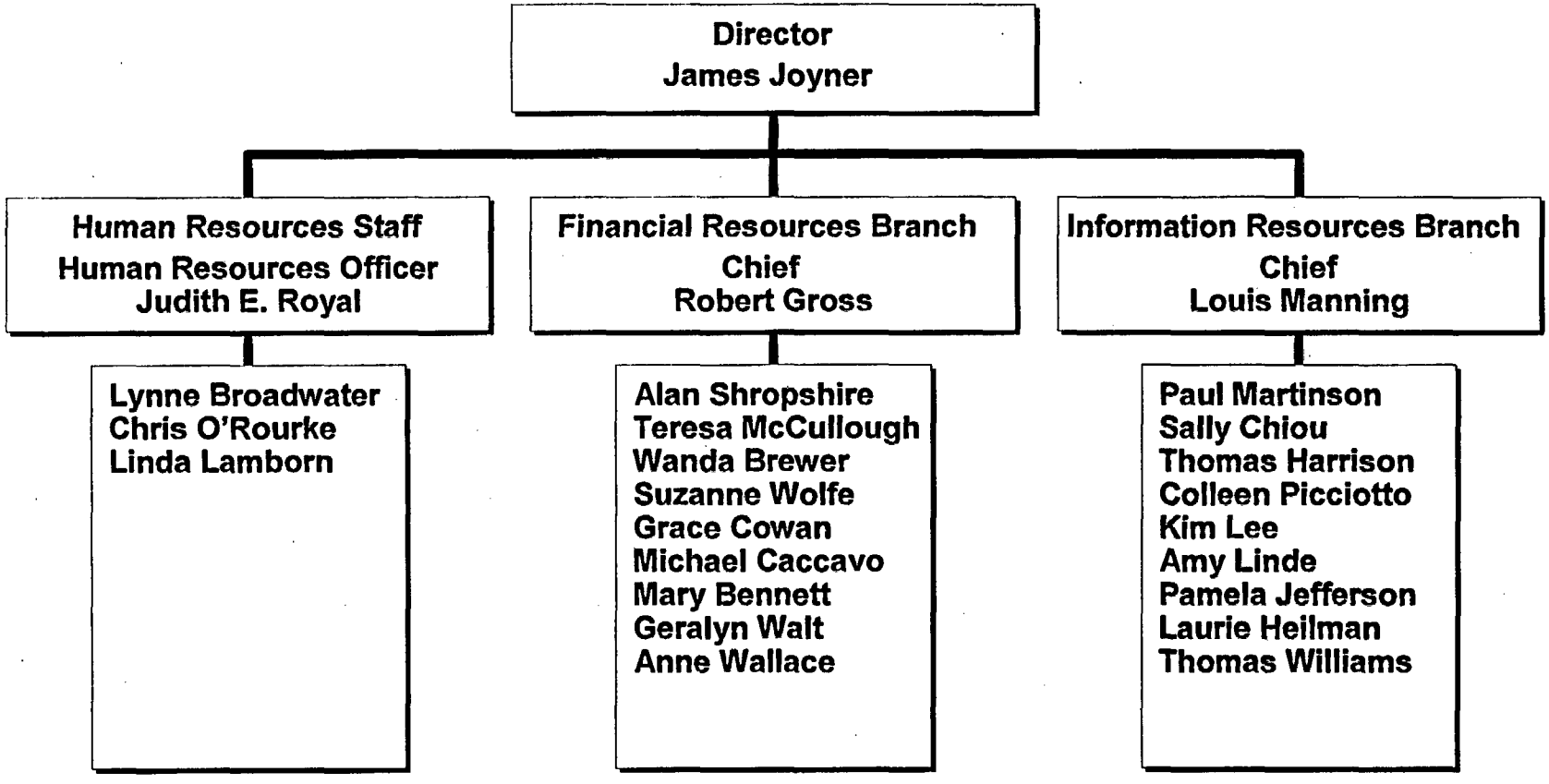
REGION I
DIVISION OF NUCLEAR MATERIALS SAFETY
Organization Chart



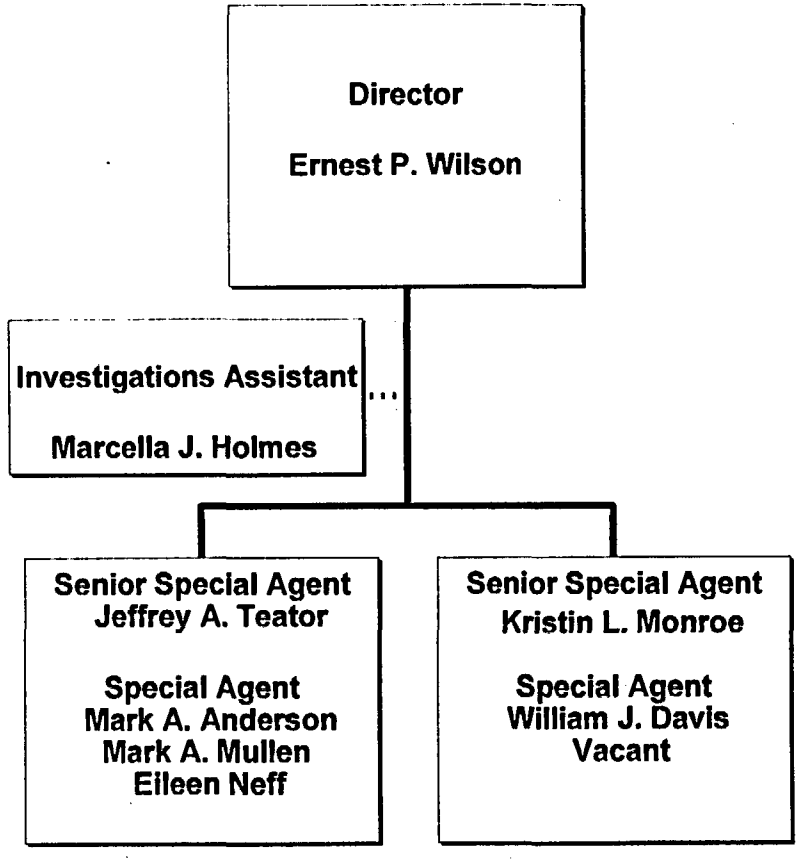
REGION I
DIVISION OF RESOURCE MANAGEMENT
Organization Chart



REGION I
DIVISION OF RESOURCE MANAGEMENT
Organization Chart



OFFICE OF INVESTIGATIONS
FIELD OFFICE
REGION I



ADVISORY COMMITTEE ON REACTOR SAFEGUARDS BRIEFING
June 10, 2003

Region I
Overview and Challenges

Hubert J. Miller

REGION I OVERVIEW

- Historical Perspective
- Industry Change and Consolidation
- Public Interest
- Resource Challenges and Staffing
- Inspection and Oversight Philosophy – "Safety Culture"

HISTORICAL PERSPECTIVE

- "Yankee" system pioneered
- Yankee Rowe – 1960 O.L.
- Large number of small, single unit sites with multiple owners
- "Governance" and remote technical support issues

HISTORICAL PERSPECTIVE (Cont'd)

- Strong public interest – e.g. Shoreham, Seabrook, Millstone
- Historical plant performance problems – numerous "Watch List" plants in past
- TMI

INDUSTRY CHANGE AND CONSOLIDATION

Year	Sites	Units	Owners
1993	21	30	17
2003	17	26	9

- 10 owner operators departed
- 4 new owners bridging other 3 regions
- Virtually <u>all</u> Region I plants operate as merchant plants
- Impacts of consolidation and deregulation

PUBLIC INTEREST

- At times, massive activity with significant resource implications
  - Past "Problem Plant" activity
  - Post 9/11 concerns
  - Indian Point activities
- Multiple Stakeholders
  - Congress
  - State and Local
  - Public Interest Groups
  - Media

INTERACTION WITH EXTERNAL STAKEHOLDERS (since 9/11/01)

	EVENTS	SUPPORTED	NOT SUPPORTED
Public Meetings	41	14	27
Congressional Site Visits	14	4	10
Congressional Briefings and Hearings	26	22	4
Support to Federal/State and other high level government officials	28	21	7
Reactor Oversight Program meetings open to public	36	36	
Other Stakeholder Interface Activities	37	25	12

PUBLIC INTEREST (Cont'd)

- Region I Initiatives
  - Budget/Staffing
  - Organization/Coordination Team
  - Communications
  - Outreach
  - Training

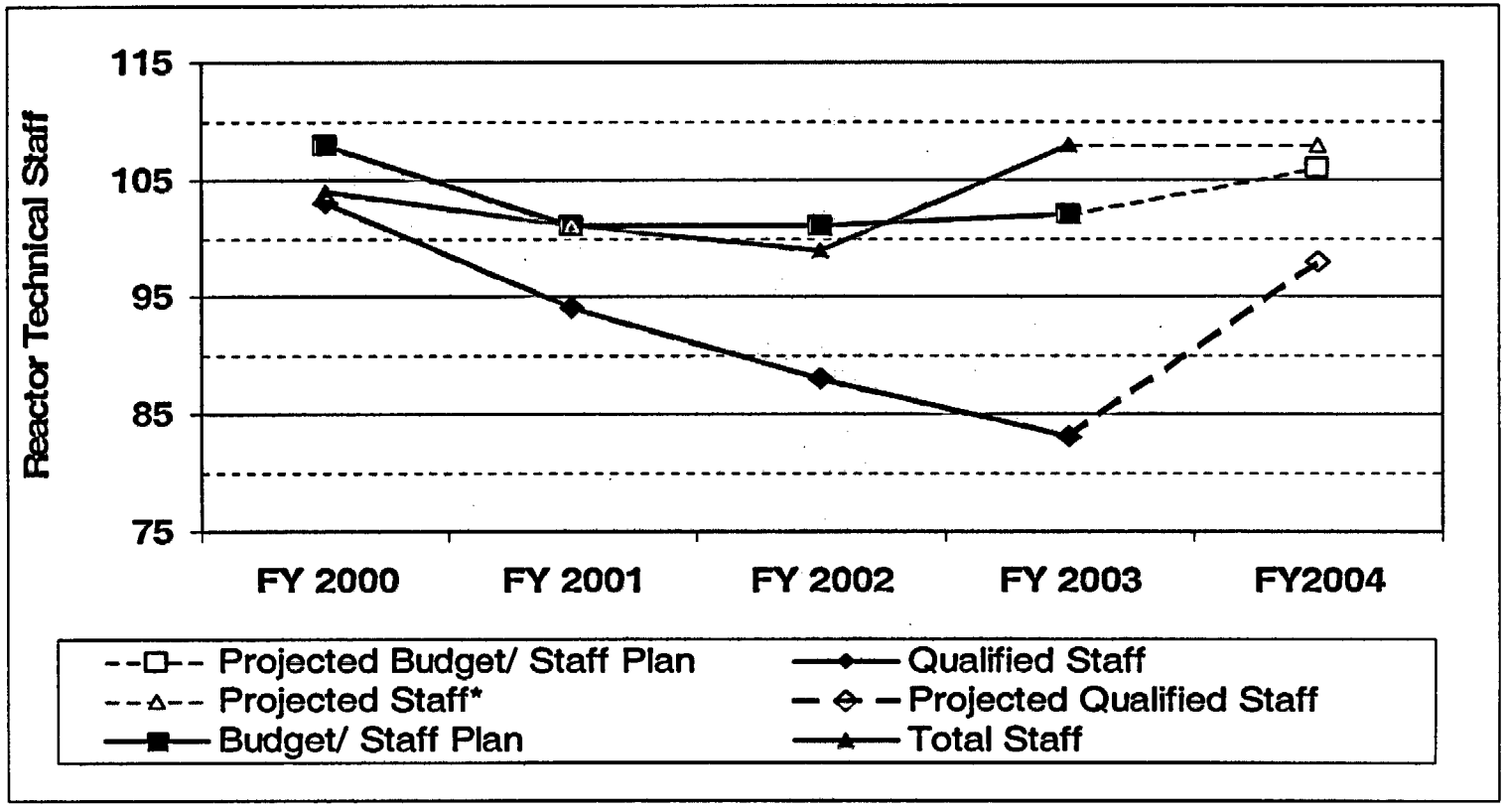
RESOURCES AND STAFFING

- Regional staffers playing key role in HQ senior positions
- Significant turnover poses challenge to program execution
- Intense management focus on staffing and resource utilization
  - Coping measures - - some "one time"
  - Positive results – e.g. program completion, quality findings, "site coverage"

RESOURCES AND STAFFING (Cont'd)

DRP/DRS

April 2000 - April 2004



* Assume 10% Attrition

RESOURCES AND STAFFING (Cont'd)

- Training and development successes and challenges
  - Significant over-hiring
  - Strong development initiatives

INSPECTION AND OVERSIGHT PHILOSOPHY

- ROP Improvements:
  - Risk focus
  - Increased Objectivity
  - Sound foundation for oversight
- As with all processes, effective implementation is the <u>key</u>

INSPECTION AND OVERSIGHT PHILOSOPHY

- Aggressive mindset to inspection and oversight is vital
  - Effective communication of expectations
  - Strong management involvement and support
  - Management site visits
- Assessment of "safety culture" a byproduct of every inspection – "connecting the dots"
- ANS September 9, 1998 Workshop

CONDUCT OF INSPECTIONS

AND COMMUNICATION OF INSPECTION FINDINGS

OVERVIEW

UTILITY/NRC INTERFACE WORKSHOP

SEPTEMBER 9, 1998

HUBERT J. MILLER

REGIONAL ADMINISTRATOR, REGION I

EXPECTATIONS FOR NRC INSPECTION AND OVERSIGHT

- FOCUS ON FINDING PROBLEMS
- FOCUS ON IMPORTANT ISSUES -- RISK INFORMED, PERFORMANCE BASED
- COMMUNICATE EFFECTIVELY

"FINDING PROBLEMS"

- BEST APPROACH NOT ONLY FOR SAFETY BUT ALSO FOR LONG TERM VIABILITY OF PLANT OPERATIONS
- IDENTIFICATION OF PROBLEMS EARLY -- BEFORE BECOMING SIGNIFICANT EVENTS OR REGULATORY BREAKDOWN
- PROVIDES LICENSEES "TIME AND SPACE" TO DEAL WITH ISSUES
- NRC INDEPENDENT, PERFORMANCE BASED INSPECTION VS. "MINING" LICENSEE CORRECTIVE ACTION PROGRAM
- VALUE ADDED BY NRC

FOCUS ON IMPORTANT ISSUES

- REQUIRED AT EACH STAGE OF INSPECTION
  - BEFORE -- PLANNING AND PICKING TARGETS
  - DURING -- ASKING FOR INFORMATION
  - AFTER -- ASSESSMENT, ENFORCEMENT AND DOCUMENTATION
- AVOID DIVERSION OF LICENSEE RESOURCES AND ATTENTION TO ISSUES WITH LOW SAFETY PAYOFF -- AWARENESS OF SUBTLE WAYS THIS CAN HAPPEN
- "SPLIT PERSONALITY" A VIRTUE
  - DIG DEEP
  - STAND BACK AND ASSESS THE BIG PICTURE
- DISTINGUISH BETWEEN ISOLATED ISSUES AND PERVASIVE PROBLEMS AND WEAKNESSES
- RISK INSIGHTS
- TAP BROADER AGENCY PERSPECTIVES IN MAKING JUDGEMENTS
  - REGIONAL MANAGEMENT
  - PEER INSPECTORS AND SENIOR RISK ANALYSTS
  - NRR

ASSESSMENT OF LICENSEE SELF-ASSESSMENT AND CORRECTIVE ACTION PROGRAMS

- STRONG ELEMENT OF SELF-REGULATION
- BYPRODUCT OF ALL INSPECTIONS IS ASSESSMENT OF LICENSEE EFFORTS IN:
  - FINDING AND DOCUMENTING PROBLEMS
  - ASSESSMENT AND ROOT CAUSE
  - CORRECTIVE ACTIONS -- WORK CONTROL, ENGINEERING SUPPORT, ETC
- RECOGNIZE NEED TO PRIORITIZE
  - EVERY PROBLEM DOESN'T GET "FULL TREATMENT" -- GET FIXED IMMEDIATELY
- LINE ORGANIZATIONS FIRST FOCUS -- RECOGNIZE BEST RESULTS CAN COME FROM LINE ASSESSMENTS
- OVERSIGHT ORGANIZATIONS PROVIDE IMPORTANT, SECOND LINE OF DEFENSE -- E.G.:
  - QA AND ONSITE/OFFSITE OVERSIGHT COMMITTEES
  - SPECIAL THIRD PARTY REVIEWS
- GIVE PROPER CREDIT -- EXERCISE DISCRETION WHERE APPROPRIATE
  - INSPECTION FINDINGS
  - PERFORMANCE ASSESSMENT (E.G., SALP)
  - ENFORCEMENT

COMMUNICATIONS

- NO SURPRISES OR DISCONNECTS
  - COMMUNICATE DURING INSPECTIONS
  - INSPECTION REPORTS MATCH EXIT MEETING MESSAGE
- BOTH FACTS AND "TONE" ARE ISSUES
- INTEGRATED INSPECTION REPORTS
  - FEEDBACK ON "NEGATIVE BIAS" IN REPORTS
- MANAGEMENT MEETINGS, "DROP-INS", SITE VISITS

INTERNAL NRC OVERSIGHT

- GUIDANCE AND TRAINING
  - FUNDAMENTALS OF INSPECTION
  - INSPECTOR CERTIFICATION
  - INSPECTOR SEMINARS AND SPECIAL TRAINING
  - INSPECTION MANUAL (MC - 0610)

- OVERSIGHT
  - BRANCH CHIEF AND OTHER MANAGEMENT INVOLVEMENT
  - INSPECTION ACCOMPANIMENTS
  - SITE VISITS
  - FEEDBACK FROM LICENSEES AND OTHER STAKEHOLDERS

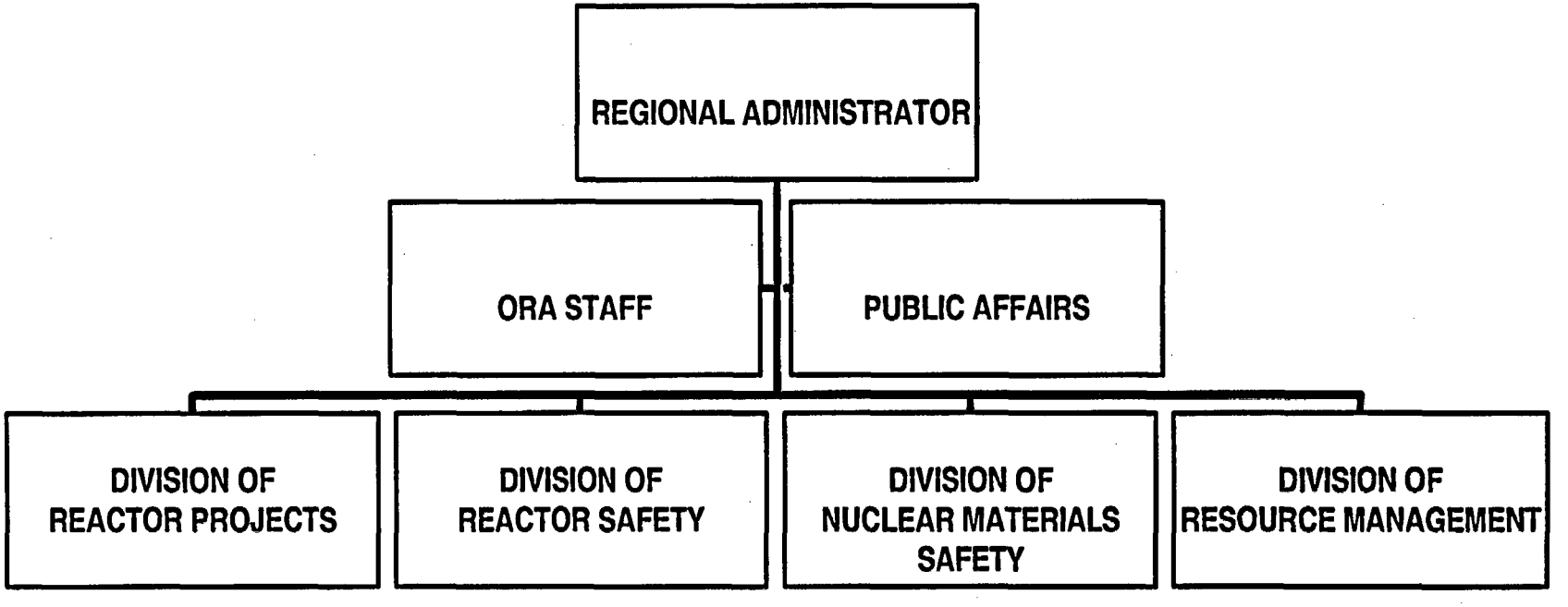
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS BRIEFING
June 10, 2003

Region I

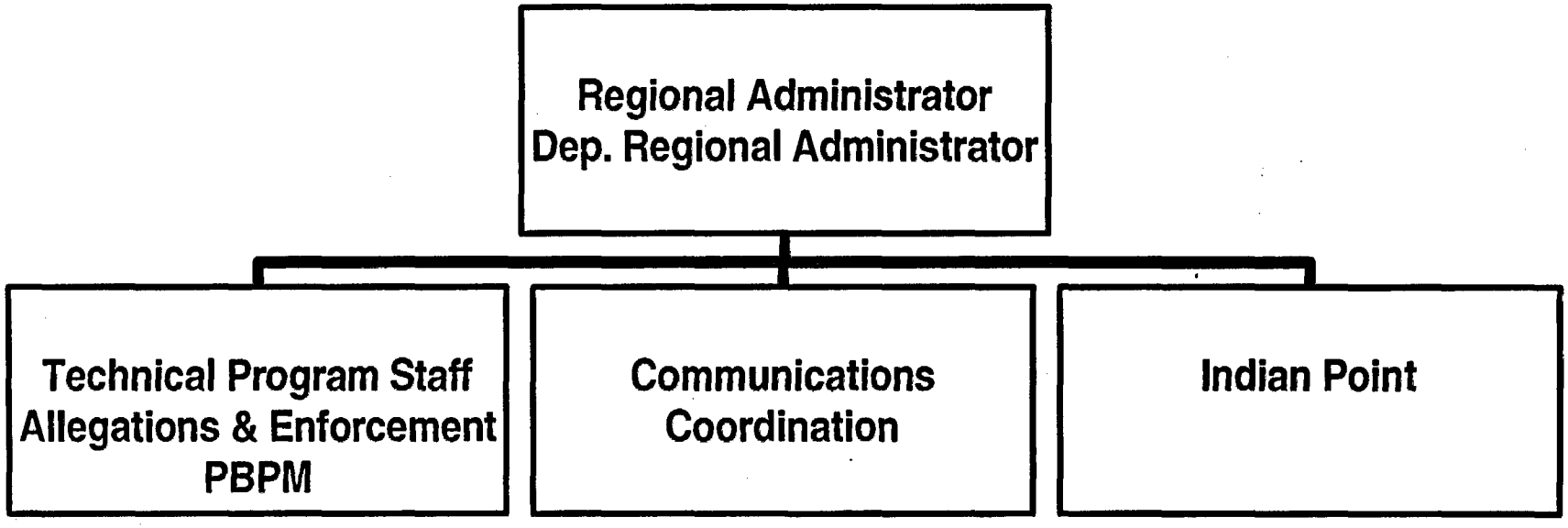
Organization

James T. Wiggins

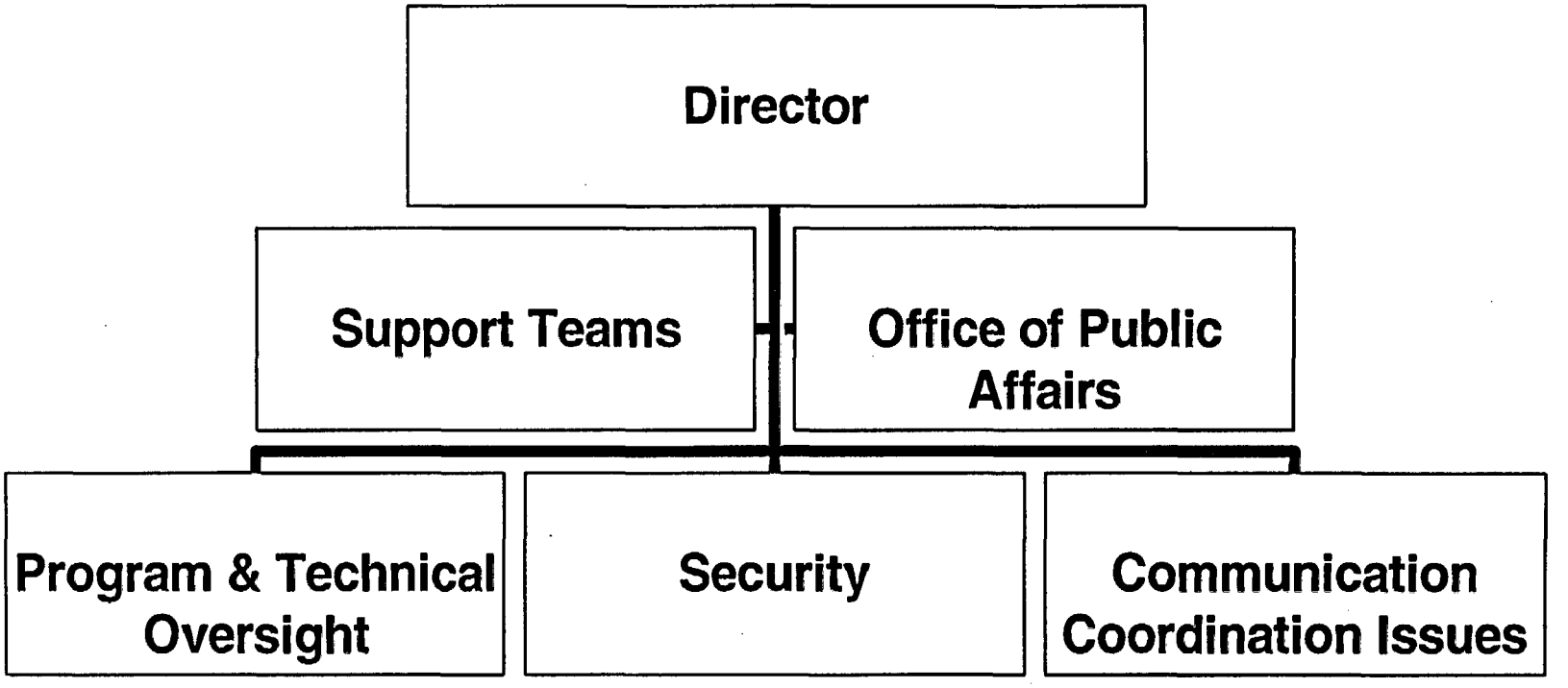
REGION I ORGANIZATION



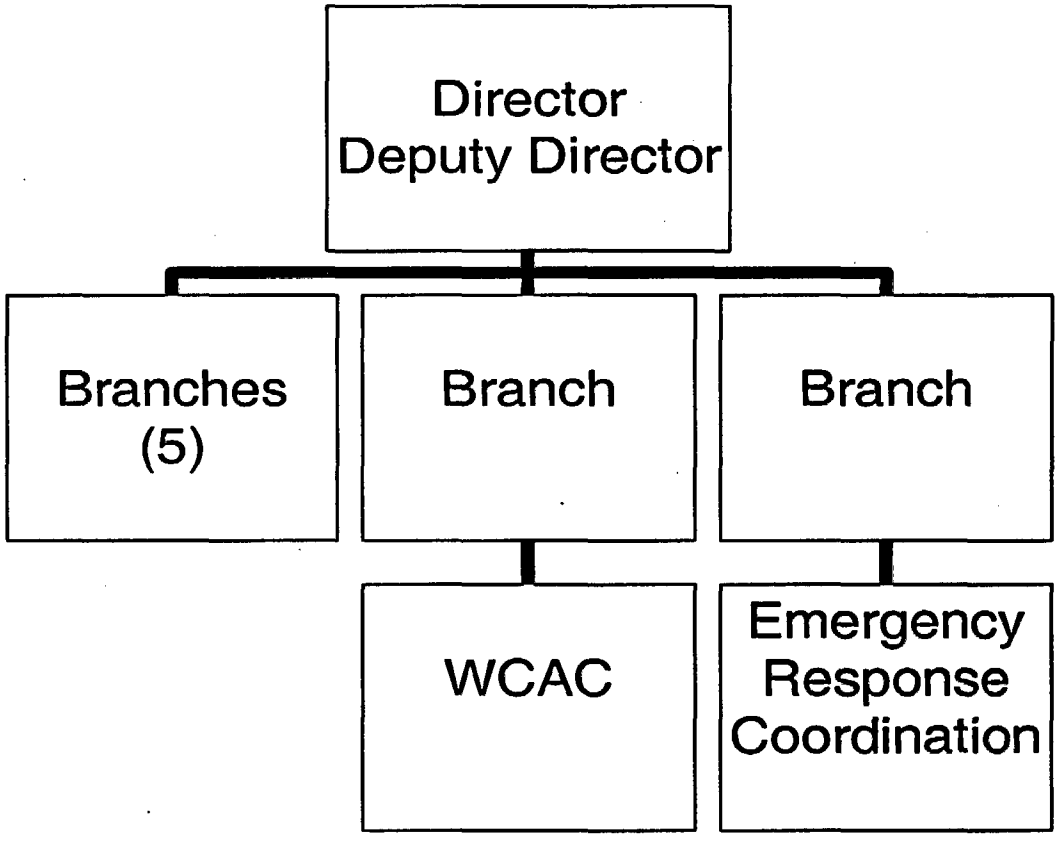
OFFICE OF THE REGIONAL ADMINISTRATOR



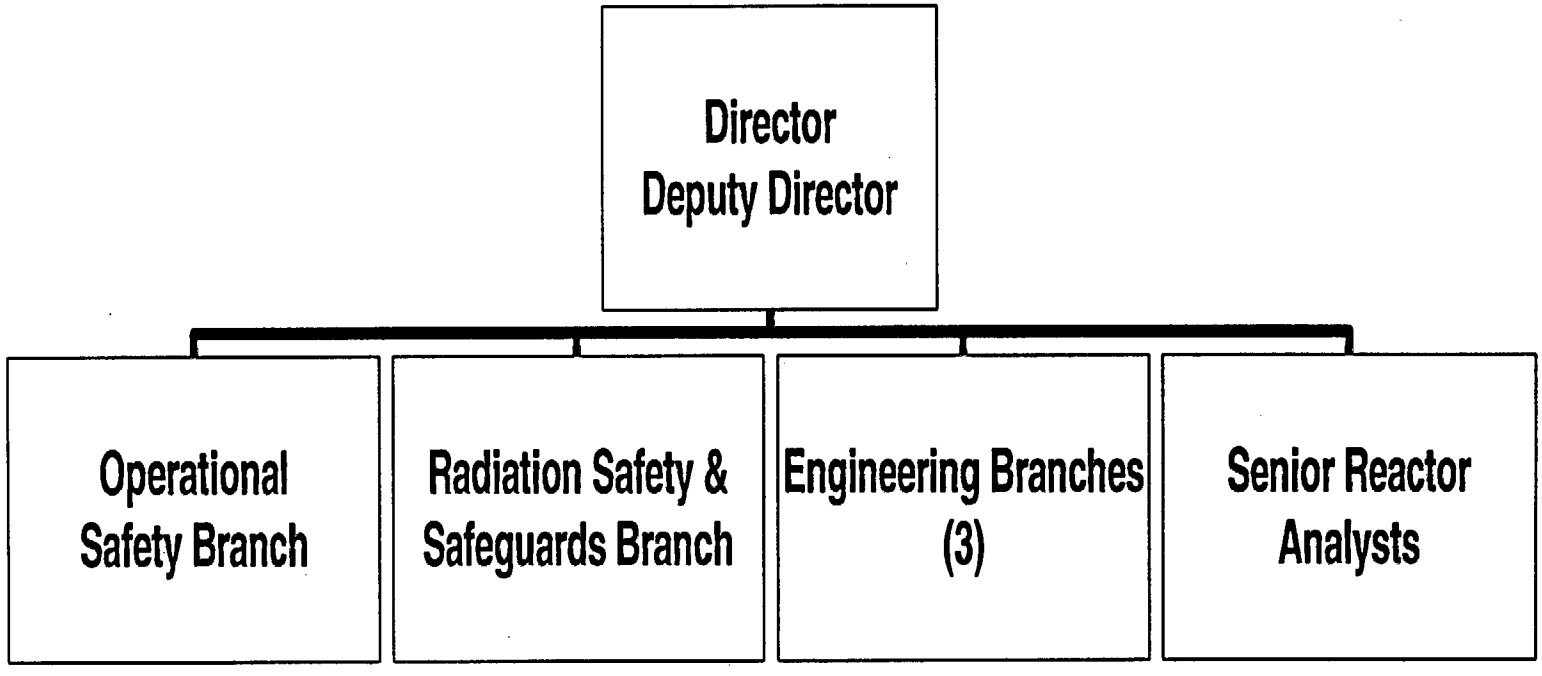
INDIAN POINT PROJECT



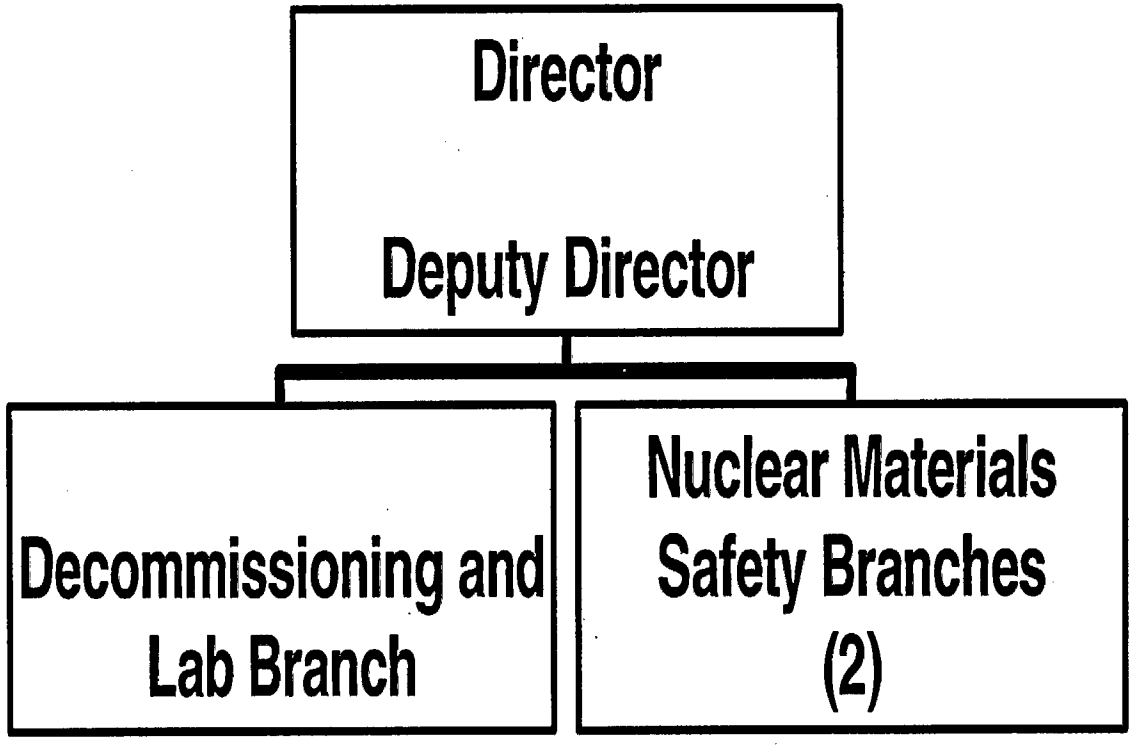
DIVISION OF REACTOR PROJECTS



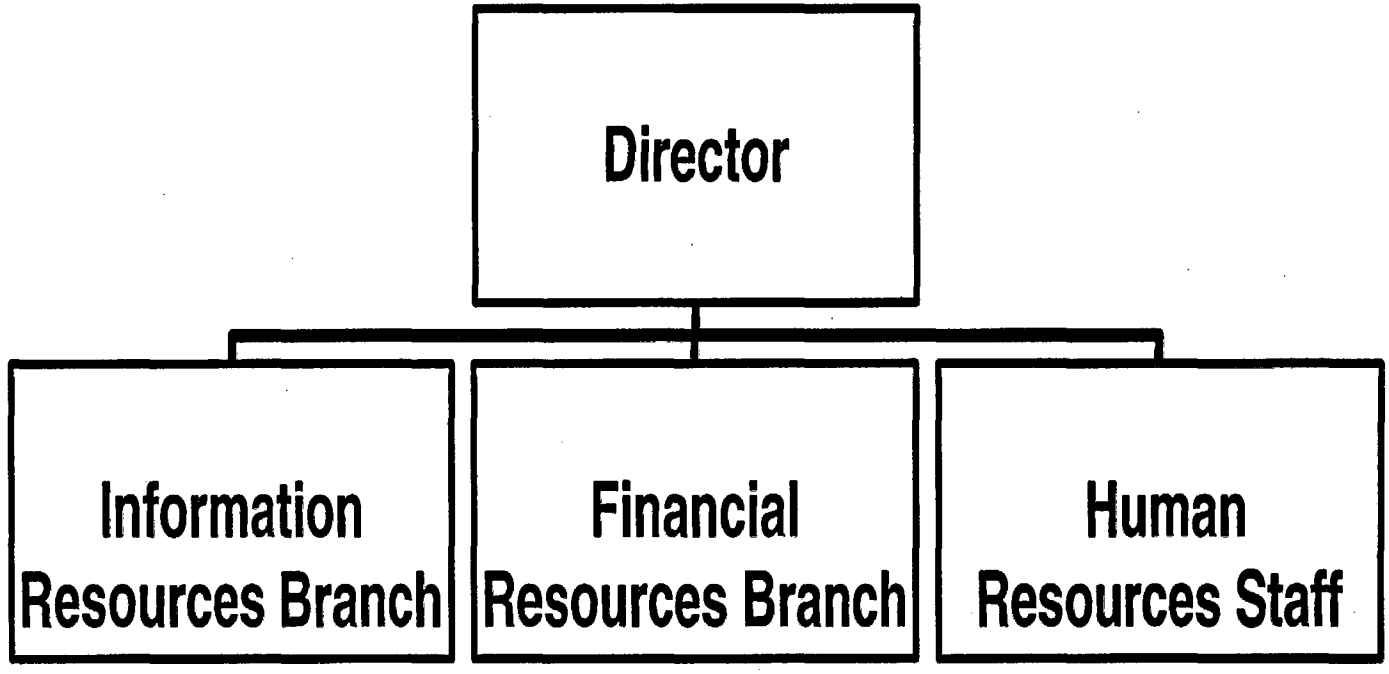
DIVISION OF REACTOR SAFETY



DIVISION OF NUCLEAR MATERIALS SAFETY



DIVISION OF RESOURCE MANAGEMENT



HIGHLIGHTS

- Resources and Staffing
- Planning and Budget Performance Monitoring
- External Communications
- Allegations/Enforcement
- Work Coordination Analysis Center

RESOURCES AND STAFFING

TECHNICAL STAFF GAINS/LOSSES

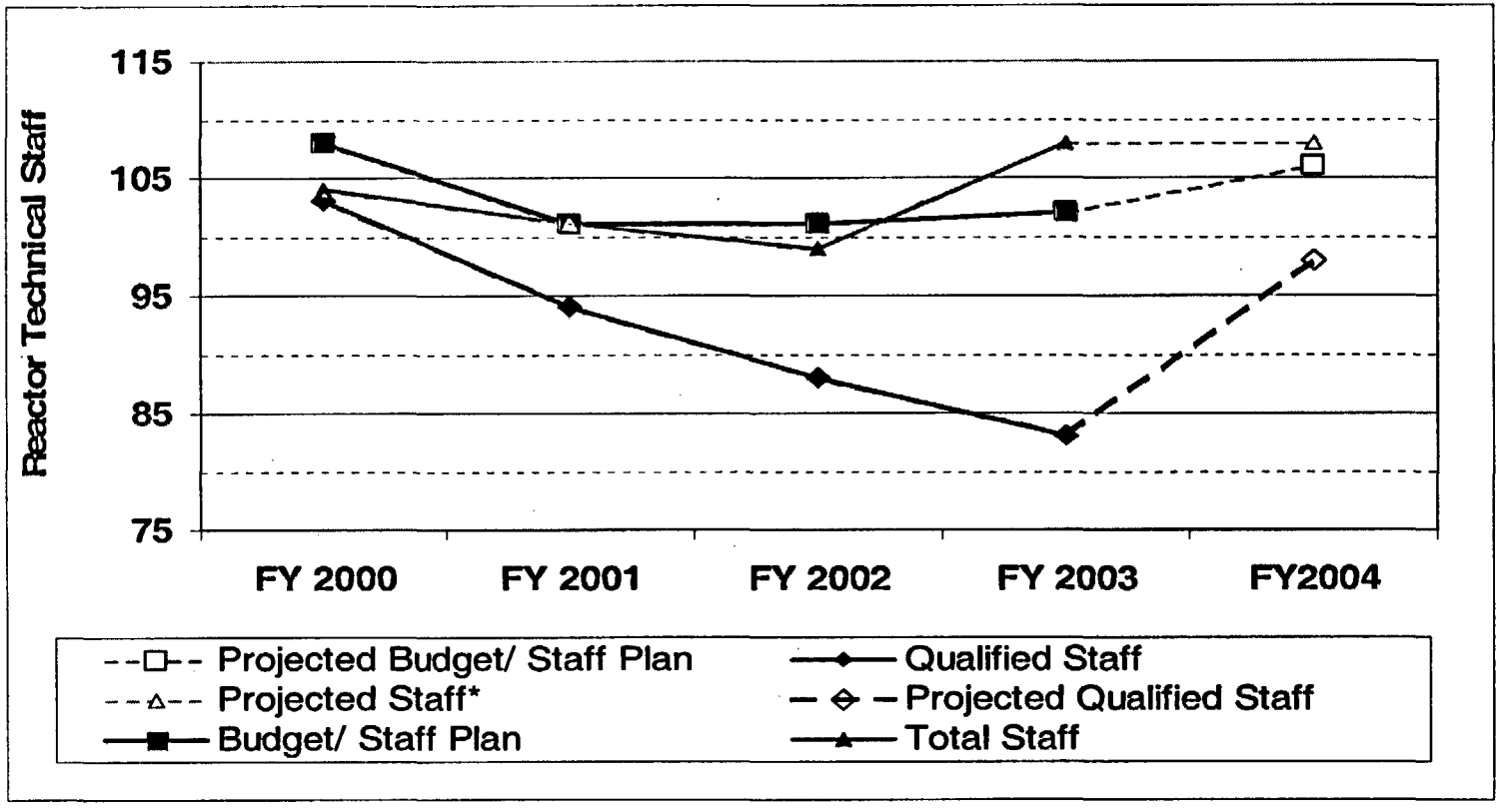
	FY00	FY01	FY02	FY03 *
GAINS	1	8	25	22
LOSSES	5	13	17	15

* Includes known gains/losses for FY03.

RESOURCES AND STAFFING (Cont'd)

DRP/DRS

April 2000 - April 2004



* Assume 10% Attrition

RESOURCES AND STAFFING (Cont'd)

	Average Years Nuclear Industry	Average Years NRC
Residents	8.0	10
Regional Inspectors	9.8	10

PLANNING BUDGET PERFORMANCE MONITORING

Process:

- Plan
- Communicate Expectations
- Monitor/Assess Results
- Adjust

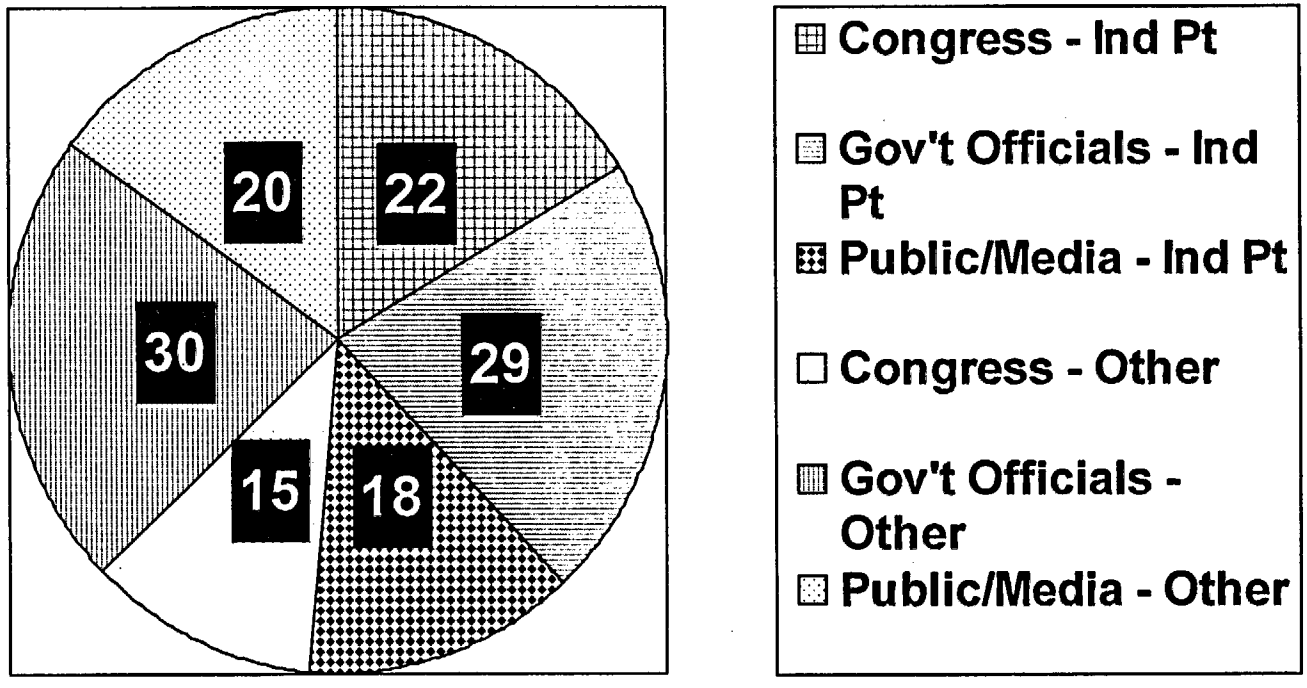
PLANNING BUDGET PERFORMANCE MONITORING (Cont'd)

Performance Monitoring and Self Assessment:

- Performance Metrics
  - Special Reassessment Team FY02
- "Event" Reviews and Lessons Learned
- Special Self-Assessments
- Senior Regional Management Site Visits
- Benchmarking

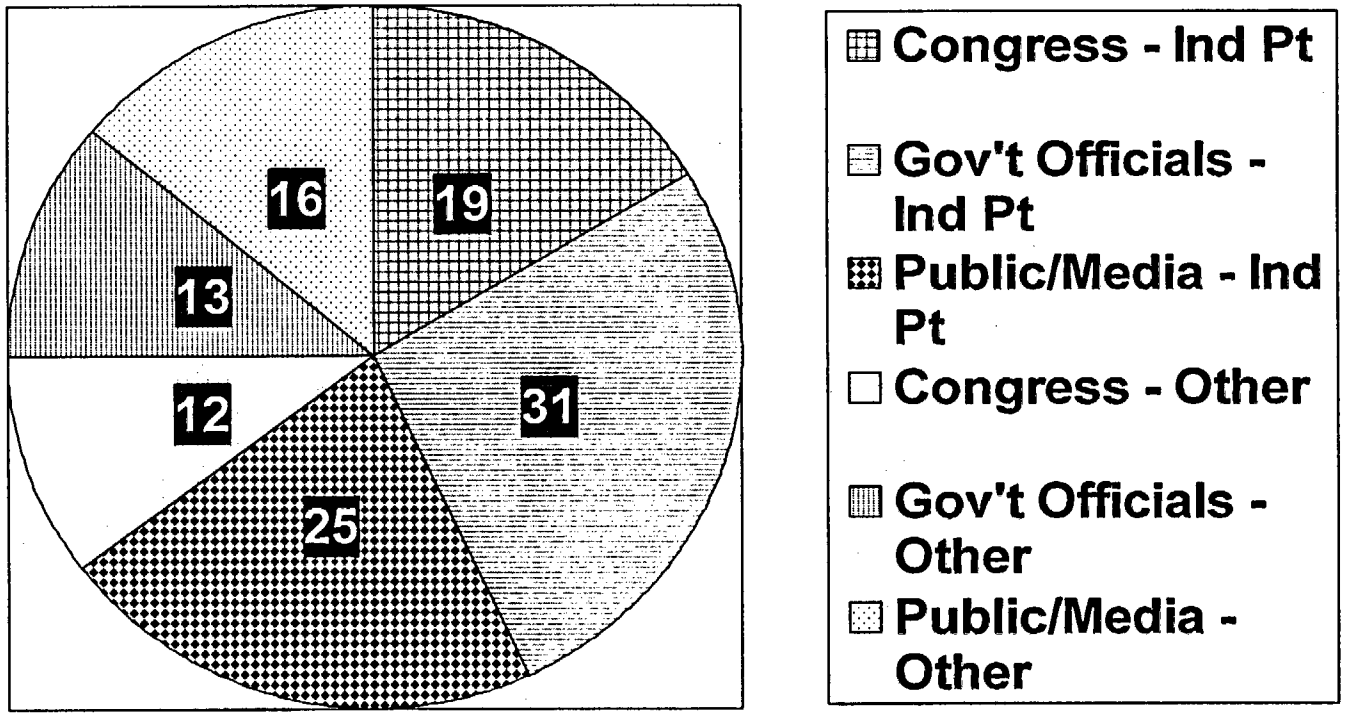
EXTERNAL COMMUNICATIONS

MEETING REQUESTS



EXTERNAL COMMUNICATIONS (Cont'd)

CORRESPONDENCE



ALLEGATIONS/ ENFORCEMENT

	FY00	FY01	FY02	FY03 *
Allegations Received				
Materials	55	48	59	33
Reactors	91	90	114	138
TOTAL	146	138	173	171
Enforcement/SDP Cases				
Materials	8	15	12	14
Reactors	8	13	10	11
TOTAL	16	28	22	25

*** Projected based on Oct-May (8 months) data.**

ALLEGATIONS/ ENFORCEMENT (Cont'd)

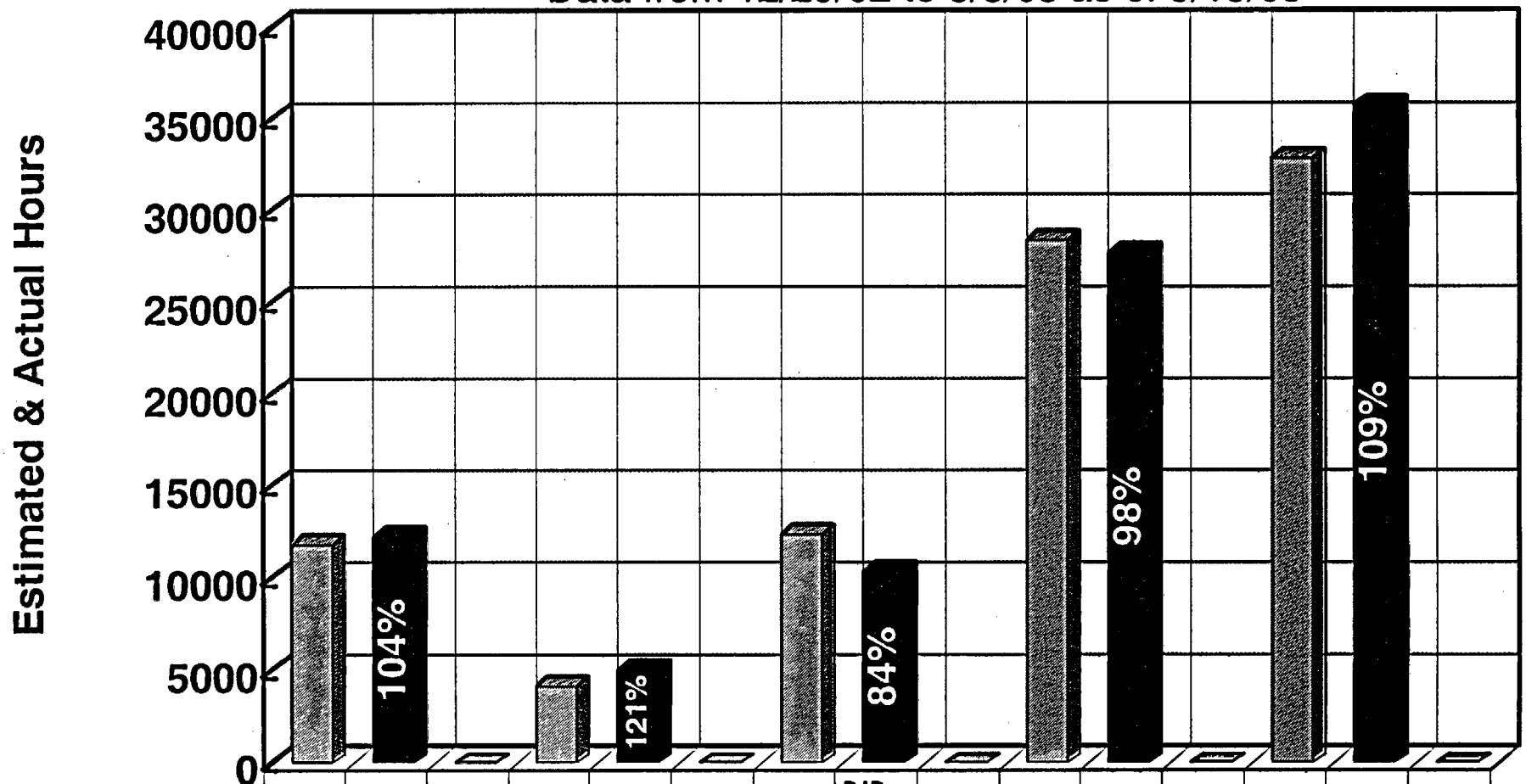
- Significant Effort in Allegations Continues
  - 35% Involved Security
  - 25% involved H & I
- Program Audit Results Consistently Outstanding

ALLEGATIONS/ ENFORCEMENT (Cont'd)

- Enforcement Workload Steady
  - 33% Involved Emergency Preparedness
  - 40% Involved Mitigating Systems
  - Some "Classic" Enforcement - e.g. Wrong Doing
- Program Audit Results Consistently Outstanding

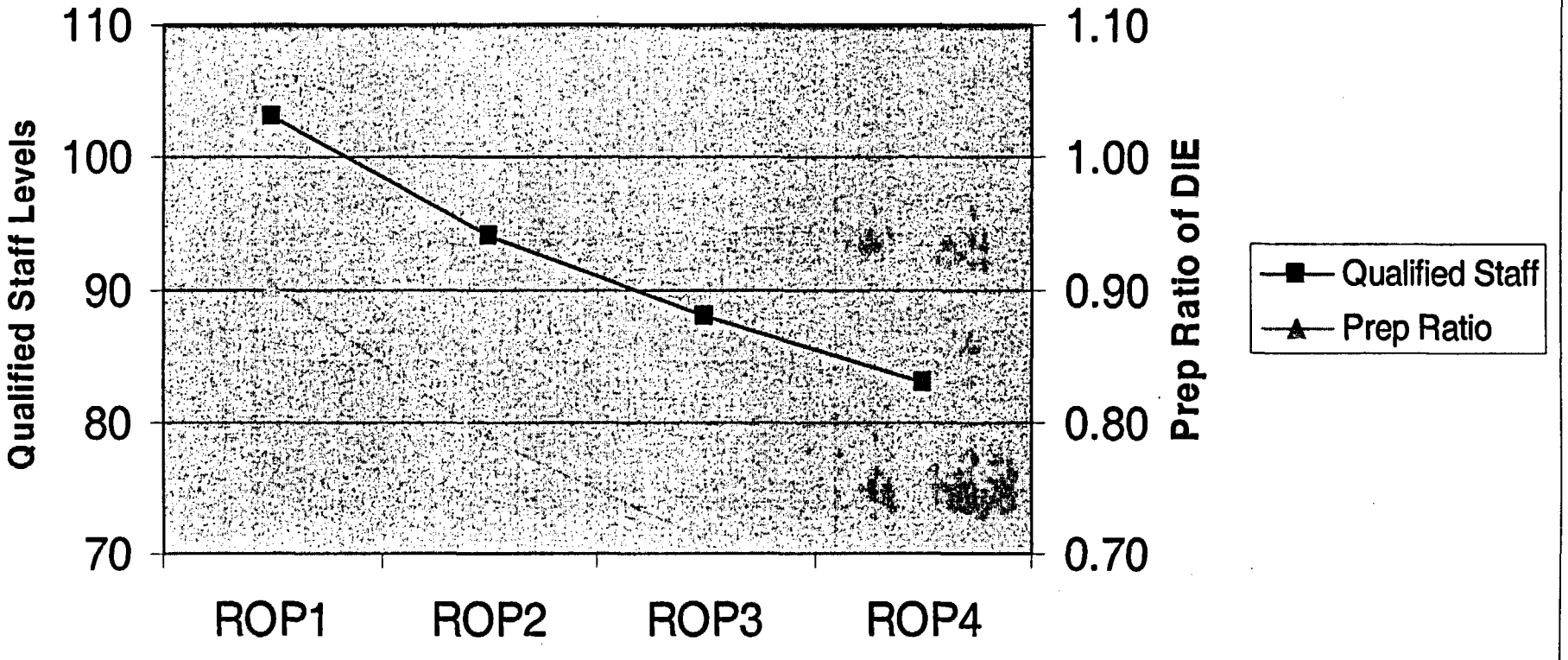
REGION I ROP PERFORMANCE

Data from 12/29/02 to 5/3/03 as of 5/13/03

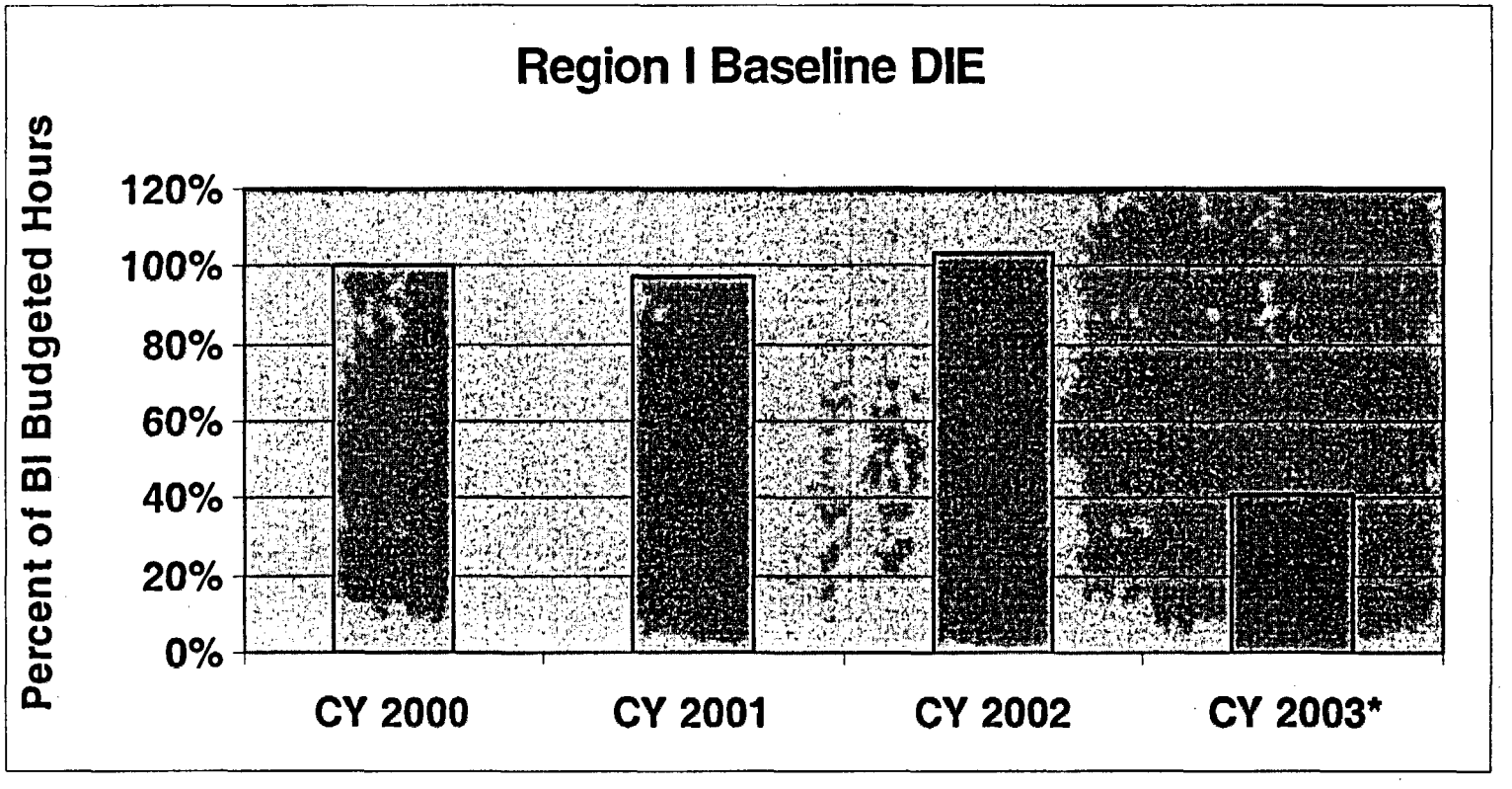


		BI			PS			BIP+ BID		BI +	PS +	P & D	Total	IPE +	ACT
Estimated	11849			4153			12365			28367			32868		
Actual to Date		12307			5045			10380			27732			35772	
Percent/Ratio			104%			121%			84%			98%			109%

Prep Ratio vs Qualifed Staff



WORK COORDINATION ANALYSIS CENTER



*To Date

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS BRIEFING
June 10, 2003

Region I

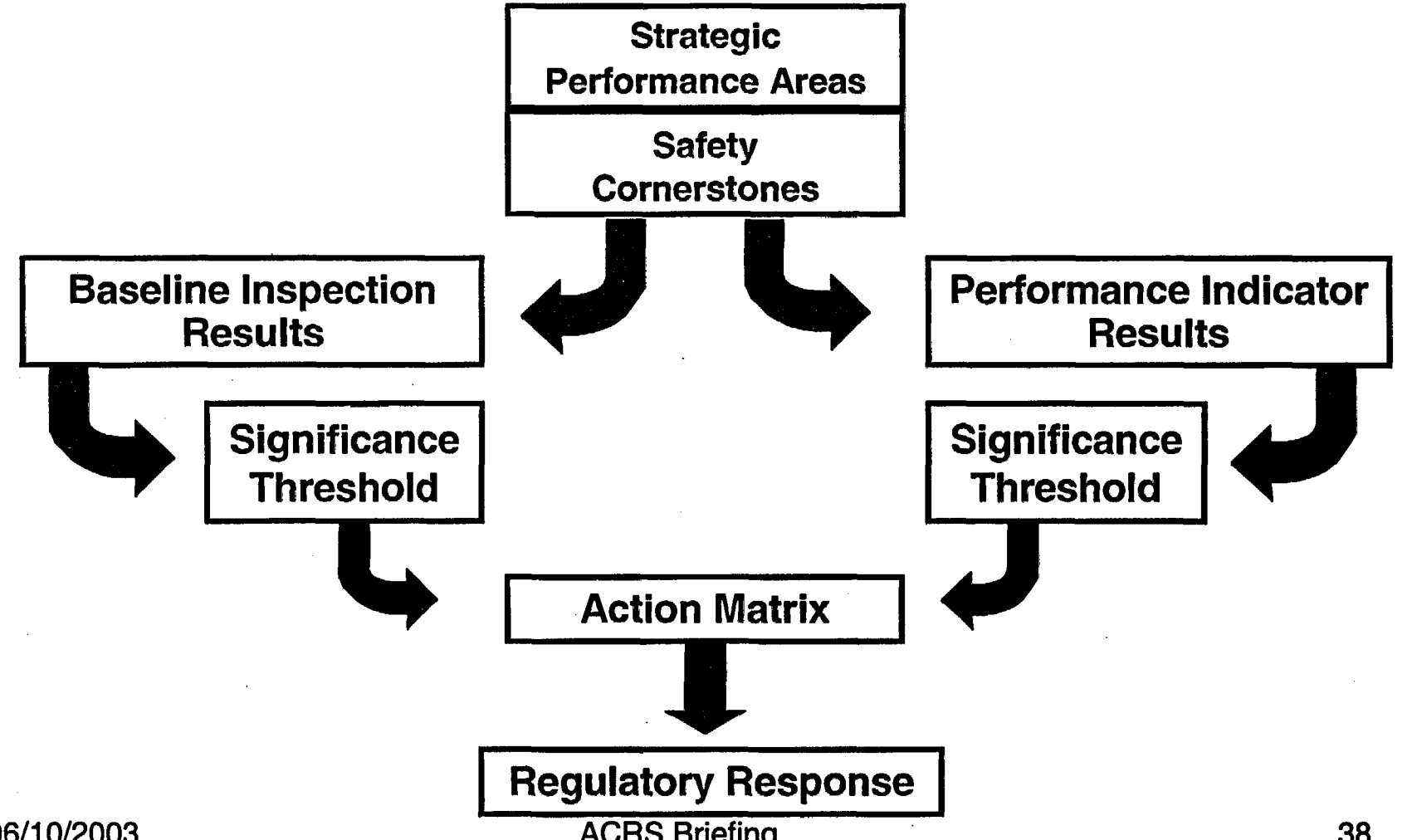
Plant Performance

Randy Blough

PLANT PERFORMANCE

- ROP OVERVIEW
- APPROACH TO INSPECTION
- REGION I PLANT PERFORMANCE

REACTOR OVERSIGHT PROCESS



APPROACH TO INSPECTIONS - - Philosophy

We add value to nuclear safety when we:

- **Focus our inspections and reviews on areas of safety importance**
- **Find problems**
- **Put those problems into safety perspective**
- **Communicate effectively**

APPROACH TO INSPECTIONS - - Continually Question

"Nuclear power is by its very nature potentially dangerous, and... one must continually question whether the safeguards already in place are sufficient to prevent major accidents."

President's Commission on TMI-2

SAFETY PHILOSOPHY

Defense in depth strategy

- **Accident Prevention**
- **Safety systems**
- **Containment (multiple barriers)**
- **Siting & emergency planning**
- **Continually question**

From NRC course "Perspectives on Reactor Safety"

CONTINUOUS ASSESSMENT:

We are always assessing licensee performance and our own oversight efforts.

- **ROP assessment process is continuous**
- **PI&R inspection has to be "continuous"**
- **RI challenges ourselves to always be assessing**
  - **Common themes**
  - **Cross-cutting areas**
  - **How well are licensee's "regulating themselves?"**

FOSTERING A QUESTIONING APPROACH AND CONTINUOUS ASSESSMENT

- Recognize good findings
- Coordinate, communicate – e.g., DRP/DRS a.m. meeting
- Inspector Seminars
- NRC management site visits
- Events, "events"
- PI&R samples
- Assessment meetings

SITE VISIT STATISTICS

	FY02	FY03 to date
RA/DRA	32	18
Division Management	49	36
Branch Chiefs	Numerous	Numerous

FOSTERING A QUESTIONING APPROACH AND CONTINUOUS ASSESSMENT

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- PI&R samples
- Assessment meetings

APPROACH TO INSPECTIONS

Unique Sites

- **Nine Mile Point and Beaver Valley**
- **Salem/Hope Creek and Millstone Units 2 & 3**
- **Indian Point Units 2 & 3**

Goal

- **Adequate indication of licensee performance; efficiently**

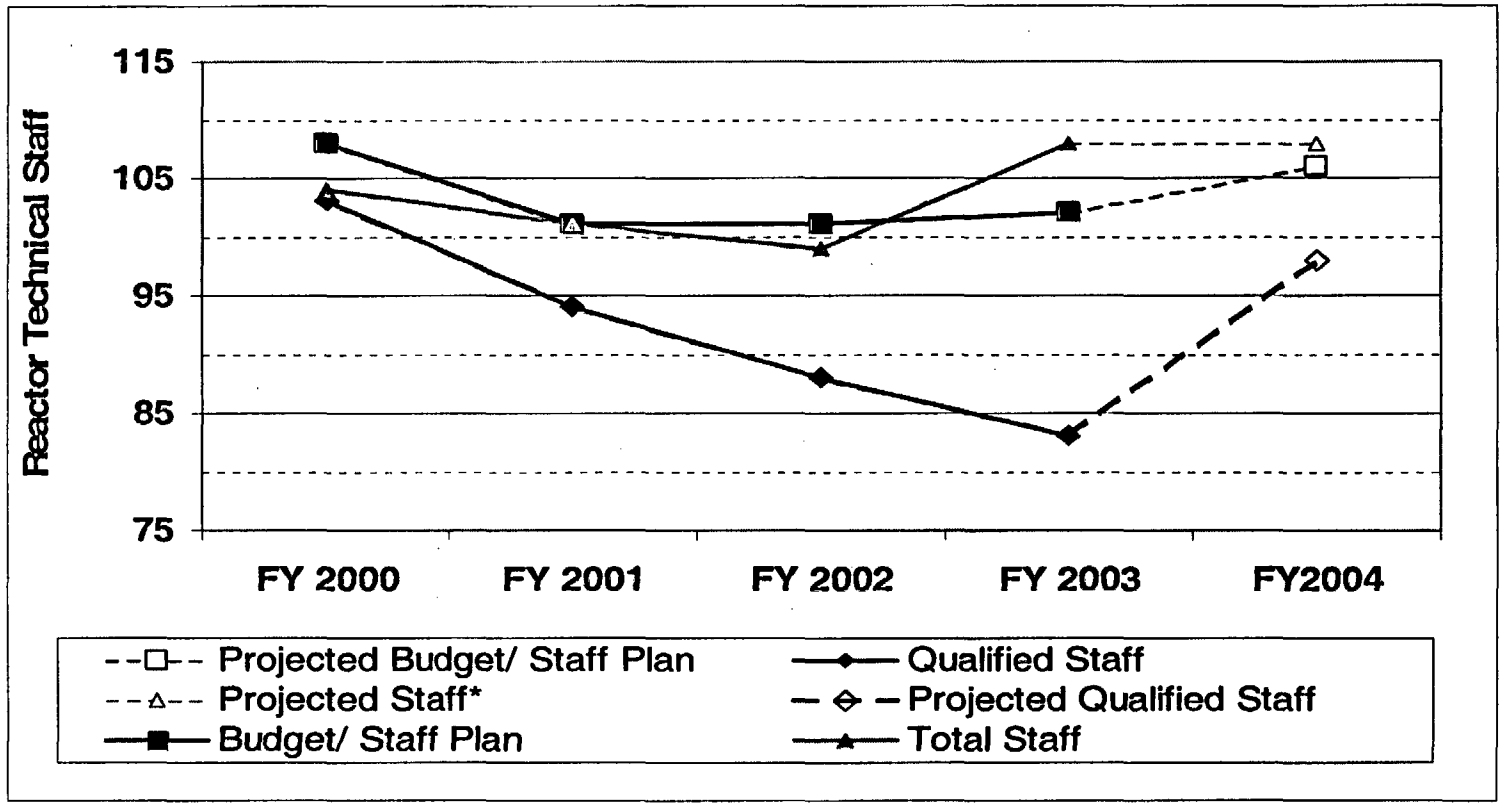
INSPECTION PROGRAM CHALLENGES

- **Accelerated turnover**
  - **Virtually** NO **external turnover**
- **Continuity at each site**
- **Complete the program with high quality**

RESOURCES AND STAFFING (Cont'd)

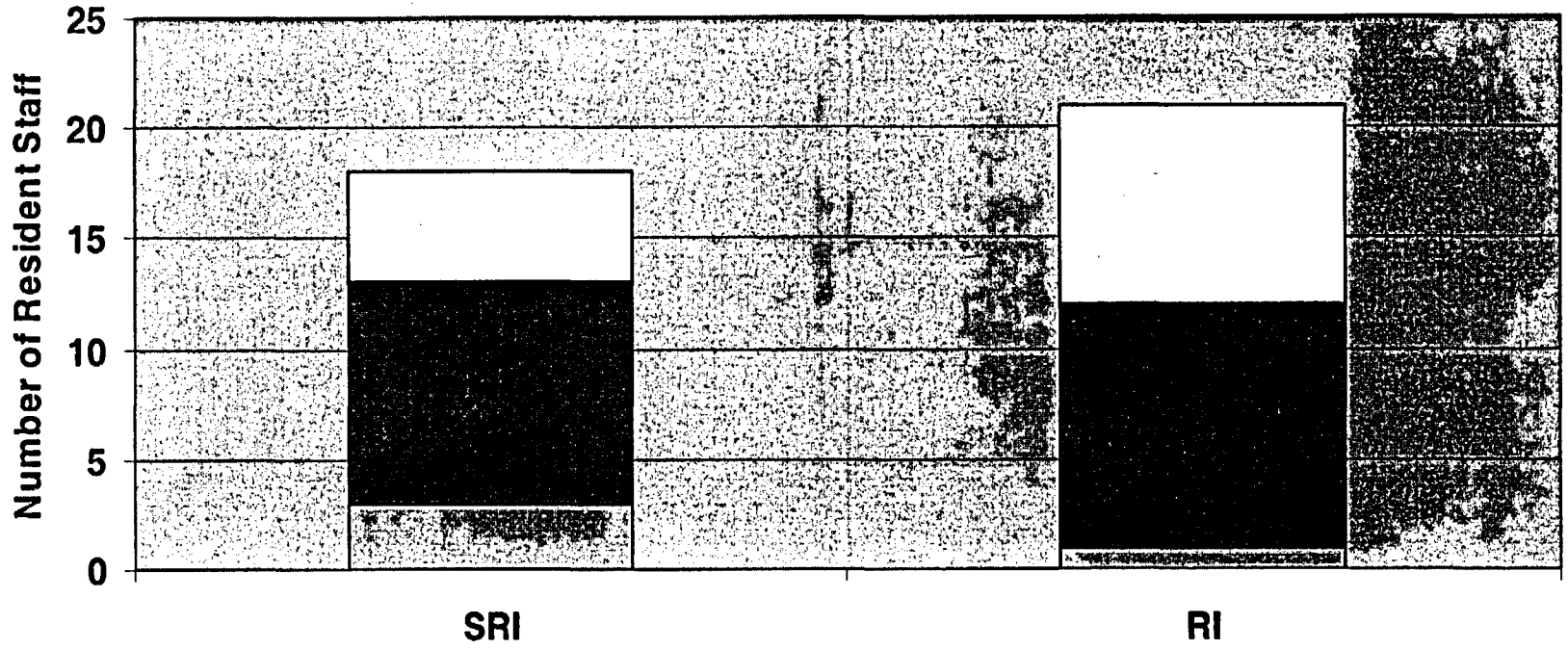
DRP/DRS

April 2000 - April 2004



* Assume 10% Attrition

Region I - Resident Changes
(Past Two Years)



Planned Change = Retirement & 7 Year Clock

Planned Moves | Unplanned Moves | No Change

RI PLANT PERFORMANCE - - Current Action Matrix Summary

Degraded Cornerstone: 1 unit

Indian Point 2 - Mitigating Systems (Exiting Degraded Cornerstone to Regulatory Response)

Regulatory Response Plants: 7 units

Ginna - Emergency Planning

Calvert Cliffs 1&2 - EP and Public Radiation Safety

Peach Bottom 2&3 - Emergency Planning

Nine Mile Point 1 - Mitigating Systems

Salem 1 - Mitigating Systems

Licensee Response Column: 18 units

CURRENT SUBSTANTIVE CROSS CUTTING ISSUES

- Defined in NRC Inspection Manual 0305, "Operating Reactor Assessment Program"
  - Significant Level Of Concern in the licensee's ability or progress in addressing cross-cutting area performance deficiencies.
  - Multiple Green or safety significant findings within assessment period with documented causal factors in the areas of human performance, PI&R, or safety conscious work environment.
  - Causal factors have a common theme. (i.e failure to follow procedures, ineffective evaluation of performance deficiencies, inadequate system engineering support of operability, etc.)
- Assessed every 6 months during Mid-Cycle and End Of Cycle Meetings

CURRENT OPEN SUBSTANTIVE CROSS-CUTTING ISSUES (Cont'd)

- **Indian Point 2 (Ongoing)**
  - Ongoing cross cutting issues identified in human performance and problem identification and resolution
    Untimely, Ineffective Corrective Actions (weak corrective actions associated with Firewall
    Skill weaknesses related to operator training issues (knowledge tech. Specs, configuration control)
- **Salem/Hope Creek (Initiated after most recent 2003 EOC meeting)**
  - Substantive cross cutting issue in PI&R
    Ineffective problem evaluation and untimely corrective actions

CURRENT OPEN SUBSTANTIVE CROSS-CUTTING ISSUES

- **Oyster Creek (Initiated after most recent 2003 EOC meeting)**
  - **Substantive cross cutting issue associated with Human Performance Human Performance deficiencies focused around procedural adherence**
- **Susquehanna (Initiated after most recent 2003 EOC meeting)**
  - **Substantive cross cutting issue associated with Human Performance Numerous findings related to operators failure to correctly implement procedures**

REGION I - PLANT PERFORMANCE 2000 - 2003

Indian Point 2 - Multiple Degraded Cornerstones / Degraded Cornerstone

Degraded Cornerstones:

Millstone 2 -	Mitigating Systems - HPI and AFW
Calvert Cliffs -	Mitigating System - AFW
Vermont Yankee -	Security - OSRE results

Regulatory Response Column: typically 1/4 to 1/2 of Region I plants

CROSS-CUTTING ISSUES - - ROP CYCLES 1- 4

- Have involved ½ of Region I sites

FitzPatrick	Calvert Cliffs
Seabrook	Hope Creek
IP2	Salem
TMI	Oyster Creek
Millstone 2	Susquehanna

- PI&R and Human Performance (60/40)
- Duration 5 months to 2+ years
- Generally helped focus company attention

APPROACH TO INSPECTIONS - - Philosophy

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- **Find problems**
- **Put those problems into safety perspective**
- **Communicate effectively**

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS BRIEFING
June 10, 2003

Indian Point Performance

Brian E. Holian

INDIAN POINT

- Challenging case where NRC oversight made a difference
- Strong NRC oversight spanned old and new processes
- Pioneering, precedent-setting case under ROP Action Matrix
  - "Escalation" and "De-escalation"
  - Tools and Flexibility
- Significant impact on regional resources and management attention

INDIAN POINT

- Plant Data
- IP2 Performance History
- Oversight Process
- Stakeholders
- Challenges

PLANT DATA

- Buchanan, NY: 26 miles north of NYC
- Unit 1: B&W PWR
  - Ceased operation in 1974
  - Purchased by Entergy Sept. 6, 2001
- Unit 2: 4 loop Westinghouse PWR
  - Commercial operation since 1974
  - Purchased by Entergy Sept. 6, 2001
- Unit 3: 4 loop Westinghouse PWR
  - Commercial operation since 1976
  - Purchased by Entergy Nov. 21, 2000

IP2 PERFORMANCE HISTORY PRE-ROP

- NRC Team Inspections
- Plant Events
- Extended Shutdowns and Confirmatory Action Letters
- SALP
- Civil Penalties
- Independent Operating Assessments

IP2 PERFORMANCE HISTORY CHART- INPUTS TO NRC ACTION MATRIX (EXPLANATORY NOTES FOLLOW) - Cont'd

	CY 2000				CY 2001			
Corner-stone	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
IE		White PI	Red	Red	Red	Red	Red	Red
MS	Yellow White PI	Yellow White PI	Yellow White PI	Yellow White PI	Yellow	Yellow	Yellow	Yellow Yellow
BI	Yellow PI							
EP	White	White White White White	White White White	White White White	White White White	White White White	White White White	
Matrix Column	N/A	consider MDC	MDC	MDC	MDC	MDC	MDC	MDC

8/99 Event*

2/00 SGTF

Entergy IP3

Plant Restart

95003 INSP

Entergy IP2

Operator Requal Hi Failure Rate

* Note: 8/99 Event was Pre-ROP. Sensitivity Study in Commission Paper

IP2 PERFORMANCE HISTORY CHART- INPUTS TO NRC ACTION MATRIX (EXPLANATORY NOTES FOLLOW)

	CY 2002				CY 2003			
Corner-stone	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
IE	Red	Red	Red					
MS	Yellow Yellow	Yellow Yellow	Yellow Yellow White	Yellow White	Yellow White	Yellow White	White	
BI								
EP								
Matrix Column	MDC	MDC	MDC	DC	DC			

CR Firewall

Public Security Issues

IP2 OVERSIGHT

- ROP Action Matrix
- IP2 Oversight Plan
- Focus on fundamental issues
- Technical Coordination Team
- Communications Coordination Team
- Continued heightened oversight - adjustments in NRC activities

STAKEHOLDERS

- Concerned Citizens
- Public Interest Groups
  (e.g. Riverkeeper)
- Congress
- State
- Counties
- Media

STAKEHOLDERS (Cont'd)

- NRC Offices
  - NRR - Research - NSIR
  - OI - OGC - OCA
  - OPA - EDO - ACRS
- Federal Agencies (e.g. FEMA)
- Independent Oversight
  - GAO
  - OIG

CHALLENGES

- Long-standing Cross Cutting Issues
  - Human Performance
  - Corrective Actions
- Site Integration
- Design Basis Initiatives
- Site Security
- Emergency Preparedness

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS BRIEFING
June 10, 2003

Inspection Results

Wayne D. Lanning

SIGNIFICANT CHALLENGES

- Scheduling and Staffing Inspections
- Transition of Qualified Staff/ Coping Measures
- External Stakeholder Demands
- Plant in Multiple Degraded Cornerstones
- Post 9/11 Activities
- Evolving Significance Determination Process
- Significant Events

STAFFING INSPECTIONS

- Impact of Staff Turnover
- Coping Measures
  - Consultants
  - Support from Headquarters and Other Regions
  - Expedited Basic Quals
  - Overtime
  - Delayed Inspections
  - Effective Use of Examiners

STAFFING INSPECTIONS (Cont'd)

- Implemented Highly Successful Hiring Strategy
  - Overhires
  - Rehired Annuitants

SIGNIFICANCE DETERMINATION PROCESS

- Ongoing SDP Improvement Plan
- Significant Support for EP, RP, and FP Revisions
- Complex Tool
  - Resource Intensive
  - Assumption Driven/Root Cause Dependent
  - Requires SRA Expertise for Phase 2

SIGNIFICANCE DETERMINATION PROCESS (Cont'd)

- Insights into Licensees' PRAs
  - Quality
  - Models/Failure Rates

SDP RESULTS

SDP Results are Timely and Seldom Challenged by Licensees

FY 01	1	Red (SGTF)
	1	Yellow (TDAFWP)
	7	White (2EP, 3MS, SEC, RP)
FY02	2	Yellow (Security, Requal)
	5	White (3 EP, 2 MS)
FY03	5	White (2 EP, 3 MS)

SIGNIFICANCE DETERMINATION

- Indian Point 2 Steam Generator Tube Failure Event
- Seabrook Emergency Diesel Failure
- Salem Emergency Diesel Turbocharger Failure
- Various Emergency Preparedness Issues

STAFF MOTIVATION /SAFETY FOCUS

- Focus on Safety/Questioning Attitude
- Challenged to Find Problems
- Communicate Insights to Licensees
- ROP Challenges (threshold for documenting issues)
- Recognition for Efforts (Performance and Instant Cash Awards)
- Develop Staff...Advanced PRA Training

INSPECTION FINDINGS

- Nine Mile Point 1 Reactor Building Closed Loop Cooling System Integrity
- Limerick Preconditioning
- Fitzpatrick Inadequate Cooler Flow
- Millstone Charging System
- Fitzpatrick Locked Valve

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS BRIEFING
June 10, 2003

Significance Determination Process

Eugene Cobey

Significance Determination Process

Salem Unit 1

Catastrophic Failure of the 1C Emergency Diesel Generator Turbocharger

TIMELINE

4/2 - 9/02	Recurring fuel oil leaks on 1C EDG
9/10/02	Decision to conduct Special Inspection
9/13/02	1C EDG turbocharger failed
9/16/02	Commenced Special Inspection onsite
1/30/03	Special Inspection exit meeting
3/14/03	Inspection report issued
3/24/03	Significance/Enforcement Review Panel
3/31/03	Preliminary WHITE finding issued
5/01/03	Final WHITE finding issued

SPECIAL INSPECTION

- Four previous turbocharger failures
- Vibration monitoring for the EDG turbochargers ineffectively implemented following 1998 failure
- Initiated corrective actions following 1990 failure, but did not implement

PERFORMANCE DEFICIENCY

Corrective actions for previous EDG turbocharger failures had not been effective in preventing recurrence of the problem

SDP ASSUMPTIONS

- Cause of turbocharger failure - fatigue failure of inducer blade
- EDG not capable of fulfilling its safety function for approximately 283 hours
- EDG not recoverable following turbocharger failure

SDP PROCESS

- SDP Phase 1 screened inspection finding to Phase 2
- SDP Phase 2 estimated risk significance as WHITE
- SDP benchmarking effort identified Phase 2 process underestimated risk significance of findings associated with EDGs
- Finding evaluated using SDP Phase 3 process

SDP PHASE 3

Internal Initiating Events:

- Used NRC SPAR model Revision 3.02
- Changes:
  - Incorporated updated LOOP initiating event frequencies and non-recovery probabilities from NUREG/CR-5496.
  - Incorporated Rhodes model for reactor coolant pump seal behavior
  - Modified emergency AC power success criteria
- Results: ΔCDF = 8.64E-6 per year (WHITE)

SDP PHASE 3 (Cont'd)

External Initiating Events:

- Seismic events not significant contributors - likelihood of seismic-induced LOOP several orders of magnitude less than random LOOP
- High winds, floods, and other external initiators not significant contributors – qualitatively determined
- Fire events not quantified – information needed for risk estimation (e.g., mitigating equipment cable routing, etc.) not available for review

SDP PHASE 3 (Cont'd)

Large Early Release Frequency (LERF):

- Large dry containment
- Events of concern
  - Inter-system LOCA
  - Steam generator tube rupture
- Events of concern not adversely impacted by findings associated with EDGs - no attributable increase in LERF

SDP PHASE 3 (Cont'd)

Conclusion:

- **Analysis uncertainty due to not quantifying the risk contribution of fire events offset by uncertainties in assumptions**

- **Safety significance of inspection finding was WHITE**

CHALLENGES

- Characterization of performance deficiencies
- Establishing assumptions for risk analysis (e.g. fault exposure time)
- Quality of NRC and licensee PRA tools
- Lack of tools to evaluate risk significance of external initiators at most plants
- Treatment of uncertainty in SDP risk analysis
- Licensee support for SDP process

SIGNIFICANCE DETERMINATION PROCESS

Questions ?