Official Transcript of Proceedings ACRST-3361

NUCLEAR REGULATORY COMMISSION

Title: Advisory Committee on Reactor Safeguards
Plant Operations Subcommittee

Docket Number: (not applicable)

PROCESS USING ADAMS
TEMPLATE: ACRS/ACNW-005

SUNSI REVIEW COMPLETE

Location: King of Prussia, Pennsylvania

Date: Wednesday, July 26, 2006

Work Order No.: NRC-1166 Pages 1-331

ORIGINAL

NEAL R. GROSS AND CO., INC.
Court Reporters and Transcribers
1323 Rhode Island Avenue, N.W.
Washington, D.C. 20005
(202) 234-4433

TB04

DISCLAIMER

UNITED STATES NUCLEAR REGULATORY COMMISSION'S

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

July 26, 2006

The contents of this transcript of the proceeding of the United States Nuclear Regulatory Commission Advisory Committee on Reactor Safeguards, taken on July 26, 2006, as reported herein, is a record of the discussions recorded at the meeting held on the above date.

This transcript has not been reviewed, corrected and edited and it may contain inaccuracies.

1 UNITED STATES OF AMERICA

2 NUCLEAR REGULATORY COMMISSION

3 + + + + +

4 ADVISORY COMMITTEE ON REACTOR SAFEGUARDS (ACRS)

5 PLANT OPERATIONS SUBCOMMITTEE

6 REGION I BRIEFING

7 + + + + +

8 WEDNESDAY,

9 JULY 26, 2006

10 + + + + +

11 The meeting was convened in the Conference

12 Room, 475 Allendale Road, King of Prussia,

13 Pennsylvania, at 8:30 a.m., John D. Sieber,

14 Subcommittee Chairman, presiding.

15 MEMBERS PRESENT:

16 GRAHAM B. WALLIS ACRS Chairman

17 WILLIAM J. SHACK Vice-Chairman

18 DR. SAM ARMIJO ACRS Member

19 OTTO MAYNARD ACRS Member

20

21 NRR REPRESENTATIVES PRESENT:

22 PAUL HARVEY UK NUCLEAR INSTALLATIONS

23 INSPECTORATE

24 IAN TAIT UK NUCLEAR INSTALLATIONS

25 INSPECTORATE

1 NRC STAFF PRESENT:

2 SAMUEL COLLINS R1 REGIONAL ADMINISTRATOR

3 MARC DAPAS DEPUTY REGIONAL ADMINISTRATOR

4 RICHARD BARKLEY R1-ORA

5 GEORGE PANGBUM R1-DNMS

6 BRIAN HOLIAN R1-DRP

7 MARSHA GAMBERONIR1 -DRS

8 JAMES TRAPP R1-DRP

9 MICHAEL MODES

10 ART BURRITT

11 ALAN BLAMEY

12 DAVID LEW R1-DRP

13 LARRY SCHOLL [via telephone]

14 MARJORIE McLAUGHLIN R1-ORA

15 RAM S. BHATIA R1

16 SHANI LEWIS R1

17 STEVE SHAFFER R1

18 SEAN MANZANO R1

19 EUGENE HUANG R1

20 ROSS MOORE R1

21 CHERIE J. SIMS R1

22 STEVE PINDALE R1/DRS

23 CAREY BICKETT R1-LIMERICK

24 MICHELLE SNELL R1

25 JEFF KULP R1

1 NRC STAFF PRESENT: (cont.)

THOMAS SICOLA	R1
RONALD BELLAMY	R1
DAVID SKEEN	R1
JIM TRAPP	R1
BRIAN HOLIAN	R1
WILLIAM COOK	R1-DRS
CHRIS CAHILL	R1-DRS
JOYCE TOMLINSON	R1
RAY McKINLEY	R1
DONALD JACKSON	R1-DRS-EB1
NICOLE SIELLER	R1 DRP Branch 5
KARL FARRAR	R1-ORA
BRIAN DELLONI	R1-ORA
L.T. DOERFLEIN	R1 DRS
PAUL KROHN	R1-DRP
A. RANDOLPH BLOUGH	R1-DRS
CHRIS O'ROURKE	R1/DRM/HR
JUDITH ROYAL	RI/DRM/HR
LOUIS MANNING	RI/DRM/IRB
KARL DIEDERICH	RI/DRS/EB1
RICH HANATI	PADEP/BRP

ALSO PRESENT:

MICHAEL CULLINGFORD	DONRR

C-O-N-T-E-N-T-S

AGENDA ITEM	PAGE
Opening Remarks	5
Region 1 Overview and Challenges	7
External Environment/Stakeholder Communications	59
Knowledge Management	92
Operating Experience	120
Grid Reliability	156
Limerick Activities	177
License Renewal Activities in Region 1	193
Power Uprate Activities in Region 1	210
Safety Culture	243
ROP Roundtable Discussion	269

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

2 8:32 a.m.

3 SUBCOMMITTEE CHAIR SIEBER: The meeting
4 will now come to order. This meeting is a meeting of
5 the Advisory Committee on Reactor Safeguards and the
6 Subcommittee on Plant Operations. Again, my name is
7 Jack Sieber. I'm Chairman of the Subcommittee on
8 Plant Operations. Subcommittee members in attendance
9 are Graham Wallis, Bill Shack, Sam Armijo and Otto
10 Maynard. The purpose of the meeting today is to
11 discuss regional inspection, enforcement and
12 operational activities. The Subcommittee will hold
13 discussions with representatives of the NRC staff
14 regarding these matters.

15 The Subcommittee will gather information,
16 analyze relevant issues and facts and formulate
17 proposed positions and actions as appropriate for
18 deliberation by the full Committee. Michael Junge is
19 the designated Federal Official for this meeting. The
20 rules for participation in today's meeting have been
21 announced as part of the notice of this meeting
22 previously published in the Federal Register on June
23 21st, 2006. A transcript of the meeting is being kept
24 and will be made available as stated in the Federal
25 Register notice.

1 It is requested that speakers first
2 identify themselves and speak with sufficient clarity
3 and volume so that they can be readily heard. I might
4 mention, if we have speakers from the audience, in
5 order to get it on the transcript, they will have to
6 come up to the table close to one of these microphones
7 that look like this so that their voice will be heard
8 by the transcriber. We appreciate the Region's
9 efforts in hosting this meeting with the ACRS.
10 Each year we go to a different region and
11 accompany that visit to the region with a visit to a
12 licensee's power plant. And, frankly, we consider the
13 activities in the region as an important part of the
14 agency's federal mission. And, in fact, this is, so
15 to speak, where the rubber hits the road and the
16 insights that we gain from talking to inspectors and
17 region-based personnel and also licensees are
18 important in rounding out our knowledge and
19 understanding of the industry as a whole and where the
20 agency should be interacting and can be more
21 effective.
22 And so we really appreciate coming to the
23 region, Region 1 today. I've been coming here for
24 almost 40 years off and on, not here but different
25 buildings in King of Prussia and so it's sort of like

1 old home for me. And so we look forward to today's
2 meeting and I know that it will be very helpful to us.
3 I'd like to introduce Sam Collins, the
4 Regional Administrator for Region 1, who will lead us
5 through today's presentations. Sam?
6 MR. COLLINS: Yes, thank you, and welcome
7 to Region 1. Seeing how you're on the road, a few
8 administrative items for you, if I may. Gina Matakas,
9 Gina, if you would stand, please, Gina is your contact
10 for administrative and support areas. Barbara is
11 familiar with how to reach Gina and we have the
12 facilities for phone, fax and other continuing
13 business, if needed. Also, I'd like to acknowledge
14 that there will be many members of the staff who will
15 speak here today. They will be speaking from the
16 table. We'll provide for those specific introductions
17 when it's appropriate.
18 We have guests today from the UK. We have
19 two senior staff members from the UK Inspector, NII
20 and from HSE, that's the Health and Safety Executive
21 portion of the UK Government and the Nuclear
22 Installation Inspector. We also have state
23 representatives here from the State of New Jersey and
24 Pennsylvania. Pennsylvania we have Rich Janarti and
25 Jerry Humphries. Some you may recall Rich Janarti, he

1 was part of the incident investigation team for the
2 Two-Mile Island intrusion event, and Rich participated
3 in a presentation to the ACRS following that event.
4 We do have a public protocol and we'll let
5 the subcommittee acknowledge anyone who would like to
6 speak and the protocol is in that regard. And I'd
7 like to acknowledge the role of Don Jackson and Dante
8 Johnson in setting up the presentations and also Jim
9 Trapp and Carey Bickett for the site trip to Limerick
10 tomorrow which I think will be very interesting for
11 you.
12 To get into the presentation, my part of
13 the presentation, if I was to define success for that
14 would be a general overview of the region with some
15 specific points in the theme of interest which is what
16 are our challenges, how do we do our business and what
17 are those areas of consideration for the future. We
18 understand ACRS' role and the subcommittee's role.
19 I've seen it from the NRR side, from the presentation
20 of the Three-Mile Island IIT, from the Deputy EDO and
21 I know the contribution that the ACRS and the
22 subcommittees make and I understand the process by
23 which you review the specifics of a presentation and
24 then provide guidance to the Commission and we value
25 any insights that you have as a result of this

1 meeting, either formally or informally during the
2 course of today or the site visit.
3 I'm into the slide package now. The first
4 slide is the Region 1 data with the number and types
5 of licensees. We have a unique region here. It's
6 unique because of the geography, the types of plants
7 and the history of the industry in Region 1. The data
8 in front of you is a rack-up of the number of sites.
9 We have reactors in 11 states, or we have 11 states in
10 Region 1, excuse me, and we have eight states with
11 reactors. There are three states without; that's
12 Maine, Delaware and Rhode Island.
13 Our other business is in the materials
14 area. The materials area is a large workload and
15 product line for us. We have 2400 materials
16 licensees. We encompass essentially two regions
17 geographically in that area. That includes 21 states,
18 Puerto Rico, District of Columbia, Virgin Island and
19 we have 14 agreement state programs and three pending
20 in one manner or another in the agreement state filing
21 or approval process and we have independent fuel
22 storage installations in six states and that number is
23 growing with additional PETs and additional facilities
24 being licensed.
25 Decommissioning is a product line for the

1 Region. Perhaps one of the more successful
2 decommissionings and I would define success as
3 scheduled but I would by accomplishing the goal and
4 working with the states would be Maine Yankee. And
5 George Pangburn's organization and many of the
6 individuals who are here have been involved in the
7 decommissioning of Maine Yankee and that covered all
8 facets. We took that plant from construction, through
9 operation, through an independent safety assessment,
10 into a plant shut-down and into a decision to
11 decommission the plant and then ultimately through the
12 decommissioning process working with the state on
13 applicable decommissioning guidelines with a lot of
14 intervention by stakeholders.
15 So that's kind of a microcosm of the birth
16 to grave process in a more contemporary sense and
17 maybe the best example that's out there at this time.
18 SUBCOMMITTEE CHAIR SIEBER: Is that site
19 available for unrestricted use yet?
20 MR. COLLINS: It is with the exception of
21 the isthmusi facility itself.
22 SUBCOMMITTEE CHAIR SIEBER: Okay.
23 MR. COLLINS: The licensee has released
24 the majority of that state to the state in the terms
25 of park property or donated the property to the local

1 community and it's being -- part of it is being
2 developed for an industrial site and the other part is
3 being held in a trust for public purpose.
4 CHAIR WALLIS: What happened to the spent
5 fuel?
6 MR. COLLINS: The spent fuel is onsite in
7 a stand-alone ISFSI arrangement at this time.
8 CHAIR WALLIS: And it's going to stay
9 there forever.
10 MR. COLLINS: I have to look at my job
11 description in the region before I answer that
12 question. The real concern there, Dr. Wallis, is
13 whether other fuel will be sent to that site. That
14 has notoriety now because of some of the actions that
15 are going through Congress and there is a sensitivity
16 to that being designated as one of the facilities,
17 particularly if DoE were to take it over to ship fuel.
18 No decisions in that, of course, but that is in the
19 media and it is -- our Office of Public Affairs is
20 responding to questions in that regard. We also have
21 complex material sites at our Division of Nuclear
22 Materials deal with day to day.
23 VICE CHAIR SHACK: I'm curious, Sam, is
24 there any exemption or anything required to get all
25 the fuel out of the pool into the ISFSI? I mean,

1 there's normally a time limit, are there waivers for
2 that or everything just sort of went normal?
3 MR. COLLINS: I want my DRS experts to
4 answer that. Randy? Ron, do they need an exemption
5 to move the fuel from the spent fuel pool to the ISFSI
6 or was --
7 AUDIENCE MEMBER: No, sir they do not and
8 I think maybe the real answer to your question is,
9 once they determine that they need to shut down, they
10 have 60 years by regulations to complete that
11 decommissioning, maybe 60 years is the --
12 SUBCOMMITTEE CHAIR SIEBER: Yeah, 60 years
13 is the final but I was just worried about getting into
14 the ISFSI.
15 MR. COLLINS: My understanding is --
16 Steve?
17 MR. SCHAFFER: The original cast design -
18 -
19 SUBCOMMITTEE CHAIR SIEBER: You need to
20 come close to a microphone somewhere.
21 MR. SCHAFFER: With the original cast
22 design, the fuel had to be out of the pour for two
23 years before it can be put in the cast but the basic
24 decommissioning was such that you never challenged the
25 two years.

1 MR. COLLINS: Okay, thanks, Steve.

2 SUBCOMMITTEE CHAIR SIEBER: That was

3 Steven Schaffer speaking.

4 MR. COLLINS: Steve is the resident at

5 Seabrook, former materials inspector. Okay, thank

6 you.

7 I'm onto the Region 1 organization slide

8 3 now and I'm going to move through these fairly

9 quickly. They are more for familiarization and for

10 you to get a general feel for the functions of the

11 organizations. I would want you to know that in

12 fiscal year '06 our staffing ceiling here in the

13 region is approximately 240 people. To put that into

14 perspective, there's 28 offices in the NRC and we are

15 the third largest office in the NRC in staffing size.

16 We are the largest region. Region 2 has

17 220, Region 3 has 205 and Region is approximately 190.

18 And we come and go between five to eight FTE per year

19 depending upon the product lines that we have and next

20 year our budget is down about five FTE but that's in

21 a preliminary sense. That might change as a result of

22 functions being relayed to the region.

23 SUBCOMMITTEE CHAIR SIEBER: Have you been

24 able to fill the FTEs so that you have --

25 MR. COLLINS: We have. In a later slide

1 we talked a little bit about staffing but I'll talk to
2 it now if I can. We have been very successful and
3 many of the individuals are in this room. If I could
4 ask those who have been hired in the last two years to
5 stand up. Those are in the development program,
6 NSPDP, summer coop. So we have been very successful
7 in attracting not only individuals out of school and
8 through an intern or a coop or summer hire program or
9 targeted opportunity with out champions for each
10 school but also individuals who have a broad
11 experience in the industry because of the dynamics of
12 either work hours or individual decisions, want to
13 make the NRC a part of their career at some point in
14 their broader career and we're blessed with a very
15 talented and diverse organization and I see that as
16 the future of the region, quite frankly.
17 Succession planning is a challenge for the
18 region, just like it is in the other parts of the
19 agency. We have many of us here who in the next five
20 to 10 years will be either moving to another position
21 or hiring from the agency and we need to bring people
22 up through the organization fairly quickly to provide
23 for knowledge transfer and knowledge management.
24 SUBCOMMITTEE CHAIR SIEBER: I don't want
25 to interrupt or disturb, perhaps, a future

1 presentation but when there is turnover in an
2 organization, you end up with productivity issues
3 related to training that has to go on. For example,
4 you can't hire a resident inspector and put them right
5 on the job. It takes a certain amount of time --
6 MR. COLLINS: Yes.
7 SUBCOMMITTEE CHAIR SIEBER: -- in order to
8 get that individual up to speed and knowledgeable
9 about the policies and practices of the agency and
10 your policies and practices. So as a rough
11 percentage, how would you characterize the number of
12 people that you have in the training mode versus the
13 number of people that you have in the fully active
14 mode, just a rough --
15 MR. COLLINS: If I can give you a little
16 bit of context, I may ask the Division Directors to
17 address that. Our entry level hiring that we track
18 over a three-year average is 33 percent of the new
19 hires that we bring in are entry level hires.
20 SUBCOMMITTEE CHAIR SIEBER: Okay.
21 MR. COLLINS: So those we would say are
22 individuals, very talented because they're
23 specifically targeted. However, they would be in the
24 situation that you would acknowledge, having perhaps
25 some coop or some summer hire experience, but needing

1 to go through a two-year or so development program,
2 either as part of the NSPDP or as part of the more
3 traditional sense. Let me ask the Division Directors.
4 Randy, do you have a feel in the Division of Reactor
5 Safety approximately how many people are in the
6 qualification program?
7 MR. BLOUGH: This is Randy Blough,
8 Division of Reactor Safety. The percentage of
9 personnel in the training process has varied over the
10 years from anywhere from about 10 percent up as high
11 as 25 percent and in calendar years 2002 and 2003, we
12 were in one of those phases where a lot of folks had
13 been promoted to headquarters and we actually
14 implemented some coping strategies to get the
15 inspection program done. Right now we're more in
16 about the 15-percent range, 15 percent of our staff
17 are in some sort of training.
18 MR. COLLINS: Thank you. So I guess for
19 clarification, the 33 percent is of all hires, 33
20 percent is new hires, and then Randy's 15 percent is
21 of the total staff. Different basis.
22 In the Office of the Regional
23 Administrator on the slide that overviews that, we
24 have four programs; Allegations, Enforcement,
25 Communications and State Liaison. We have a Senior

1 Technical Communications staff who is Rich Barkley.
2 We have two State Liaison Officers. We went from one
3 to two. Bob Bores, Dr. Bores recently retired. We
4 have on state liaison who is targeted towards
5 interface with emergency preparedness. That's FEMA
6 and reactor states, and one who is targeted towards
7 outreach and communication with the states and our
8 other federal partners. That's to acknowledge the
9 enhanced or enhanced need and the increased workload
10 in those areas at a regional level.
11 Communications is a challenge for us in
12 this region. We'll talk about that in a moment.
13 That's partly due to the demographics of the region,
14 the location, New England, very vocal, very
15 demonstrative state government styles and a history of
16 plants in the region, some of that dealing with
17 performance that warrants increased stakeholder
18 involvement.
19 The next organization is the Resource
20 Management functional responsibilities and what I
21 would want to acknowledge there is we're going to
22 focus on the technical discussion here today; however,
23 like all organizations, we depend on our
24 infrastructure to be successful. And the Division of
25 Resource Management hold the keys to that

1 infrastructure. There is a list of activities that
2 they perform that runs from administrative support to
3 human resources to IT, to budget formulation, budget
4 implementation. They do the travel. We do a lot of
5 travel here in the Region. That's one of our primary
6 functions in the Region. That's why we're out here.
7 Coordinating training and development, and
8 all of the technology that goes along with being a
9 successful organization, including implementing the
10 concepts from OAS and CIO. FOIA requests, Freedom of
11 Information requests is a workload for us. We get a
12 number of those. They're coordinated up in our office
13 by Carl Farrar, our regional counsel. The program is
14 managed down in Division Resource Management and
15 there's a lot of FOIAs that come in that are fairly
16 hefty requests for information. It's part of our
17 outreach. It's a necessary part of the function and
18 it does take time.
19 Of course, we'll a fee recovery agency so
20 fee billing is very important for us and the accuracy
21 of how we spent our time, people and money in
22 providing for information and analysis of the
23 management in corporate arena. We are leading the
24 agency in a pilot organization in the Division of
25 Resource Management for regional activities and we're

1 coordinating that with the Program Offices and
2 headquarters with the CIO/CFO/Admin in order to
3 provide for in-depth analysis and structure within our
4 corporate arena and providing the tools for the
5 technical divisions to know where the time is being
6 spent, where the money is being spent and are we doing
7 it in a way that provides us the best leverage for
8 achieving our safety mission.
9 The next slide goes over the material
10 safety functional responsibilities. I covered a few
11 of those. We're talking a large number of licensees
12 here, 2400 materials licensees. I can say that I used
13 to be of the mind, before I became real familiar with
14 materials when I went to Region 4, that reactor was
15 where the risk is, but really what I think is that
16 reactor has low probability and high consequence,
17 materials has high probability, low consequence, but
18 having said that, people are hurt in the materials
19 area. We do have deaths in this area, we do have
20 injuries in this area. We do have misadministrations.
21 We do have industrial accidents, and Mark comes to us
22 from Region 3, having been a Division Director on
23 Nuclear Materials, very familiar. I used to be
24 familiar with the program. George is getting me up to
25 speed here but it is a very important part of our life

1 here in the region.

2 And the materials events, we pay a lot of

3 attention to those because they have a direct nexus

4 with the public and/or the licensee and the authorized

5 user.

6 SUBCOMMITTEE CHAIR SIEBER: Let me ask a

7 question about that. Could you tell me roughly the

8 percentage difference between medical

9 misadministrations and other by-product events in

10 radiography or what have you that have consequences

11 that are significant?

12 MR. COLLINS: We looked at -- we just did

13 a review, right?

14 MR. DAPAS: Right, I'm trying to remember.

15 I think it was on the order of like seven medical

16 events in 2005 if I recall correctly.

17 SUBCOMMITTEE CHAIR SIEBER: Okay.

18 MR. DAPAS: And we do look to see -- trend

19 that and we work with the Program Office to make sure

20 that we have an understanding, is there any increase

21 in the number and the program office may decide that

22 there's some generic communication that is

23 appropriate. And then as part of the annual agency

24 action review meeting, which is associated with the

25 reactor and material performance, there is a paper

1 that's provided to the Commission that talks about any
2 trends and that's where you're looking at the nuclear
3 material events data base which there is quarterly
4 report and where you review that and other operating
5 experience to identify are there any outliers, number
6 of lost sources, number of stolen sources, number of
7 medical events, which would include over-exposures, et
8 cetera. So we do evaluate that as an agency.
9 MR. COLLINS: None of those resulted in
10 health effects.
11 MR. DAPAS: Right.
12 MR. COLLINS: On the industrial side,
13 again in '05, we did have a fairly significant event
14 at Baxter and Baxter is a facility in Puerto Rico.
15 It's a large irradiator and --
16 SUBCOMMITTEE CHAIR SIEBER: Right, I read
17 about that.
18 MR. COLLINS: Right, and those issues at
19 Baxter are not unique to the medical or industrial
20 side of the house as far as nuclear materials
21 licensees are concerned, because they dealt with
22 command and control. They dealt with overriding
23 interlocks. They dealt with individuals having the
24 right devices with them. They dealt with
25 familiarization with procedures and they dealt with a

1 sense of judgment of getting the job done quickly
2 because of production pressures as opposed to taking
3 more time and thoughtful approach.
4 SUBCOMMITTEE CHAIR SIEBER: You're right.
5 MR. COLLINS: We had exposures, fairly
6 significant exposures here but no latent health
7 effects. We recently have had a number -- and that
8 number is less than five, but a number of exposures in
9 radiography; one due to training where any individual
10 actually picked up -- they thought they were in a
11 training situation but they had an actual device and
12 they picked up the source and looked at it and set it
13 back down and the exposure calculations there were
14 fairly significant but the actual experienced
15 exposures were not that readily apparent.
16 But again, that's in training and that
17 facility chose to give up their license and shut down.
18 SUBCOMMITTEE CHAIR SIEBER: I presume that
19 most of these incidents in the medical and other by-
20 product industrial uses are licensee identified.
21 MR. COLLINS: Yes, I would say yes, but I
22 would say, of course, we're dealing with agreement
23 states here, so licensees would identify the issue to
24 the agreement state and to the NRC. Typically,
25 without being too overarching but typically when we

1 look at the event, there's more to it than what's
2 originally reported. But most of them are reported.
3 Now, we do have -- we do have inspector findings in
4 the medical area and in the industrial area where we
5 go and perform a program review and find out that
6 something went wrong that they didn't realize and they
7 didn't report.
8 We had the potential for lost sources at
9 Green Belt NASA that took place this year would be one
10 for example. And we've gone to some medical
11 applications. Typically the --
12 MR. DAPAS: I think patient intervention.
13 MR. COLLINS: -- patient intervention,
14 yeah, thank you.
15 MR. DAPAS: Where the setting was.
16 MR. COLLINS: Right, where as a result of
17 administration but patient intervention ends up to be
18 an exposure to an individual that the licensee may or
19 may not realize until after the fact.
20 SUBCOMMITTEE CHAIR SIEBER: Right.
21 MR. DAPAS: And just to add to that, we
22 work with the Program Office. Sometimes we end up
23 sending a request asking the Program Office, Office of
24 Nuclear Materials, Safety and Safeguards, to evaluate
25 the medical criteria and did this particular event

1 meet the threshold because you do, sometimes, get into
2 interpretation issues; to what degree was there
3 patient intervention, et cetera. So we do that to
4 insure consistency in our application.
5 SUBCOMMITTEE CHAIR SIEBER: Thank you.
6 MEMBER ARMIJO: Of the 2400 licensees
7 what's a rough breakdown, medical, industrial or other
8 major categories? And you don't have to be precise;
9 is it half medical?
10 MR. COLLINS: We'll try to get you that
11 number. I'm not sure I have that in my head.
12 MEMBER MAYNARD: About how frequently do
13 you look at the programs? 2400 it looks like it would
14 be difficult to look at their programs or do any type
15 of inspection very frequently.
16 MR. DAPAS: I can answer that. Marc, the
17 Deputy Regional Administrator, but there are different
18 priorities for inspections and that's based on the
19 risk significance of the sources. For example, an
20 irradiator licensee would be -- frequency is once a
21 year. You have the manufacturers and distributors.
22 You have radiographers and then, of course, the
23 medical licensees and you have different categories
24 and it will either be a one-year, a two-year, a three-
25 year, five-year or even seven-year frequency and

1 that's the risk informed inspection program in
2 determining the periodicity of inspection.
3 MR. COLLINS: On top of that, we have the
4 agreement state programs which we look at through the
5 MPEP program and we don't inspect the licensees in
6 that case but we do inspect the state's programs for
7 licensing and inspection to insure that there is
8 compatibility between the NRC rules and regulations
9 and the state rules and regulations, which means they
10 have to at least be equal. Some states are more
11 conservative. So we look at the backlog of rules and
12 regulations and we also look at their inspection
13 program and the results of their inspection programs.
14 MEMBER MAYNARD: Thank you.
15 MR. COLLINS: In the Division of Reactor
16 Projects, there will be a presentation today for that.
17 The Division of Reactor Projects, essentially, is our
18 operations coordination organization. They facilitate
19 the implementation of the reactor oversight process,
20 coordinate that on a site by site basis as well as the
21 assessment. So the reactor oversight process is
22 really two tools; it's inspection and assessment. The
23 inspection is done by the Division of Reactor Safety
24 and the Division of Reactor Projects. Those inputs
25 go to the Division of Reactor Projects and they

1 oversee and manage the assessment cycles which is a
2 mid-cycle, an end-up cycle, preparation for the
3 agency, action review meeting, of course, that moves
4 up to the Commission presentation and the annual
5 review of the reactor oversight process as well as a
6 look at the licensees to see if the reactor oversight
7 process is providing all the tools that are necessary
8 for us to be effective as regulators.
9 The old equivalent of that was the watch
10 list, remember. Now we have a column 1, 2, 3, 4,
11 facilities. Licensee public meetings are a big part
12 of our product line here, interface with the
13 stakeholders. Staff comes and goes. We conduct many
14 public meetings that we lead or participate in. Some
15 of those are product line. Some of those are
16 outreach. Some of those are with the states, some of
17 those are with the licensees, some of those are with
18 communities, some of those are topic specific, or
19 licensee performance specific. It's a large part of
20 our business line here.
21 And there is an increased state emphasis,
22 as you know, through the Strategic Plan on openness.
23 Our openness is a result of what we publish through
24 our process and how we communicate an understanding of
25 our roles and responsibilities and what actions we

1 take with our licensees. I know you're particularly
2 interested in the resident program. That's a very
3 specific program to the regions. I want you to know
4 also that that is, of course, supplemented by our
5 Division of Reactor Safety in the reactor world.
6 Those are the discipline experts who supplement the
7 residents on site to provide for focused review of
8 areas within a reactor oversight process and the
9 residents, like Steve and the senior residents who are
10 at the sites have the overarching knowledge of the
11 sites, Otto, I know you're very familiar with this --
12 MEMBER MAYNARD: Yes.
13 MR. COLLINS: -- at the sites, of course,
14 but the Division -- and the Division of Reactor Safety
15 performs a valuable function not only of providing for
16 the discipline expert but by being familiar with more
17 than one site. So when they come to the site and they
18 look at a fire protection program or an engineering
19 program or an operator licensing program, they're also
20 testing what the resident knows or what the senior
21 resident knows and is the plant really performing at
22 a level that's a best in class or a best in fleet or -
23 - because you hear from a licensee, you know, "We're
24 best of fleet", or, "We're an IMPO 1". The traveling
25 discipline experts get a very good view of, "Well,

1 they have a good program but if you look at Wolf
2 Creek", because it's not in Region 1, "if you look at
3 Wolf Creek, their program is much more progressive and
4 efficient", and the resident maybe only sees one
5 program, and this individual sees a number of them, so
6 that's very valuable for us.
7 SUBCOMMITTEE CHAIR SIEBER: I notice in
8 reading through inspection reports and this has been
9 going on for quite a long time, you use residents from
10 one plant to do -- to assist in team inspections in
11 other plants and I think that is valuable from the
12 licensee's standpoint and it's also valuable from the
13 agency standpoint in that inspectors and particularly
14 resident inspectors, if they don't get to other
15 plants, they become sort of parochial in the plant
16 where they're --
17 MR. COLLINS: Yeah, which is normal. It's
18 not a criticism. I understand, it's just normal
19 because you're ingrained in that process day-by-day.
20 SUBCOMMITTEE CHAIR SIEBER: Well, I just
21 wanted to say, I think it's a good practice and the
22 more you do it, I think the better off you are.
23 MR. COLLINS: Okay, thanks for that. A
24 comment in that regard would be within the role of the
25 ACRS and the Subcommittee, in Region 1 we receive of

1 late numerous requests for an independent safety
2 assessment. And of course, that was done at Maine
3 Yankee a number of years ago before we had the reactor
4 oversight process and before we had some of the tools
5 we have now, but it was called for -- hi, George,
6 George Pangbum, the Director of Material.
7 MR. PANGBUM: Good morning. How are you
8 this morning?
9 MR. COLLINS: From Maine Yankee in
10 conjunction with the power operate, there's a call for
11 Oyster Creek in conjunction with license renewal,
12 Indian Point. There's actually a legal bill working
13 its way through Congress right now that's being
14 proposed for an ISA at Indian Point, and as you may
15 know, there was a bill that was approved requiring the
16 NRC to mandate backup batteries for the siren system
17 at Indian Point. I'm not a fan of regulation by
18 legislation. I have to say that right up front.
19 Having said that, there may be a role for
20 the Subcommittee or the ACRS in looking at this ISA
21 issue and you know, do the inspections that we do here
22 both in the ROP but particularly in the engineering
23 area, which right now is component design basis
24 inspection which is the outgrowth of the latest series
25 of engineering focus inspections, and the responses

1 from the Commissioners, particularly the Chairman,
2 which stresses that we are an independent agency, do
3 they fill the need? Do they fill the need for
4 insuring that we are performing a rigorous engineering
5 evaluation over the period of time? You can't just
6 look at one series of inspections, you have to look at
7 all of them. And does the NRC in the way that we
8 fashion our teams, provide enough expertise and
9 independence to negate the need for an ISA?
10 The Commission has spoken to this because
11 they have responded to a number of letters in this
12 area but it might be an insight that you would gain
13 from your presentations that you receive from the
14 Program Offices as well as your visits to the regions.
15 SUBCOMMITTEE CHAIR SIEBER: Well, we're
16 familiar with the issue because of our hearings on the
17 Maine Yankee and others that have -- it seems to have
18 caught on as a way to scrutinize various applications
19 that licensees would submit.
20 MR. COLLINS: Right. I think it's
21 important for us, too, that we have representatives
22 here from New Jersey and Pennsylvania. I think it's
23 important for us to include the states in these
24 initiatives which we do routinely.
25 SUBCOMMITTEE CHAIR SIEBER: I do, too.

1 MR. COLLINS: They're a very important
2 stakeholder, plus they're a very important voice in
3 the line between the federal NRC independent
4 responsibilities and the local state responsibilities,
5 so it's very important that they understand. Bill
6 Sherman for one, it's very important that they
7 understand what we're doing and why we're doing it and
8 either observe it and hopefully in some cases have
9 ownership.
10 CHAIR WALLIS: In the case of interaction
11 with the state that we've had, it's very useful, very
12 helpful. The difficulty was with the public whose
13 idea of independent safety assessment sort of means
14 independent of everybody, some group that has not
15 connection with NRC or any other group and it's very
16 difficult to find.
17 MR. COLLINS: Yes, understand.
18 SUBCOMMITTEE CHAIR SIEBER: Well, it's
19 difficult to find qualified people that are unbiased.
20 On the other hand, I'm familiar with state inspectors
21 in Pennsylvania and Illinois and other places and in
22 general, I feel very good about their competence and
23 their ability to manage their programs. So I think
24 it's legitimate and important to include state
25 agencies as part of this process.

1 MR. DAPAS: Thanks for that.

2 MR. COLLINS: I'm going to take a short
3 break from this to answer a question now on the
4 division of license numbers between industrial and
5 medical.

6 MR. PANGBUM: Okay, I mean, nationwide,
7 again, I'm George Pangbum, Director of the Materials
8 Program here. Nationwide, there are about 21,000
9 materials licensees. The agreement states have the
10 vast majority of those with about 17,000. NRC has
11 4500 and those are administered by this office, Region
12 3 and Region 4. This office is the largest materials
13 program in the country with about 2400 licensees.
14 Medical licensees typically make up about a third of
15 the licensees, whether it's an agreement state or NRC
16 jurisdiction. So for here we have about 800 medical
17 licensees.

18 Industrial licensees, in terms of -- run
19 the gambit between radiographers, which are a fairly
20 small number but it's a high risk operation because
21 they use intense sources and obviously, intended to
22 penetrate steel and determine the appropriateness of
23 welds. Most of our industrial licensees are people
24 who use portable and fixed gauges, whether it's for
25 determining the thickness of asphalt in a parking lot

1 or soil testing of other types, and we probably have
2 about 500 of those.
3 We also have a number of different types
4 of research and development licensees all the way from
5 large radiopharmaceutical firms to smaller operations
6 that provide support to industrial users. I don't
7 know if that gets to the heart of your question or --
8 MEMBER ARMIJO: Yeah, sort of, just a
9 rough breakdown of what the major categories were.
10 MR. PANGBUM: Yeah, and I mean, there are
11 even -- when you get to medical, two of the programs
12 go very broadly from broad scope licensees, such as
13 University of Pennsylvania or University of Pittsburgh
14 that are broad scope programs, have a number of users,
15 go all the way from high risk therapies for treatment
16 of cancer, down to basic nuclear medicine tests, all
17 the way down to small private practice clinics with
18 one user that probably just do basic testing of
19 individual for health screening purposes.
20 MR. COLLINS: Thank you, George.
21 MR. PANGBUM: Okay.
22 MR. COLLINS: I'm going to move rapidly
23 through the other organizations here, particularly
24 focusing on the resident program, because I know
25 that's of interest to you. We rotate the residents

1 every seven years and they do participate in
2 inspections at other sites. They have primary backup
3 sites. They also participate in team inspections. We
4 rotate people to other regions. We rotate people to
5 headquarters, both for functional and developmental
6 purposes.
7 SUBCOMMITTEE CHAIR SIEBER: Are you able
8 to keep the seven-year rotation schedule or when the
9 seven years is up say, "Well, I can't make a move
10 right now, we'll get it next year"?
11 MR. COLLINS: It's a very formalized
12 process. You need an exemption not to do it. An
13 exemption typically comes from Bill Kane and the EDO.
14 Brian, have we had any exemptions here in the past
15 three years from the seven-year rotation?
16 MR. HOLIAN: No, Brian Holian, Division of
17 Reactor Projects. No, no exemptions for the seven
18 years. We have an individual coming in -- a seven-
19 year resident coming in this month from up at Nine
20 Mile, so, no, no exemptions for that.
21 SUBCOMMITTEE CHAIR SIEBER: Thank you.
22 MR. COLLINS: We typically start planning
23 at five years if we go that long. Now everyone goes
24 that long. There is a minimum period we like to have
25 because of the investment with the relocation and the

1 training; however, when people typically and I've been
2 through this, Marc has been through this, many of us
3 here, when you get towards the end of the time frame,
4 you start to plan and that typically will formulate
5 within two years of the end, you know where you're
6 going to go, you know what your options are.
7 MEMBER MAYNARD: Sam, you may want to
8 defer this to later if you've got a presentation on
9 it, but I'm interested in how you -- the leadership
10 team here gets out and actually makes some independent
11 judgments on how well their staffs are doing out
12 there, the inspectors, because they are your eyes and
13 ears. How do you know that you're getting a
14 consistent level of feedback?
15 MR. COLLINS: Right, and I think Brian --
16 we have a structured program of site visits. They're
17 mandated for length and frequency and for purpose and
18 that's at the Branch Chief level or Division Director
19 level and Region Administrator level. And then we
20 have feedback forms that are specifically targeted
21 towards licensee individuals, particularly at the Vice
22 President level now, where we go in and request
23 feedback. It goes into the process with a feedback
24 form. We get a copy, the Program Office gets a copy.
25 We rack those up at the end of the year for insights.

1 Brian can elaborate more on that if you'd like.

2 I talked about the Division of Reactor

3 Safety with their independence. I would like to

4 acknowledge that one of their functions also is

5 operator licensing. And when you look at the Part 55

6 responsibilities for the operators and control rooms,

7 that's a primary safety focus for us to insure those

8 individuals have the tools that they need to be

9 successful in judging the tools that are provided and

10 supported by the licensee to insure that the

11 individuals are trained and alert and knowledgeable.

12 Our most valuable aspect of understanding

13 that, I was talking to our UK counterparts here, is

14 really the review of events. When you go in and look

15 at an event and you look at the way the control room

16 responded to that event, how they used procedures, how

17 they declared the emergency, and how the plant

18 performed, you get a pretty good insight into that

19 facility. So we have a very specific, fairly

20 elaborate judgment process, Management Objective 8.3,

21 of how we respond to events on a greater level based

22 on the risk and safety significance of that event.

23 Those are opportunities for us.

24 I'm a little over time. I'm going to

25 finish up here in five minutes. The Region 1 overview

1 and challenges is important. If you were to turn to
2 page 5, where we talk about the historical
3 perspective, some of the older or oldest facilities
4 still operating are in Region 1 and Yankee-Rowe was
5 undergoing decommissioning at this time and those of
6 you who may have been familiar with the ball, it's all
7 gone. We're into the ISFSI stage. They re now in the
8 final site reclamation.
9 NE.1 is partially decommissioned. It's
10 still onsite with the other two units. That site if
11 or notoriety now because of the groundwater leakage,
12 the potential for the tanks there and the pools to be
13 contributing to the groundwater contamination which is
14 a fairly recent lessons learned for the Agency, about
15 the extent of groundwater contamination, how do you
16 know it's there if you don't test the water, if you
17 don't have wells?
18 SUBCOMMITTEE CHAIR SIEBER: This basically
19 shows up at tritium?
20 MR. COLLINS: Tritium is a primary
21 component. We're getting some strontium.
22 SUBCOMMITTEE CHAIR SIEBER: Oh, really?
23 How about cobalt?
24 MR. COLLINS: Cobalt, Randy, we had some
25 false positives for cobalt, right?

1 MR. BLOUGH: Just, there's a well right
2 near Unit 1 and Unit 2. It's just one well that's
3 showing a little bit of cobalt, very low levels. The
4 strontium is mostly thought to be Unit 1 related,
5 although they haven't pinpointed the source. That's
6 still a question. It's just a very small amount of
7 strontium and this is oxide. Again, I'm Randy Blough,
8 Reactor Safety.
9 MR. COLLINS: Thank you, Randy.
10 SUBCOMMITTEE CHAIR SIEBER: I imagine the
11 older plants would show more cobalt in their stored
12 liquids than more modern plants because there's --
13 MR. COLLINS: More wear products.
14 SUBCOMMITTEE CHAIR SIEBER: Yeah, more
15 wear products and the industry has changed its use of
16 things like Stellite.
17 MR. COLLINS: The tritium aspect is
18 interesting because it's primarily related to either
19 unmonitored, uncontrolled dilution streams which is
20 one tact, or spent fuel pool release, typically liners
21 that are unmonitored because it's unknown. It's in
22 the evaporation numbers so to speak. And it doesn't
23 necessarily comport with plant age. We have the Salem
24 facility which is not new but it's one of the more
25 recent facilities here which is, as New Jersey knows,

1 is mitigating a spent fuel pool leak now. They have
2 remediation measures in place. So part of their
3 challenge in this area is how do you know you have a
4 leak if you don't have the wells and aren't doing the
5 monitoring in those. So that's the challenge that's
6 in front of us as an agency, to define those
7 requirements.
8 NEI has an initiative now that's the next
9 step for us in this area, but it's not necessarily a
10 safety issue but it is a stakeholder communication
11 issue particularly if it's offsite.
12 We have a large number of single units.
13 We used to be the recipient of a number of what we
14 would call mom and pop organizations with the anti-
15 fleets and those types of organizations but there's a
16 large consolidation now within the industry and when
17 you look at the Dominions and the Constellations and
18 the entities and the Exelons, there's a consolidation
19 of the industry and you know, even amongst those
20 players, they're starting to devour one another. You
21 have P&L and Constellation and Exelon and Public
22 Service, Hope Creek. So we're dealing with very large
23 corporations with centralized functions, centralized
24 support functions and then plant specific functions.
25 That's a different way of doing business for us,

1 rather than each site have a stand-alone organization
2 including engineering, oversight, QA, security, all of
3 those. There's emergency preparedness facilities now.
4 There's fleet initiatives. There's best of fleet,
5 there's the Exelon way would be an example. That's --
6 you go to one site and the procedures are the same,
7 the training is the same, the expectations are the
8 same, the measurements and the benchmarks, the metrics
9 are all measured against one another. So there's --
10 SUBCOMMITTEE CHAIR SIEBER: Well, this
11 whole thing has been a long evolution. In the early
12 days of the industry, there was a so-called
13 headquarters staff with engineering and so forth, and
14 a plant staff whose vision was to operate the plant
15 and a consolidation of headquarter and plant functions
16 took place in the 1980s to make sure that the
17 headquarters function was married to the plant as
18 opposed to doing the same thing. And so now I see
19 organizations splitting apart again and it will be
20 interesting. You know, whether it works or not is
21 truly a function of the leadership involved. So I
22 think we all have to just sit and watch and see how
23 things work out.
24 MR. COLLINS: Right, if there's a
25 sensitivity in that area, and I know Brian and Randy

1 will speak to it, it's how robust is the central
2 organization and being able to provide for the
3 expertise for the sites. There is a tendency and it's
4 not -- normally it's understandable, but there's a
5 tendency to move people to a site that's an extremist
6 and take them from the best performers and then move
7 people up through the organization. And when we look
8 at some of the sites that have been managed that way,
9 it's fairly clear that performance does improve at the
10 targeted site. What's hard to measure is what's
11 happened at the site where those individuals have
12 left.
13 SUBCOMMITTEE CHAIR SIEBER: Right.
14 MR. COLLINS: And when does it get to a
15 point where the performance trend at that site is of
16 concern but the assessment task that we have through
17 the oversight process.
18 SUBCOMMITTEE CHAIR SIEBER: You may have
19 that situation going on at a number of sites here.
20 I'm heartened that you recognize that that's a
21 phenomenon that will occur and that you're looking out
22 for it.
23 MEMBER MAYNARD: And typically, it's going
24 to be two, three, four years before you may see the
25 impact that may change that.

1 MR. COLLINS: That's right. There is
2 momentum at the sites and particularly at a good
3 performer that will move through. But you'll start to
4 see indicators with a backlog of corrective actions
5 for example, of repeat events, those types of things.
6 MEMBER MAYNARD: Well, I think the NRC
7 needs to stay away from the -- kicking aside whether
8 it's better to be a big organization, small
9 organization or whatever and focus on the plant
10 performance and the support that they're getting. So
11 I --
12 MR. COLLINS: I agree. We have a number
13 of former Wash List plants here and a lot of this is
14 history but Pilgrim, Peach Bottom, Nine-Mile.
15 Millstone was notoriety in early safety culture issues
16 at Millstone. Salem 1 and 2 and of course, Maine
17 Yankee. We've had a number of plants with extended
18 shut-downs. Hadamack and Viewpoint 1, Beaver Valley,
19 Pilgrim and others. So this region, some of us here,
20 many of us here, are familiar with it, some of us
21 lived through it, have seen the industry when it
22 hasn't performed at the level that it has today.
23 And when you speak to knowledge transfer,
24 what's normal is always the benchmark.
25 SUBCOMMITTEE CHAIR SIEBER: That's right,

1 uh-huh.

2 MR. COLLINS: I mean, when Randy and I and

3 others here were out at the sites in the '80s, it

4 wasn't unusual to have a couple plants trips a month.

5 SUBCOMMITTEE CHAIR SIEBER: That's right.

6 MR. COLLINS: And particularly before the

7 maintenance rule with the secondary plant. And

8 outages were long outages, right, two months, 10 times

9 or so and that was normal. And of course, now it's

10 very different. And we're seeing staffing reductions

11 at some of the sites. There's always pressure on

12 staffing at the sites, because Region 1 is a market

13 driven utility based, not regulated by PUCs, states,

14 so they're very conscious -- the bottom line, they're

15 very conscious of the corporate ownership and

16 stewardship and there is pressure to perform with

17 benchmark levels of expertise and resources and we're

18 conscious of that.

19 I talked about the ownership changes.

20 This is just an overview of some of those. Of course,

21 we're going now through the pending PSEG/Exelon

22 merger. That's pending State of New Jersey approval.

23 And there is talk, although it's on hold now, Florida

24 Public Water, Power and Light taking over

25 Constellation and there are still some sites out there

1 that are being looked at but nothing that's on the
2 radar screen in front of us today.
3 Part of the challenge in coming into
4 Region 1 is just the demographics of New England and
5 when you have a Florida Power and Light who comes in
6 and takes over Seabrook or Entergy who takes over
7 Maine Yankee or a Vermont Yankee, you have this
8 concept of you're from away, so since you're from
9 away, you don't have stewardship of the area. You're
10 just here to make money, particularly since you're a
11 merchant plant and you may be selling electricity even
12 outside the state.
13 CHAIR WALLIS: That's why the state gets
14 more involved.
15 MR. COLLINS: Right, therefore, due
16 diligence, what's the benefit to the state in you
17 being here? And that's a tension between the industry
18 and the states, where we get drawn into that because
19 of our safety role.
20 CHAIR WALLIS: In Vermont the state is
21 trying to insert itself into the licensing process.
22 MR. COLLINS: Well, we can talk about
23 preemption and dual regulation at some point if you'd
24 like. That's an issue that's coming up on our radar
25 screen. We have a number of examples. Carl Farrar is

1 here with us right now, but we're engaged with the
2 State of New York right now on a materials issue, on
3 the reprocessing or reuse of materials that a state
4 law preempts NRC and we're engaged directly with the
5 state at that time, now. And we have a letter going
6 to the Governor to encourage him not to sign that law.
7 On a different level, we have a number of
8 facilities who are undergoing state review, typically
9 environmental or discharge permit reviews and there
10 are -- like any process, there are desires that work
11 their way into those processes and they're leveraged
12 towards other activities. Oyster Creek would be one,
13 there's a request in the Coastal Act Mitigation
14 Program for a security driven emergency procurement
15 exercise and Vermont as a number of these. It used to
16 be Acts but there's a law now to show economic benefit
17 for the site before the state would approve license
18 renewal for one entity. So there are number of those
19 that are working their way through the process. They
20 seem to be more of note recently than they have been
21 in the past. The Commission has focused on this. As
22 you know, the Commission has tasked OGC to understand
23 these issues and bring them to the Commission's
24 attention when they reach a certain threshold and the
25 Commission wants to be more assertive in this area.

1 Our argument would be we want to avoid
2 them, particularly before they get to the case where
3 there's confusion over the safety role or safety
4 mission in the risk of performing some of these
5 activities. In a market driven environment, we have
6 to remember there's a bottom line in the budget and if
7 unanticipated line items come into that budget that
8 mandate spending money in the NRC's realm of control,
9 which is safety related, but mandate spending that
10 money for a purpose other than is prioritized on a
11 risk and safety reliability basis, that takes away
12 from something else. It's very hard to measure it, but
13 from my discussion with the executives, it can be
14 notable, can be noticed in the way that they rearrange
15 the budget away from some things to provide for those
16 needs.
17 MEMBER MAYNARD: Actually, that does occur
18 in two ways; actually one in the budget, the other
19 just in management attention. Any time something new
20 comes on, you're going to have attention focused on
21 that as opposed to something else that might actually
22 be more important to safety.
23 MR. COLLINS: Right, and we can be accused
24 of that, too. I mean, that's why the ROP was
25 provided, so that we can have a transparent,

1 predictable regulatory environment and we would want
2 other regulatory environments to be that same way.
3 Not that we're perfect, but that the goal would be the
4 same and how you get there depends on the situation.
5 Okay, thank you.
6 Next is public involvement. A lot of
7 public involvement in the region. I talked about that
8 earlier. We spend a lot of time at public meetings,
9 a lot of time at outreach. Outreach is increasing
10 through our state liaison and through Richard's
11 initiatives. We've had government-to-government
12 meetings with New York, with New Jersey. We're
13 planning one for the Commonwealth of Massachusetts.
14 We'll have one with Vermont after some of their more
15 notable licensing issues are behind us. Those are
16 focus meetings on a government-to-government basis to
17 explain our programs, explain our roles and our
18 responsibilities and to be sure that there's
19 compatibility and understanding. They can be
20 contentious but generally, they're overall positive.
21 We do have some very tough public meetings
22 in the area of New York. There have been some in
23 Vermont, you may be familiar with those.
24 Massachusetts, a little less so, but still of note,
25 and Oyster Creek is of note, too, going through their

1 licensing process. Emergency preparedness always
2 seems to be a focus issue and age of the facilities of
3 this regions seems to be a focus issue.
4 We have congressional interest,
5 particularly around Oyster Creek, some at Salem/Hope
6 Creek, clearly at Vermont Yankee and at Millstone. We
7 have Attorney Generals who are elected separately from
8 Governors and we have Boards of Selection and Nuclear
9 Advisory Panels and it's pretty much a localized
10 government in a way and many of those situations are
11 leveraged at certain times of year depending on
12 election cycles and budget cycles and our program
13 cycles. There always seems to be opportunities in
14 those areas.
15 Staffing dynamics, we talked a little bit
16 about this before. This proximity to headquarters in
17 the aggregate is a good thing. We're able to bring
18 people back and forth from headquarters particularly
19 on rotations. We have a number of senior executive
20 service candidate development program, individuals
21 working with us now. We have two in that development
22 program who come up and work with us as part of their
23 development program for a number of months, and that
24 enhances not only their development program but it
25 helps us with a different view and expertise typically

1 at the Deputy Division Director level.

2 If you look across the agency, you can see

3 a number of Region 1 staff who occupy senior

4 positions. Some of those are there. I would add

5 Laurie Zimmerman to that list, for example. So we do

6 have a lot of movement between headquarters and the

7 region. If you were to look at that list, it's

8 interesting, I'm asking this question frequently,

9 "Aren't you folks just a group of retired Navy nukes"?

10 And I think in the '80s the answer to that might be,

11 "Well, probably", but today, no. Today, no, it's a

12 very different organization, even at the commission

13 level. There was a time when a number of admirals and

14 others with Navy nuclear experience were in those

15 positions but the agency is different now. We have a

16 number of individuals who are coming up through the

17 organization who are a diverse group and our hiring

18 practices now where we're bringing people in from the

19 industry, many of them, two examples here, many of

20 them with site experience, with SRO licenses, STA

21 experience.

22 There will be a time when, as individuals

23 move up through the agency, where it won't be uncommon

24 for the executives senior positions for individuals to

25 be formally licensed by the NRC or to have direct site

1 experience over a number of years.

2 SUBCOMMITTEE CHAIR SIEBER: And I think

3 that's a good thing.

4 MR. COLLINS: I think it's a good thing,

5 too. I mean, our challenge, you mentioned earlier, is

6 to train individuals who are highly experienced or

7 have high potential to be good regulators. They're

8 very talented in the technical area or industry

9 experience area. Our challenge is how to transform

10 individuals into good regulators and we can do that.

11 It takes time but that's the focus.

12 SUBCOMMITTEE CHAIR SIEBER: I guess before

13 you leave this slide, and you can correct my vision if

14 it's incorrect, but sort of see headquarters having an

15 upcoming demand for people because of new reactor

16 placements and so forth and I picture also sees the

17 regions as sort of the farm system and to me that's a

18 concern. And I hope that that's not happening but one

19 could set up a system where that would be the method

20 of operation. Could you comment? Do you see that

21 that's a potential?

22 MR. COLLINS: Marc, do you want to speak

23 to that?

24 MR. DAPAS: Yeah, I would. Actually, that

25 is something --

1 MR. COLLINS: Somebody who just came from
2 the Region 3 area.
3 MR. DAPAS: Yes.
4 SUBCOMMITTEE CHAIR SIEBER: I would say
5 you're for that, right?
6 MR. DAPAS: Actually, I do think the
7 cross-pollination is beneficial to both organizations
8 but obviously, as headquarters staffs up for new
9 reactor licensing there are going to be promotional
10 opportunities. There are going to be -- certainly
11 going to be interests for the staff in applying for
12 those. I think we have a rather aggressive
13 recruitment program. We do look at succession
14 planning. We have a human capital management plan
15 that we focus on and we do have retreats where we
16 discuss succession planning, staffing.
17 The Division Directors right now are
18 working on the staffing plan for fiscal year '07. We
19 look at things like historical attrition and those
20 type of what I'll call external planning assumptions,
21 what do we expect to be the attrition as NRR staffs up
22 to support new reactor licensing, that is something
23 that we do need to look at, but I think the agency as
24 a whole benefits. Obviously, when we have folks that
25 have experience in the regions and they're able to go

1 to headquarters and support the programs there, that
2 brings field experience to headquarters which can be
3 very beneficial.
4 SUBCOMMITTEE CHAIR SIEBER: That's a good
5 thing. That's a good thing.
6 MR. COLLINS: Yeah, my view is that
7 there's three groups and the individuals who come in
8 through the coop and the Nuclear Safety Professional
9 Development Program are very open to different
10 experiences. We send them down to headquarters for
11 rotations. We send them to different regions for
12 rotations. They're a very fairly mobile group. The
13 SES, our obligation is to really go where you're
14 appointed. The attention is in -- and it's
15 understandable, is in the individuals who are senior
16 staff, who have experience in the region or in
17 headquarters who have family, who have people in
18 school. In today's day and age, it's not uncommon for
19 the spouse to have a professional career also. They
20 have a residence that needs to be dealt with and the
21 cost or relocation, particularly if you're going to
22 headquarters or to some of the specific regions, can
23 be daunting.
24 SUBCOMMITTEE CHAIR SIEBER: Yes.
25 MR. COLLINS: And the disruption. You

1 have to balance that against the career gain and we
2 have limitations in those areas. I think we try to be
3 as generous as we can in the relocation benefits but
4 the emotional aspect of providing for all of those
5 family needs in the center group provides for some
6 barriers that people have to work through
7 individually.
8 SUBCOMMITTEE CHAIR SIEBER: Right.
9 MR. COLLINS: So I think our HR
10 organization is aware of that. We're trying to use
11 different types of tools but we don't have all the
12 tools that the industry has. So --
13 SUBCOMMITTEE CHAIR SIEBER: On the other
14 hand, I think you have many of the tools, the industry
15 has. There are certain barriers to mobility and I
16 would think that use of the internet and so forth, can
17 streamline your operation and the communication much
18 better.
19 MR. COLLINS: Yes, and an outgrowth of
20 that and we have Judy Wherle and Chris O'Rourke here
21 from out HR staff. An outgrowth of that is the
22 alternate workplace concept, you need the expertise,
23 you need the function, you need the individual's
24 background. Is it necessary for that person to be
25 relocate in order to do that job.

1 SUBCOMMITTEE CHAIR SIEBER: That's right.
2 MR. COLLINS: And it's a little harder on
3 the region to facilitate some of that with the type of
4 work we do but we are endeavoring to do it in the
5 materials area. We're doing it on a limited basis.
6 We're looking right now at providing for some
7 alternate work sources for headquarters, hiring people
8 here, having them work on headquarters programs. And
9 we do have work at home programs here on a case-by-
10 case, on a project basis. That's an alternative to
11 individual relocation. In the region, it's hard to do
12 and keep conductivity with some of the job functions
13 that we have.
14 MR. DAPAS: Just one thing, if I could
15 add, Sam and I have an opportunity to meet any
16 potential employees from outside the organization that
17 come to the regional office that have expressed
18 interest in a particular vacancy and I often ask,
19 "Well, what is it that particularly interests you in
20 the NRC", and I often get the response, "Well, I noted
21 that you're the third best organization in the
22 government to work for", and that certainly peaks
23 their interest and they've -- they are very interested
24 in the professionalism that we have. And so that has
25 been a real recruiting tool here as a result of that

survey.

SUBCOMMITTEE CHAIR SIEBER: Okay, thank you.

MR. COLLINS: These are the current issues. I won't dwell on any of these specifically. We do have two reactor site deviations in place; one at Salem/Hope Creek for the safety conscious work environment cross-cutting issue and the other at Indian Point to follow up on the groundwater contamination and the emergency preparedness RN upgrade. Both of those programs are and were outside of the ROP focus when these issues came to light.

Of course safety conscious work environment now is a new aspect of the reactor oversight process and we'll be testing that at mid-cycle coming up next month to insure that we're aligned with the ROP and if we need to move forward, then we would go to the ROP and the outgoing cycles in that case.

I talked a little bit about knowledge management. We're going to talk some more about that. One administrative issue we have is the office relocation. We've been in this building for a number of years. It serves us well. We like the location; however, we would like to have better infrastructure,

1 more up to date process programs, IT is an example of
2 that. And we need more space for the future. So
3 we're going through an office relocation process now,
4 working with GSA and with our headquarters
5 organization. Our goal would be to be in another
6 building in late '07, early '08, but we might have
7 some hurdles to do that because of the process that
8 we're following and we're working through those at
9 this time.
10 CHAIR WALLIS: I'm presuming that's not a
11 big move, that's not several hundred miles away. It's
12 right here.
13 MR. COLLINS: No. Thanks for the
14 question. We know the committee made up of the staff
15 and through the input of the staff, they want to stay
16 in this general location. So we have restricted the
17 bidding process to a specific area that's bounded by
18 some major road arteries within this essential
19 corporate complex that's bordered by 202 and the
20 turnpike.
21 Lastly, we look forward to any insights.
22 I think we had a lot of discussion here. Thank you
23 for that. I have to apologize for the agenda, Rich.
24 Perhaps we've answered some of the questions here from
25 the other presentations, but we do look forward to the

1 exchange. Thank you for engaging us. We wanted this
2 to be an interactive session here.
3 CHAIR WALLIS: Speaking about item 2,
4 we'll be here all day.
5 (Laughter)
6 SUBCOMMITTEE CHAIR SIEBER: The only thing
7 that's firm is the starting time.
8 MR. COLLINS: I know you guys work
9 weekends and everything to meet the agenda, so we
10 appreciate that dedication. Rich, at this time, do
11 you want to go through the next topic?
12 MR. BARKLEY: Yes.
13 MR. COLLINS: Okay.
14 SUBCOMMITTEE CHAIR SIEBER: Thank you very
15 much, well done.
16 MR. COLLINS: Yeah, I've enjoyed my time
17 in front of the ACRS. I know we had the -- while
18 Brian is setting up here, I think one of the more
19 exciting times in my early career was making the
20 presentation on Three-Mile Island IIT. And Rich was
21 there. We used graphics for that. Some of you may
22 recall, we recreated the individual's entry into the
23 site and that was a lot of fun, but it was one of the
24 first time that graphics were used in a presentation
25 and at that time, unlike today, of course, ACRS we

1 infamous for interactions with the staff.

2 It was not always a congenial

3 relationship. I know it is now, but it wasn't back

4 then. But I thought that was a really good

5 opportunity early in my career to understand the

6 broader aspects of what the ACRS does and go through

7 that process to be able to really challenge the

8 product that we had.

9 MEMBER MAYNARD: I'm not sure congenial is

10 the right -- I think it's important to have a

11 professional exchange and interaction but the ACRS and

12 the staff shouldn't necessarily be congenial and be

13 just working together any more than what the ACRS and

14 the licensee should be working together. They provide

15 an independent role and look at everything.

16 MR. COLLINS: Sure, right.

17 MEMBER MAYNARD: I do think it's important

18 to have professional communications as opposed to

19 pouncing on or whatever.

20 MR. COLLINS: Mayhem. Well, the

21 independence is important so the constructive

22 criticisms and the professional approach is certainly

23 where we need to be. For the staff to be successful,

24 the accountability of the ACRS has to be demonstrated.

25 We rely on ACRS to overview and provide guidance to

1 the Commission and without that, with our stakeholders
2 and amongst ourselves, we really can't point to how
3 the checks and balances work within the agency.
4 SUBCOMMITTEE CHAIR SIEBER: Thank you.
5 MR. HOLIAN: Good morning, right onto the
6 next presentation. I do remind the speakers to maybe
7 speak from up here, Rich, if we can go that way for
8 the other audience members. It's a little difficult
9 for our staff to hear back there. My name is Brian
10 Holian, Director of Division of Reactor Projects. I
11 have been in Region 1 about seven years. I've been on
12 both the Division of Reactor Safety side and now the
13 Division of Reactor Projects side. Prior to that I
14 was at headquarters for a good nine years in the
15 Reactor Projects Organization and then spent three
16 years on commissioned to Germany, the German Staff
17 back at that time.
18 Prior to that I was six years at Calvin
19 Cliffs, in the engineering and operations organization
20 following Mike Jung into the SRO/STA program there so
21 did Mike Stondely also down at Calgary Tech. Was
22 first sent to Calgary Tech, left and went to the NRC,
23 the third best place, maybe the second best place at
24 that time to work. And Calgary didn't write a letter
25 when we left, so I don't understand that. We weren't

1 the essential people.

2 Real quickly, that's my background. We'll

3 be giving this quick presentation here, just on

4 external stakeholder involvement. Sam hit a few of

5 the topics on there, so we'll go through it quickly.

6 That's my background. Rich Barkley has been a key

7 person and Tracy Walker before him, on our staff. You

8 might know Tracy's name as a technical communications

9 coordinator for the region. And it's something we've

10 been forced to do really within the last five, six

11 years in particular but Rich is going to start this

12 off. Give them your background.

13 MR. BARKLEY: Yes, I have actually 22

14 years in Region 1. I was a resident at several of the

15 sites in Seabrook and spent a long time in the DRP

16 organization dealing in supporting the resident

17 inspectors, much of that time dealing with

18 controversial reactors in DRP. And what I wanted to

19 give you a quick overview here is just a little bit of

20 the history of the external environment in Region 1,

21 give you a perspective of the environment in which

22 we're working here and give you the idea that this is

23 a very unique region relative to the other four in the

24 sense that the tremendous amount of time and effort

25 that we spend dealing with external stakeholders.

1 Some of the history again, goes back all
2 the way to the late '60s and early '70s. Some of
3 these projects are very well know around the industry,
4 Seabrook and Shorum, obviously Shorum a protracted
5 period of time during construction and then the EPA
6 issues that eventually led to a state deal to shut the
7 facility down and decommission it. We have a unique
8 emotional event and technical event in this region
9 having the TMI accident in this region and the
10 subsequent clean-up of that project as well as then
11 the prolonged period in which time Unit 1 was down and
12 then eventually restarted in late 1985.
13 Following the TMI accident when emergency
14 preparedness was expanded, we had a number of sites
15 that had particularly difficult emergency preparedness
16 issues, Indian Point in the '82/'83 time frame and
17 Brian can talk a little bit about the recent problems
18 with emergency preparedness. But that was a very
19 difficult time, threatened to shut down the plant but
20 it didn't eventually culminate in that. The Seabrook
21 project which delayed the start-up of that facility
22 for almost 33 months due to unwillingness on the part
23 of the Massachusetts communities to participate in
24 emergency preparedness and obviously, Shorum which
25 eventually was reclassed behind the shut-down that

1 terminated, I believe that was late 1988.

2 Since that period of time, outside the EPA

3 area, we've had continued interest in a number of the

4 sites. We give you a list up there. A number of

5 facilities have had localized issues. So for instance,

6 Vermont Yankee will be relatively quiet for several

7 years. Then an issue would come up such as the

8 extended power operate which prompts a lot of interest

9 in that particular site. That seems to be quieting

10 down quite a bit now since the plant has finished the

11 power escalation, the process has been approved,

12 although they're still interested in that location.

13 And then a number of the other projects,

14 again, that promote a considerable amount of interest

15 and so because of that, senior management and the

16 staff spent a considerable amount of time responding

17 to the inquiries from the public and from members of

18 the press and Congress.

19 Obviously, a watershed event in this

20 reason was the 9/11 attacks. They were all in this

21 region. That prompted very, very serious concerns on

22 the parts of the States of Pennsylvania, New Jersey

23 and New York, prompted the deployment of the National

24 Guard and State Police at sites -- at those locations.

25 The National Guard still remain at the sites in New

1 Jersey and New York five years after the fact.
2 Because of that, again, there's been enormous numbers
3 of inquiries regarding that. There are many, many
4 calls post-9/11 for greatly expanded security
5 provisions. They want a site hardening, they wanted
6 airspace exclusions. They wanted a whole range of
7 security upgrades which make these plants essentially
8 defend them against targets of war. And so there are
9 -- obviously, there are provisions in the regulations
10 that nuclear stations need not deal with an enemy of
11 the state, but as to where the dividing line is
12 between their security provisions and the national
13 defense provision is not a hard and fast line.
14 So we spent a lot of time doing briefings
15 of a range of outside individuals on security
16 subjects. It's quieted down a good bit from 9/11 but
17 in the several years afterwards it was a very serious
18 time.
19 SUBCOMMITTEE CHAIR SIEBER: I take it that
20 those plants in Region 1 do not have FAA airspace
21 restrictions.
22 MR. BARKLEY: There's a NOTAM that the FAA
23 has out that urges pilots to stay out of the area, the
24 immediate area of a nuclear station but there is no
25 hardened airspace exclusion there.

1 MR. HOLIAN: But it continued to be called
2 for by -- especially in the Union Point area. You
3 might have seen news clippings in the last several
4 weeks about the Westchester County Airport that's
5 proposing to redirect traffic in a direction over the
6 Union Point Plant that's raising elected officials'
7 interest in that.
8 SUBCOMMITTEE CHAIR SIEBER: Well, there
9 are some sites where that's virtually impossible where
10 you have ISL beams right over the plant.
11 MR. BLOUGH: This is Randy Blough. The
12 NOTAM applies only to general aviation. You get small
13 aircraft that there's no airspace restriction like fo
14 the airlines and larger --
15 MR. COLLINS: This is Sam Collins. Otto,
16 you know, about the NOTAMs right? You still have your
17 private pilot's license. This issue is predominant at
18 Indian Point and we've coordinated with FAA and as FAA
19 tells us, the disruption on the national flight plans
20 for commercial flights if there were to be
21 restrictions over the nuclear power plants, would
22 severely hinder the effectiveness of the commercial
23 industry as well as increase the risk of airline
24 flight. And so that judgment has been made, although,
25 as Brian says, we continue to be pressed on why that's

1 the case, particularly at sites that are near airports
2 where you have ascent and descent possibilities.
3 MR. BARKLEY: Brian was going to cover the
4 next slide.
5 SUBCOMMITTEE CHAIR SIEBER: Okay.
6 MR. HOLIAN: The first item and I've got
7 a few handouts for you, I'll just cover -- a couple of
8 visuals for you. Around Indian Point, Richard had
9 mentioned, this is just the EPZ around Indian Point.
10 This is a population map, color coded for the high
11 population zones, going from lower population in green
12 and up to higher populations in the pink and oranges.
13 You'll be at Limerick tomorrow. The EPZ for Limerick
14 has almost as many people as the EPZ for Indian Point.
15 New York City, of course, being down here, the Tappan
16 See Bridge is outside of the EPZ. Most of the
17 population is in the Northern Westchester. There's
18 four counties around the Indian Point plant here in
19 the middle. Westchester and Rockland, Orange and
20 Putnam and you know, you mentioned the 9/11 attacks.
21 It was soon after that the flights out of Boston and
22 the north, actually, as you know, navigated right down
23 the Hudson River to the World Trade Center and when
24 that became known to the population up here it was a
25 significant emotional event for them. They had

1 questions right away, what if they had chosen this
2 instead of the World Trade Center.
3 The EPZ up here, you know, on this side
4 you do have a lot of state land over here, so it's not
5 too bad in the Northern Rockland County. So
6 obviously, in Northern Westchester, very congested
7 roads, two-lane, four-lane. Senator Clinton's home is
8 out down the eastern side of the EPC right out here
9 about 12 miles out and the Commission itself has taken
10 an interest in driving these roads. Commissioner
11 Jaczko has been up there, Chairman Diaz went up there
12 in particular and have talked to the public about
13 their knowledge of particular concerns with not only
14 this EPZ but other high population zone EPZs. I just
15 wanted to show that.
16 One other handout I'd pass around. You
17 can keep these or trash these. These I just printed
18 off the website this morning from Riverkeeper who is
19 one of our stakeholders. These are just pages on
20 their public website but it continues to draw
21 interest. One of the major stakeholders around the
22 Indian Point area, I'll just put them out there.
23 They're all on different subjects but if you look at
24 the left-hand column there you'll see a map that they
25 keep of the EPC on their website and what they have a

1 circle for is the 17.5 mile and they have the peak
2 fatality zone on there. Now, where do they get that
3 from? Unfortunately, they get that from an old NRC
4 document. It was a Crack 2 report that you've
5 probably seen referenced before in your readings and
6 that from way back when research had some money to
7 spend in maybe the '80s or '80 time frames and looked
8 at a siting study.
9 That was out there after the 9/11 and this
10 organization, I believe, Recordkeeper was one of the
11 first ones to resurrect that document and use excerpts
12 from that in a way that was not intended and so I just
13 show that to you as an item of what continues to be on
14 their web page and continues to come up in public
15 meetings.
16 The other issue besides 9/11 itself, it's
17 on your slide, was the James Lee Witt EP study that
18 was done by the State of New York in 2003. And quoted
19 still on the Riverkeeper website and it's on one of
20 your sheets, that's going around, is the quote from
21 that report that the current radiological release
22 system and capabilities are not adequate to protect
23 the people from an unacceptable dose of radiation in
24 the event that it were released from Indian Point. So
25 that's a powerful statement that came out in 2003 in

1 that report.

2 If you get through the report in general

3 as you might have, it really was not centered on

4 normal type events in a plant, but it was centered on

5 the hypothetical what would happen if a plane came

6 down on the plant and you had what they called a quick

7 release, a quicker release than was ever envisioned

8 from the plant and that continues to resonate to this

9 day. The NRC has responded to that in several letters

10 and other issues and -- but we continue to get it at

11 public meetings up there.

12 You know, Indian Point back in June 2003,

13 I think was the last time the ACRS was here, and I

14 gave you a briefing on Indian Point in general.

15 They're doing -- at that point, they were just coming

16 out of a red find and they were the first red finding

17 under the ROP that was from the 2000 steam generator

18 tube failure that they had up there, a very poor

19 contractor oversight that they could have prevented

20 that in our view and that was the first red finding.

21 So you had a -- that was the first really alert type

22 issue to the populous around there at that plant. It

23 had been pretty quiet until that time. So you had the

24 2000 event and then you had EP concerns following the

25 September 11th event and continue to this day.

1 In general, the plants themselves have
2 done pretty well, Indian Point 2 in particular. Sam
3 mentioned the consolidation of the industry and
4 Entergy taking over Indian Point 2 and Indian Point 3.
5 I'll get to a slide in a minute that talks about
6 consolidation. I wanted to include that in here. But
7 Entergy, you know, they've had a rough time with the
8 populous and the stakeholders here but in general,
9 plant performance has improved. Both those plants are
10 in green licensee response. We still receive
11 differences between those plants Indian Point 2
12 performance lagging behind. A recent resident
13 quarterly report exited with 12 findings at Indian
14 Point 2 and one at Indian Point 3. There are some
15 differences there even though the gate's been taken
16 down or the fence between the plants and they're
17 trying to work together. So it continues to be a
18 plant, one, performance we're looking at and two, of
19 course the stakeholder interest.
20 We do finally get a lot of congressional
21 correspondence. Let's go onto the next slide. These
22 stakeholder type of correspondence we get are
23 numerous. They are very numerous at Indian Point but
24 Salem/Hope Creek, Vermont Yankee also are very high.
25 We continue to get the TMI. I was going to read a

1 couple quotes from some of the correspondence we get.
2 You've got the words on the slide, but on BY, you've
3 probably seen some of it there, a letter from John
4 Kerry from one of his constituents. He repeats that,
5 "For someone who's lived for 33 years near this
6 Vermont Yankee Reactor 'reasonable assurance,' in
7 quotes, is not very comforting and in fact, it's
8 completely unacceptable". We had to respond to that
9 from Senator John Kerry.
10 On Indian Point, Senator Schumer, to his
11 dismay, he was amazed at the belated announcement of
12 hairline cracks in the spent fuel pool, wanted to know
13 what the NRC is doing about that and we had many
14 letters on that. A letter from all the
15 representatives up there, Engel, Kelly and Lowey,
16 "Should the worst happen we would expect every single
17 site to be in working order. Instead the NRC seems to
18 believe that a failure rate of 10 percent that might
19 effect 20 percent of the population is acceptable. We
20 disagree that it's not acceptable".
21 One of the country executives in Orange
22 County on the western side of the plant, "Orange
23 County is again, extremely displeased with the site
24 performance. We will ask you to remedy this dangerous
25 situation. And finally even on TMI, a little further

1 west from here, after 9/11 they wanted the
2 implementation of a Phalanx Close-In Weapon System and
3 just recently we had a letter on TMI from a
4 stakeholder that notified us that he suing a director
5 of FEMA, he's suing the governor of Pennsylvania and
6 he's suing Sam Collins for what he called, "a
7 coordinated failure to enforce and implement federal
8 laws, regulation and guidelines for nursery schools
9 and day centers".
10 MR. COLLINS: He's threatened to sue.
11 MR. HOLIAN: Threatened to sue. That's
12 right, we haven't seen the actual document although
13 OGC is still looking for it.
14 MR. COLLINS: At 1:20 in the morning.
15 MR. HOLIAN: So we do have at many plants,
16 not just at Indian Point, I wanted to cover a few
17 other plants here in the Northeast as Sam has
18 mentioned. What this resulted in and Sam mentioned,
19 we have done frequent meetings and outreach, not only
20 from our resident staff that's a little bit of a
21 burden on our resident staff where they have to
22 respond to some of these letters, obviously, it's --
23 you know, they have to review some of the letters. We
24 try to do a bulk of that from here, with Richard's
25 help and other's help but the resident staff in the

1 Northeast through the ROP has a lot of stakeholder
2 pieces put on them also.
3 And the tritium identification, I didn't
4 bring the map in for that, maybe in the ROP discussion
5 in the afternoon, we can bring in another good map
6 just to show you that DRS has really been helping DRP
7 out on leading the Indian Point well and tritium
8 issues. In effect, we have a bi-weekly call with
9 congressional stakeholders, that is it's helped calm
10 the fears, so it's done very well, but every two
11 weeks, they tie onto a bridge for a good hour, hour
12 and a half and they get the update on the exact
13 numbers, they know the wells, they know what we told
14 them last time. They're tracking and trending the
15 data just as we are, so in a real time effort, they
16 want that type of information and kind of expect to
17 have it now at this point for a plant like this.
18 Next slide, please.
19 MR. COLLINS: Brian, Sam Collins, the
20 public meeting we had at Indian Point on the
21 groundwater contamination after a special inspection
22 team from Randy's organization, DRS, how many people
23 were at that meeting?
24 MR. HOLIAN: There were 400 crammed into
25 the second floor story of a restaurant about a mile

1 out of Indian Point, that's right.

2 MR. COLLINS: That's right.

3 MR. HOLIAN: We mentioned the

4 correspondence being high. I'll also mention that the

5 allegation workload is awfully high in the Northeast

6 here. Dan Holody, the allegation coordinator is not

7 here but I believe the numbers in our allegations

8 equal the other three regions and --

9 MR. COLLINS: It's the highest amongst any

10 office in the NRC, both allegations and the

11 enforcement numbers we have.

12 MR. HOLIAN: We also have high profile OI

13 investigations.

14 CHAIR WALLIS: The allegations, are they

15 all from outside or are they from personnel who

16 actually work at the plants? Where do that

17 allegations come from?

18 MR. HOLIAN: We get a mix of both,

19 predominantly the plant employees.

20 CHAIR WALLIS: Plant employees.

21 MR. HOLIAN: Plant employees that will

22 come to us --

23 CHAIR WALLIS: Does it turn out that these

24 are valid allegations, mostly or --

25 MR. HOLIAN: High percentages, over 90

1 percent are not substantiated but there are good
2 issues. Several of them are. One of them, the high
3 profile one I was just going to cover at Indian Point
4 was an OI case. It was --
5 CHAIR WALLIS: Office of Investigations.
6 MR. HOLIAN: Yes, Office of
7 Investigations, thank you. It just closed after
8 three or four years and it was a public investigation.
9 It was an individual who happened to show up on Good
10 Morning America after he had already brought his
11 concerns into us and so, you know, talk about high
12 visibility, as you see the security guard that you've
13 already initiated an investigation on espouses at a
14 public forum about safety and security concerns at
15 Indian Point and partial of those issues were
16 substantiated. There were issues with weapons
17 cleaning and weapons maintenance and that but the
18 aspects of his ste protected were obviously not in
19 that case. But high numbers in all those and I just
20 wanted to highlight that one in particular.
21 Sam mentioned the independent safety
22 assessments that have been called for. That continues
23 to be an issue. You know, the ACRS was a body that
24 was -- you know, I think filled a void in that for the
25 power upgrade type aspect. As Sam mentioned, you

1 know, how good that is, but it filled it in one way.
2 Vermont still calls for it though, because what they
3 envision is an in-depth inspection of the plant in a
4 way that would eventually shut down the plant like
5 they believe happened when main occurred so we
6 continue to get that call and particular at Indian
7 Point and BY for any kind of safety assessment.
8 It's not unusual with this type of
9 stakeholder involvement to be called down to the Hill.
10 Sam goes routinely down to the Hill with
11 commissioners. I had to brief our oversight committee
12 staffers on the Indian Point independent safety
13 assessment last year and, you know, the background of
14 that, why we believe the 95-003 inspection and they'll
15 be able to walk through the ROP is a significant
16 inspection. It kind of takes the place of what the
17 old independent safety assessment order could do. So
18 those are some of the other aspects that we have with
19 stakeholders. I didn't want to forget our
20 congressional stakeholders here.
21 Next slide. I threw this into this
22 presentation because we did brief you back in June
23 2003 when you were here about deregulation and
24 licensee changes. Sam covered this in particular but
25 I would just note that we have gone from 17

1 owner/operators to about eight and that might go to
2 seven if PSEG Exelon come in. Another aspect of this
3 is the cross-regional aspect now. We have -- as you
4 see, there's several owners now spanned with one
5 regional office and we hear about that. I mean, Sam
6 will be going down like tomorrow or the next day to
7 Dominion for an all Dominion fleet meeting where the
8 Regional Administrators will meet. We hear about it
9 at the Regulatory Information Conference, "Hey how are
10 the regions treating us a little differently on
11 inspection findings," and things like that. So we do
12 that same benchmarking among our DRP Directors and DRS
13 Division Directors also.
14 MR. COLLINS: It's actually -- this is Sam
15 Collins. This is actually useful information for
16 Entergy or Dominion or Exelon to look across the
17 regions and to -- they're very good at benchmarking
18 the sites and giving us feedback on whether we're
19 handling issues consistently, whether it be the amount
20 of inspections, the types of inspections, how many
21 hours it takes, how the findings are handled, those
22 types of things. It's good information for us. We
23 have to judge it independently, of course, but it's a
24 good source of information.
25 SUBCOMMITTEE CHAIR SIEBER: Should we

1 thank them for informing you that the regions need
2 beefed up, right?
3 MR. DAPAS: That's right, it is a two-way
4 street, just having attended the status of the fleet
5 meeting with First Energy, there have been questions
6 posed by members of the public, "Well, explain the
7 difference in performance at Davis-Besse versus Beaver
8 Valley." So the corporate entities also have to
9 address the variances and inconsistencies as well.
10 MR. COLLINS: Yeah, we had sent our
11 inspectors for example, Region 1, Beaver Valley to the
12 FENOC sites in Region 3 to try to be sure that we're
13 not handling things differently and that we understand
14 FENOC's approach at each site. Because Beaver
15 Valley's performance is very different than Davis-
16 Besse and we wanted to be sure on the NRC end we
17 weren't looking at them through a different prism than
18 Region 3.
19 SUBCOMMITTEE CHAIR SIEBER: And what was
20 your conclusion?
21 MR. COLLINS: Well, the conclusion as
22 borne out by the recent CDBI, the Compliance Design
23 Basis Inspection, is that Beaver Valley's programs are
24 more robust and that's predominantly to the region's
25 credit before I ever came here. Bob Miller and others

1 focused on Beaver Valley and worked with that licensee
2 specifically for design basis reviews and upgrades to
3 programs and procedures before Davis-Besse really
4 occurred.
5 MR. HOLIAN: Yes, they did -- this is
6 Brian Holian. They did some in-depth system health
7 reviews back in the last '90s and got ahead of that
8 following agency action really on 50.54F and all that.
9 They submitted that for reviews and it seemed to have
10 borne out.
11 SUBCOMMITTEE CHAIR SIEBER: And is FENOC
12 aware that the agency has done this, because that
13 should be to their advantage to know about that.
14 MR. DAPAS: They certainly would receive
15 the CBDI reports and then they look at that. I think
16 they do their own internal benchmarking and comparing
17 inspections of the different facilities.
18 MR. COLLINS: They have moved people back
19 and forth between the two sites.
20 SUBCOMMITTEE CHAIR SIEBER: Yeah, I wonder
21 about that. Does that raise another site or -- as far
22 as competency is concerned? Maybe you ought not
23 comment.
24 MR. COLLINS: I think we've seen a little
25 of both. The more common is when the right people go

1 to the site, plant performance improves.

2 SUBCOMMITTEE CHAIR SIEBER: Right.

3 MR. COLLINS: As Otto indicated it's a

4 little -- and Dr. Shack, it's a little harder to

5 acknowledge because it's less visible, the gradual

6 decline of a site over time, because there is momentum

7 and there is infrastructure and that has a tendency to

8 decline.

9 SUBCOMMITTEE CHAIR SIEBER: Yeah, well,

10 when that decline is occurring, you don't want to find

11 out about it through some event. It's better to find

12 out about it in the ordinary inspection process.

13 MR. DAPAS: Which is how the Reactor

14 Oversight Process is structured.

15 SUBCOMMITTEE CHAIR SIEBER: Right.

16 MR. DAPAS: Hopefully, the indications of

17 declining performance manifests themselves through the

18 ROP inspection finding, et cetera.

19 MR. COLLINS: Randy, did you have a

20 comment on this?

21 MR. BLOUGH: Randy Blough, DRS. Just a

22 couple thoughts. One is that with FENOC we have had

23 state of the fleet type meetings and our senior

24 inspector from Beaver Valley toured another plant

25 along with Region 1 management in conjunction with

1 those meetings and we have watched Beaver Valley
2 closely for a number of years for any indications of
3 the fact that the account is being sent elsewhere for
4 adverse impact. We didn't sense any, but as you say,
5 you know, it's something that takes time and you have
6 to see the length of it. Right now, we still haven't
7 seen any effect.
8 MR. HOLIAN: And just to follow through o
9 that same vein, Brian Holian, DRB, the last bullet I
10 had on the slide I was going to cover is the impacts
11 of both consolidation and deregulation and those are
12 items we're looking at. One is the bench strength
13 that they might have in their management type
14 organization. You know, staffing cuts in general, we
15 do, obviously, see those on those plants that are in
16 a deregulated environment. Now, I think that they're
17 more prevalent than the non or the regulated
18 environments. We see clippings all the time. Nine
19 Mile just cut 150 people this year. In the article it
20 mentioned that at a 2000 time frame about five years
21 ago they were three to 400 people higher than they are
22 right now. So that's a stress around the
23 organization.
24 I recognize -- Mr. Maynard commented about
25 different sites can do it with different number of

1 people and we recognize that but it clearly is a
2 stress around the organizations at least in the
3 transition period and a lot of our allegations also
4 come from right around the times of staffing cuts at
5 plants.
6 What else have we looked at, I mean, we
7 see PM optimization is a big item now with
8 consolidation and deregulation. We see the shorter
9 outages. We see, I won't call it a reluctance to shut
10 down. I mean, we're obviously looking for that but
11 the stress and the economic effects that they have for
12 an unscheduled shutdown you can clearly see that they
13 want to schedule their outages for maintenance items
14 about a week from now, not necessarily right away. So
15 our residents are stressed but looking at operability
16 in a real time situation it seems like more frequently
17 on these type of plants.
18 And you know quick restarts is another
19 item that stresses our resident staff. They're very
20 quick. Indian Point 3 went down on Friday night. I
21 was turning around the plant on Saturday. And so it's
22 a stressor for our organization a little bit to get in
23 there and make sure what they're doing is not an
24 apparent cause but what are causes for trips and
25 issues like that.

1 MR. COLLINS: That's not -- Sam Collins,
2 that's not technical though. That's a primary safety
3 focus but it's also in communications. A high profile
4 facility, a plant shut-down, we have a whole
5 communication planned with stakeholders and then we
6 communicate again based on the cause and we
7 communicate again when the plant restarts. We end up
8 not only following the technical aspects of the plant
9 but we really have two communication plans in a very
10 short period of time.
11 MR. HOLIAN: I'll turn back over to Rich
12 Barkley for the last couple of slides.
13 MR. BARKLEY: All right, I'll quickly get
14 through these three slides. I just wanted to give you
15 a little outline of some of the things we've tried to
16 cope with all of the demands of the involved
17 stakeholders. After 9/11 we did do additional
18 recruiting and training in the security area to follow
19 up on the concerns and interests that came up with the
20 increased demands from increased security requirements
21 and increased management oversight for two to three
22 years. Brian Holian devoted pretty much his entire
23 time to dealing with outside activities related and he
24 pointed out the controversial facilities.
25 We've had to tap folks at headquarters to

1 support us at critical junctures where the demands on
2 us were just too much to try to handle alone. So we
3 really appreciated the support they provided. And
4 again, my job is unique to this region. The other
5 three regions do not have an equivalent technical
6 communications persons supporting these type of
7 activities. It's been a demand on the staff, too,
8 responding to numerous security requests and
9 information requests. Post 9/11 for awhile we had to
10 turn down responding to a number of them, just too
11 many time demands on us. That has since tapered off
12 a bit, but it's still a time demand.
13 VICE CHAIR SHACK: I'm just curious, when
14 you have letters, what's the process for deciding how
15 you're going to respond to them?
16 MR. BARKLEY: Again, I work with the
17 Regional Administrator and the Division Directors as
18 to responsibilities for those letters. Some take very
19 careful delicate planning as to how we're going to
20 respond to them because to some degree, they're not
21 only technical but emotional, probably more emotional
22 than technical.
23 VICE CHAIR SHACK: But does everybody get
24 a response?
25 MR. DAPAS: Let me comment on that. This

1 is Marc Dapas. It often depends on the level to which
2 the letter is addressed. For example, if a letter
3 comes in addressed to the Chairman, the Executive
4 Director for Operations will issue what's called a
5 green ticket and it will target which office has the
6 lead, what are the support offices. There will be
7 times where the Office of Nuclear Reactor Regulation
8 may have the lead. If it's a question that relates to
9 a programmatic aspect, or the region, you know, it
10 will be tasked to say Region 1 identifying the
11 supporting offices and then we work internally to
12 determine how we're going to staff that, which
13 divisions are involved and then we provide the draft
14 response for review.
15 So it is a function of the nature of the
16 correspondence in terms of which process we invoke.
17 MR. COLLINS: I think your question was
18 does every letter get a response? Every letter gets
19 a type of response. More often than not, it's a
20 written response. There are some malicious
21 correspondence. We get a flood of activity. This
22 happened at Davis-Besse, I think. You get a flood of
23 form letters that come in where we, in that case would
24 write a form letter back. But every correspondence
25 that comes in that suggests to the agency at some

1 level, using a priority system of the level of review
2 and concurrence, receives a response. I think the NRC
3 is fairly unique in that case and it is -- in some
4 cases we call the individual and say, "Can we just
5 discuss this on the phone with you", and then we'll
6 write a letter back saying, "As discussed on the
7 phone, we responded to your question. Please let us
8 know if you have any further issues". So there's
9 various ways of handling it to try to minimize the
10 impact based on the significance of the letter.
11 MR. BARKLEY: And I do find that people
12 like the personal contact, so the quick phone call you
13 can make up front may satisfy them over all but that's
14 probably the most positive way of getting feedback is
15 a quick call and being timely.
16 CHAIR WALLIS: That can be
17 counterproductive. You can get into sort of a
18 technical debate on the phone, that can give rise to
19 a lot of misunderstanding sometimes.
20 MR. BARKLEY: I can. You have to be
21 selective as to who you make the phone calls to.
22 VICE CHAIR SHACK: It's nice to know who
23 you're calling.
24 MR. DAPAS: We also have some experience
25 for example, an individual that has expressed concerns

1 in the past were to communicate say via e-mail, we
2 have relied on what has been an effectively
3 communication feedback form, i.e., responding by
4 letter so that we have a documented trail, we have
5 found is the -- you know, we'll often say, "Please
6 send us a letter in communicating your current
7 concerns specifically", put it into the appropriate
8 process.
9 MR. COLLINS: In our office of Public
10 Affairs we have two Public Affairs officers here and
11 they are very good in helping out and responding
12 directly to some of those.
13 MEMBER MAYNARD: I would think that one of
14 the main problems is just sorting out the emotion from
15 the facts, the issues and trying to get it where you
16 get the common understanding of what the facts are and
17 responding and dealing with that.
18 CHAIR WALLIS: Of course, all the emotion
19 is on the public side.
20 MEMBER MAYNARD: You have to be careful
21 you don't engage in the emotion.
22 MR. DAPAS: We're committed. The public
23 is emotional, we're committed.
24 MR. BARKLEY: I find I have to work very
25 hard to try to explain the issue but when I get it in

1 perspective, that makes it a lot easier. You can calm
2 a lot of emotions then. If they're open to that kind
3 of background. Quickly wrapping up here, we have
4 expanded discussions at our annual assessment
5 meetings. We have public meetings on performance of
6 licensees and we expand it into group discussions of
7 security need. We have done some outreach activities
8 here we've actually met with other government bodies
9 at Oyster Creek and Indian Point and will continue to
10 do that in the future.
11 Let me roll to this last slide. Again,
12 we've mentioned congressional office briefings. Brian
13 mentioned bi-weekly conference calls. We have
14 representatives of congressional and Senate staffers
15 there listening in, twice weekly to discuss
16 groundwater contamination issues and then we've
17 supported some highly controversial meetings. One of
18 the BY meetings we had 500 people, a particularly
19 tough meeting. So we've had some waters that we've
20 gone through.
21 MR. HOLIAN: Brian Holian again. Finally
22 the last slide we have is or office going forward,
23 really is just more of the same. We've geared up to
24 respond to these types of challenges and we'll
25 continue to that. Our last slide, probably a

1 purposeful cycle there, we think we have met and will
2 continue to meet these challenges and it's something
3 we track even in the budget space a little bit. We're
4 working with what we call a unique site budget model
5 for Region 1 here. As Sam mentioned a lot of single
6 unit sites and of course we have some sites like
7 Salem/Hope Creek. We have Millstone with a
8 Westinghouse plant, so on budget space for how much it
9 takes to inspect them, we're looking at a unique site
10 budget model and we also are tracking kind of the
11 outreach type effort that we need all the way down to
12 our residents, a portion of which they have to respond
13 so that we can fill that packet in the budget area.
14 That's it for the outreach slides. I just
15 had a couple items I'll just touch from questions I've
16 heard and then there's a two-hour session that Dave
17 Lew our Deputy Director will be covering this
18 afternoon on ROP for more resident type questions.
19 But in general you talked about NSPD peers earlier,
20 Randy mentioned about a good 10 to 15 percent, that's
21 a good number. We don't have them all here even the
22 ones that stood up. We have eight NSPD peers in the
23 program at any one time here. That's a two-year
24 program.
25 On top of that, we have, I'll call it the

1 burden nor the opportunity to host a lot of
2 headquarters NSPD peers out. So you just need to know
3 when you're out at our sites and you see that third
4 person there, it's headquarters folks coming out for
5 their resident tour. And it's very valuable for them
6 but that's a training issue that this region in
7 particular has.
8 We talked about the seven-year resident
9 policy. Interestingly enough, we've been in a very
10 stable period here and starting in 2007, DRP is
11 already looking ahead to 2009. There will be about a
12 30 percent turnover as the people who first entered
13 that seven-year period start timing out. So it's an
14 item that we have on our radar screen for the
15 expertise that will be needed to fill those sites.
16 Finally, you mentioned site visit policies
17 and we can talk more this afternoon, but in general we
18 do do objectivity visits. Every resident goes out for
19 a week at another plant. That continues to this day.
20 We also do that cross-regional so where we have these
21 utilities being cross-regional, we'll send an
22 individual to a Dominion plant down in Region 2 and we
23 get a very good cross-feed between the regions and of
24 course, the plant knowledge, so that happens.
25 Finally, you asked about management

1 oversight visits. We kind of pride ourselves here in
2 Region 1 to almost double kind of the management type
3 visits that, at a minimum that's called for in the
4 manual chapters for all regions and that. So we keep
5 a high presence out there. And Sam mentioned the
6 feedback forms. Historically they're 90 percent or
7 above very positive, 95 percent are positive on
8 interactions. One just recently we had was an issue
9 where a utility said, you know, it's hard at the exits
10 for us to really see significance, not in the findings
11 but maybe in the observations that residents bring up
12 in their exit, things you don't see in an ROP report,
13 but still at the exits they're observations.
14 And so our quick response was to make sure
15 the Branch Chief is out there at the next several
16 exits with you with the senior residents to make sure
17 those go well, that's one example.
18 MR. COLLINS: Yeah, to tie a few parts
19 together, thank you Brian, we talked about
20 stakeholders, these visits and the training of the
21 staff. What we're finding here in a corporate sense
22 is that the ability to communicate professionally and
23 efficiently and effectively is one of the key
24 attributes that we're looking for in the staff in the
25 future. It did not always be that way. Back in the

1 '80s when I was hired, it was technical expertise,
2 understanding of the industry, background. The
3 stakeholder environment was very different. The
4 opportunities for interface were very different. You
5 weren't dealing with Corporate Vice Presidents on
6 site. You were dealing with Plant Managers. The
7 corporate individuals were dealt with by the region.
8 In today's environment, when we hire
9 people, we look at their ability to communicate. And
10 we hopefully train them in this area as they move
11 through because we have to be able to efficiently and
12 effectively transmit the message both to the licensee
13 and to the stakeholders in order to be an effective
14 organization. The feedback forms that we get from
15 licensees, the predominant issue was communications.
16 It's not the validity of the technical finding. It's
17 not the regulatory impact, it's mostly communications.
18 And it revolves around some ownership and some
19 emotional issues, obviously, but it's still
20 communication of that technical information. And you
21 probably see that as much as anyone with the
22 presentations and the staff, you have a lot of
23 opportunity to see the NRC.
24 In a regional basis we have to be able to
25 transmit findings, operate in emergencies, operate in

1 extremis, be present in the situation because or
2 credibility is at stake. That's the first thing
3 people see is the body language and the ability to
4 communicate before they ever transmit the information.
5 Quite interestingly, if people we're hiring in, the
6 staff that we're bringing in through the NSPDP program
7 are very good at that. At a young age, you know, the
8 exposure to the technology, the opportunities that are
9 afforded in school, there's usually extra curricular
10 activities. They represent programs, they belong to
11 societies. They're very good and they're very
12 effective. Adults listen to the younger generation
13 when they're transmitting information. It's
14 fascinating to watch, but they are very effective.
15 That's it.
16 VICE CHAIR SHACK: The next presentation
17 we're working to move into is knowledge management but
18 based on our schedule, I think it would be appropriate
19 to take a break and then go into that if that's all
20 right.
21 SUBCOMMITTEE CHAIR SIEBER: It makes no
22 difference to me. It's time for a break.
23 VICE CHAIR SHACK: We will break to 10:35.
24 (A brief recess was taken.)
25 MS. GAMBERONI: I'm Marsha Gamberoni,

1 Deputy Director in the Division of Reactor Safety. In
2 this next session we're going to talk about knowledge
3 management and specifically address the question, does
4 the NRC offer sufficient training towards developing
5 new inspectors. Before we get into the issue, I
6 wanted to introduce some of the other team here to
7 discuss this topic. Louis Manning, the Branch Chief
8 in Division of Research Management, he's previously
9 been a qualified HP inspector so he's gone through the
10 qualification process. We also have two recently
11 qualified inspectors, Jeff Kulp, coming with
12 experience from the outside, mostly in the Navy, about
13 10 plus years in the nuclear side of that and Michelle
14 Snell, a recent grad from NC State and in nuclear
15 engineering.
16 I also want to introduce Chris O'Rourke.
17 She's our Human Resource Specialist in charge of our
18 training program in Region 1. So before we get into
19 the specifics of knowledge management, I just wanted
20 to talk a little bit about the flow path, I guess of
21 the inspectors and it's something I necessarily wasn't
22 familiar with until I came to the region. And that is
23 we talked about how the NSPs come into the Division of
24 Reactor Projects and our experienced inspectors come
25 into the Division of Reactor Safety.

1 Well, there is a lot of mix that goes on
2 back and forth through their career. After the NSPs
3 complete their qualification program and NSPDP
4 requirements, they move over into Division of Reactor
5 Safety and often times our Division of Reactor Safety
6 inspectors, after they've completed the qualification
7 program in a few years as inspector for DRS type
8 inspections, will move into the resident ranks. So we
9 continue to get the cross-knowledge and diverse
10 experience, diverse skill sets to continue the
11 development of inspectors and we'll talk more about
12 that as we go through the slides.
13 Really, on Slide 4 we broke down our
14 training and development program into four areas; the
15 qualification program which is the formal program
16 required by Inspection Manual Chapter 1245; our
17 person-to-person interface which involves not just the
18 interface between the employee and their supervisor,
19 but also mentors and assigned peer sponsors; on the
20 job training, we'll talk a little bit more about that.
21 References are obviously key. One thing I'll point
22 out, I know often times you deal with the licensing
23 side and when you consider the ROP being a new
24 process, even though inspection has been around
25 relatively young, since 1999, the references are newer

1 and their continually updated, the inspection
2 procedures by information provided from the agents.
3 So I think that's -- having dealt with the licensing
4 side, that's the difference between thinking about the
5 standard agent and some of our inspection procedures.
6 Then there's some other references we'll
7 cover and then additional training. Even though
8 there's a lot of training involved with the
9 qualification program, training continues on and it's
10 a big part of the regional program to develop experts
11 in particular areas. So with that I'm going to turn
12 it over to Louis to go through those five components.
13 MR. MANNING: Hi, I'm Louis Manning. One
14 of the things that Marsha already pointed out that we
15 have two types of inspectors that we hire. They're
16 experienced reactor inspectors and entry level reactor
17 inspectors. And I'm going to cover the experienced
18 reactor inspectors first and the qual program process.
19 They're assigned to the Division of Reactor Safety
20 where there's generally more need for extensive
21 knowledge in the reactor industry, specific areas like
22 fire protection, electrical, et cetera.
23 And also the qual process is a formal
24 training program that they go through. It could take
25 approximately a year for them to complete it because

1 they're coming in with experience so you can already
2 leverage that. They're also assigned a peer sponsor
3 and I'll get into the peer sponsor role later on. And
4 they complete the Manual Chapter 1245 that's already
5 outlined, the formal process for inspector
6 qualifications.
7 VICE CHAIR SHACK: How do you decide
8 they're experienced? Is one year of experience
9 enough, five years, nuclear Navy or you know, what's
10 an experienced inspector? I'm sure he's not an
11 experienced nuclear, you know, NRC inspector.
12 MR. DAPAS: This is Marc Dapas, let me
13 just comment on that. With any particular job vacancy
14 that we have, we have different grading factors. So
15 we may have a full performance GG-14 physical security
16 inspector or a GG-13 health physicist, and as part of
17 the package submittal each of the applicants have to
18 address the rating criteria and then they also -- they
19 draw from their experience in addressing the rating
20 criteria. For example, the rating criteria may say
21 knowledge and comprehensive understanding of the full
22 rated operation of a nuclear power plant to include
23 systems, et cetera. And then each applicant would
24 have to address how their experience has given them
25 the expertise or technical capability in response to

1 that particular rating criteria.

2 So that's how we really get at gauging the

3 experience and we just use that to differentiate

4 between a recent college graduate that's going through

5 our entry level program.

6 VICE CHAIR SHACK: Thank you, Marc.

7 CHAIR WALLIS: Chapter 1245, means there

8 are 1200 chapters in this manual? It's somewhat

9 daunting.

10 MR. BARKLEY: That particular Manual

11 Chapter is a Manual Chapter. I think they skip a lot

12 of numbers on the way up.

13 SUBCOMMITTEE CHAIR SIEBER: Yes, they do.

14 MR. MANNING: Okay, the entry level

15 reactor inspectors are usually recent college grads.

16 They go through a formal training program which is to

17 say a professional development program, which is a

18 two-year program and it takes these individuals

19 approximately two years to complete the process that

20 is the NSPDP part and also the inspector manual

21 chapters and I'll get into the next slide.

22 They are also assigned a peer sponsor and

23 mentor to help them navigate the process, acclimating

24 to the agency and coming up to speed with regard to

25 their inspector qualification process. Again, it's a

1 formal training program. They have the Manual Chapter
2 1245 to complete. One of the things that we do in
3 Region 1 which is unique to us specifically, we assign
4 a reference site where the individuals get assigned to
5 a specific BWR, PWR site so that helps them through
6 their process of being able to now look at what that
7 site has, what they're seeing in theory, if you will,
8 and now being able to look at some practical
9 applications.
10 One of the things that the NSPDP
11 requirements is a two-year program as I said earlier
12 but there are requirements for rotational assignment.
13 They will -- the NSPDP candidates will complete a
14 three-month rotational assignment at their reference
15 site and will also typically go to headquarters for
16 three months as well to gain greater insights into the
17 agency particularly in OR and how the things work
18 there.
19 VICE CHAIR SHACK: And that comes where in
20 the program?
21 MR. MANNING: It varies. Typically it
22 might come at the end of their first year to their
23 second year when they look at the types of rotations.
24 It depends on how they work out. There's a formal
25 training guide that they go through that --

1 CHAIR WALLIS: Does anybody fail?

2 MR. MANNING: There are individuals I

3 guess that --

4 MS. GAMBERONI: Through the NSPDP program

5 I'm not aware of any in the region who have failed.

6 There are, though, certain tests that are required

7 with respect to the TTC courses and so there's an

8 opportunity there to test knowledge and skills. And

9 ultimately when you complete either one of the

10 qualification programs, the last step is a qual board.

11 CHAIR WALLIS: Well, let's say not just

12 failing; do they drop out for other reasons? Do those

13 who start finish typically?

14 MS. O'ROURKE: Chris O'Rourke, Human

15 Resources. There have been a number, a small number

16 of individuals since the beginning of the program who

17 have been dropped from the program or have left the

18 program voluntarily. I don't know the exact numbers.

19 CHAIR WALLIS: It's not a significant

20 number.

21 MS. O'ROURKE: No.

22 CHAIR WALLIS: Those who come in usually

23 finish and go out to be inspectors.

24 MS. O'ROURKE: Yes, sir.

25 MR. DAPAS: I have one comment. This is

1 Mark Dapas, Deputy Regional Administrator. One of the
2 things that we do focus on is insuring that our new
3 employees are gainfully employed. We have a mentor
4 program. We have staff that is assigned to help in
5 the training and qualification program in addition to
6 the Branch Chief, I'll call it a training coach, but
7 we want to insure that our new employees are getting
8 our of their NRC experience what they had hoped to and
9 what they had signed on for. So we do monitor that
10 very closely to insure that we don't have someone
11 that's leaving the agency because they were
12 disillusioned or feeling unfulfilled. They say, "Gee,
13 this is not what I thought this was going to be", but
14 we do get some that have left on occasion voluntarily
15 because they have decided they want to make a change
16 and pursue another career opportunity.
17 But I think we've had very good success
18 with our retention rate for the new employees because
19 of the level of attention that we focus. But you
20 certainly can ask the NSPDPers in the room to speak,
21 you know, as opportunities here, either during lunch,
22 et cetera, to gain insights on the care and feeding
23 that we are providing to them.
24 MS. SNELL: Yes, this is Michelle Snell,
25 the Division of Reactor Safety. To answer your

1 earlier question about when we do the rotations,
2 usually you have -- well, first if we do an
3 orientation offsite, you usually have your training
4 classes down in TTC in Tennessee which is seven weeks
5 of usually pressurized reactor training, so you have
6 an idea of what you're getting into before you go to
7 the plant. Then you do your three months, depending
8 on also what's going on in the region and what's going
9 on in your branch, and usually your rotation to
10 headquarters is towards the end, after your
11 qualification board.
12 So that's just kind of how we do business.
13 It might be different in another region.
14 MR. MANNING: Now, I'll go to the person
15 to person interface with -- specifically with peer
16 sponsor or mentor. This individual is assigned to
17 help the NSPDP candidate or new inspector, who then
18 would be experienced as well, get through various
19 topics of knowledge management subjects which we'll
20 cover a little later, to teach throughout the training
21 and development process, because as I said earlier,
22 there's a template, if you will, for NSPDP
23 individuals, specifically that they have various
24 training which includes -- may include external
25 training, required training at the technical training

1 center, and to get through those various courses. And
2 it's important that they stay on track, if you will so
3 that they complete the training process and become a
4 qualified inspector.
5 In addition, we discussed goals and
6 options. Some of the individuals who are going
7 through the NSPDP program may want to eventually want
8 to become a resident inspector and some of the DRS
9 inspectors might want to become a resident inspector
10 as well. We're just becoming more specialized in the
11 various areas. So there is movement across the
12 various areas. And then also, not to usurp, if you
13 will, the role of the Branch Chief, but there may be
14 some informal discussions that the peer sponsor may
15 have or mentor helping understand branch expectations,
16 and things of that nature.
17 SUBCOMMITTEE CHAIR SIEBER: Who is the
18 peer sponsors?
19 MR. MANNING: The peer sponsors typically
20 is an experienced inspector that's gone through the
21 program, already has done various things and kind of
22 a matching up, if you will, of the individual coming
23 in. The mentor is typically someone in management.
24 It could be, not their Branch Chief, but it could be
25 someone, Deputy Division Directors or --

1 SUBCOMMITTEE CHAIR SIEBER: Okay, two
2 different people then.
3 MR. MANNING: Two different people, two
4 different --
5 SUBCOMMITTEE CHAIR SIEBER: And the
6 trainee, does he keep the same peer sponsor and mentor
7 throughout the program or do you switch off depending
8 on what field you're currently training in or how does
9 that work?
10 MS. GAMBERONI: For the most part, I'll
11 just answer in general but we maintain the peer
12 sponsors and mentors throughout the program. And one
13 of the things the peer sponsor does, just to get into
14 a little more specifics is preparing somebody for TTC,
15 they might study, you know, the individual who is
16 going through the program might do self-study on
17 systems and then the peer sponsor will meet with the
18 individual to check to see if he has questions and
19 that sort of thing. But for the most part, we
20 maintain the peer sponsor through the program and then
21 mentor through the program also.
22 SUBCOMMITTEE CHAIR SIEBER: Thank you.
23 MR. MANNING: Okay, the knowledge
24 management component, there are various meetings that
25 are conducted in the knowledge management area to deal

1 with subjects including current and historic events,
2 Q&As as well. Some of them include the ROP process
3 allegations, enforcement, the enforcement process,
4 pertinent sections of 10 CFR as well. And also
5 during the semi-annual inspector seminar, there is
6 another opportunity where we have all the resident
7 inspectors in, including the reactor inspectors to
8 really share a lot of knowledge from the experienced
9 inspectors and the technical aspects that they gain,
10 the value added findings and things that they can
11 apply to their inspection techniques, if you will, to
12 get at the heart of some issues.
13 CHAIR WALLIS: So by knowledge management,
14 you mean something like classes? They actually go in
15 and learn formally from experienced people, they take
16 exams or is it a much vaguer thing than that?
17 MS. GAMBERONI: This part that we're
18 talking about the conducting weekly experienced
19 inspectors' discussions is more informal. It's at a
20 set time. It's Thursday mornings at 9:00 o'clock.
21 CHAIR WALLIS: And they're advised to go
22 read up on this for the --
23 MS. GAMBERONI: Yeah, one of the things
24 that happens is we do have daily meetings on plant
25 status and issues come up during those daily meetings

1 that the newer people may not understand and they come
2 with lots of questions, whether it's regulation or
3 it's some term that was used or more specifics.
4 CHAIR WALLIS: So it's more like learning
5 on the job with current issues rather than learning a
6 lot of stuff which is more general.
7 MS. GAMBERONI: A little bit of each.
8 It's a little bit of each. We usually have our -- and
9 we have a couple sitting over here, our SRAs, Senior
10 Risk Analysts, who are always in attendance and maybe
11 one or two Branch Chief. So sometimes it depends.
12 It's a mix every week, who's available, but it's --
13 sometimes they come with subjects that they want to
14 provide to everyone or sometimes the individuals are
15 and/or the individuals who are attending promote
16 questions.
17 CHAIR WALLIS: How do you evaluate that
18 they've learned what they're supposed to learn?
19 MS. GAMBERONI: Ultimately through the
20 qualification board and also through discussions with
21 their peer sponsors.
22 MEMBER ARMIJO: Does that board go through
23 some sort of an oral exam or written exam? What's the
24 -- at the end of the one year, is there some sort of
25 a test or interview process that says, "Yes, these

1 guys really did learn what they were supposed to"?

2 MS. GAMBERONI: The inspection manual

3 chapter requires an oral board and it's comprised of

4 a couple of Branch Chiefs and another Senior

5 Inspector. Usually it's not their supervisor who

6 chairs the board and that's as a minimum. And then

7 sometimes a senior manager also is in attendance.

8 It's a series of questions both hypothetical or

9 related to the reference site and how long would you

10 said it lasts, a couple of hours?

11 MR. KULP: One to two hours.

12 MS. GAMBERONI: Anything else would you

13 want to add, Jeff, to the board process?

14 MR. BLOUGH: If I might, Randy Blough.

15 That board happens after they've completed the TTC

16 courses, they've completed a qualification journal, a

17 lot of self-study, inspection accompaniments, the

18 plant tours. Their Branch Chief has spent sufficient

19 time to believe they're ready. That's in the office

20 and at the plant, and the other -- we intensely focus

21 on helping the candidate be ready for the

22 certification board and we will -- if we think the

23 candidate needs more work, we'll actually delay the

24 certification board and then there is an option to --

25 there are several options at the certification board.

1 One is pass, one is pass with look-ups
2 which usually happens. The next is pass with look-ups
3 that must be completed and then discussed with
4 management before you actually certified as an
5 inspector and the other one is you fail, in which
6 case, a revote would be necessary. But the point is,
7 there are a lot of steps and an extensive journal and
8 certifications that the person is ready before they
9 even progress to this board, which is a demanding oral
10 certification board.
11 SUBCOMMITTEE CHAIR SIEBER: And I take it
12 that the candidates for the inspector position are
13 graduate engineers? Is that true or not? Pardon?
14 AUDIENCE MEMBER: I think we hire
15 engineers.
16 MS. GAMBERONI: Engineers.
17 SUBCOMMITTEE CHAIR SIEBER: So they would
18 have some kind of technical background before they get
19 there but not necessarily nuclear power, correct?
20 MS. GAMBERONI: Correct, mechanical,
21 electrical, some nuclear engineers, there's a variety.
22 MR. COLLINS: Yeah, this is Sam Collins.
23 The staffing plan for the region, which is part of our
24 overall human capital plan which includes training and
25 staffing and diversity initiatives, each position has

1 a series designator and that position, as Chris can
2 explain, designates the series 840.801. They have
3 certain education and/or experience requirements in
4 order to be eligible to fill that position. So people
5 come into the position as defined by the staffing plan
6 with the requisite background based on the position.
7 It can be health physics, it can be sciences, it can
8 be IT and other aspects as defined by the staffing
9 plan. And we define the staffing plan based on the
10 workload and the program definition.
11 SUBCOMMITTEE CHAIR SIEBER: So for
12 somebody from outside the agency, I take it that the
13 significant part of the training is familiarization
14 with the regulations, what they mean, and how they
15 apply and how the agency wants them to be applied.
16 MS. GAMBERONI: Correct.
17 SUBCOMMITTEE CHAIR SIEBER: Okay.
18 MR. DAPAS: Marc Dapas, I have just one
19 thing to add, when I referenced the rating factors in
20 that process, there will be examples in there where it
21 will say, "This expertise can be satisfied with a
22 nuclear engineering degree or a technical degree", in
23 a certain area. To give an example, there's a process
24 where when you have applicants, there's a rating panel
25 and you go through and you evaluate the quality of the

1 individual's experience and there is a crediting plan
2 that's developed that will outline what is considered
3 an A candidate and B candidate against each of the
4 rating factors and that will highlight the level of
5 experience and give examples of what would constitute
6 satisfaction at that particular grade level.
7 SUBCOMMITTEE CHAIR SIEBER: Now somewhere
8 during this two-year program, does a candidate get an
9 opportunity to do anything with, for example, a
10 simulator, plant simulator?
11 MR. KULP: Yes, there is a two-week
12 simulator course at the end of the TTC training.
13 SUBCOMMITTEE CHAIR SIEBER: Okay, so they
14 have some kind of operating experience.
15 MR. KULP: Yes.
16 SUBCOMMITTEE CHAIR SIEBER: Okay. Good
17 enough.
18 MR. MANNING: Additional training that the
19 individuals go through, not only their required
20 training according to the manual chapter and NSPDP
21 required courses, but there may be some external
22 training which we call 368 training where several
23 dollars are set aside for courses that are outside of
24 what the NRC offers and the help the individuals
25 develop various expertise and specific specialties.

1 Some of it could be independent spent fuel inspections
2 or fire protection, things of that nature. And they
3 also may help an individual, a person may be looking
4 at taking advanced college courses or degree masters
5 level courses and it may lead to a degree or a
6 certification, special certification, things of that
7 nature.
8 There's division specific training that is
9 on a more informal basis that may cover various topics
10 of interest and one of the things that everyone has to
11 do is strategic workforce planning. This is an annual
12 requirement. We go and update our skill sets and what
13 we have. And it's used for determining gap analysis
14 and hiring strategies and find out where we need to go
15 as far as what we need to do to insure the success of
16 the agency, if you will, and then finally maybe some
17 probabilistic risk assessment or analysis basis for
18 individuals as well.
19 VICE CHAIR SHACK: Does that mean, they
20 learn to use the SDP notebooks?
21 MS. GAMBERONI: I'll let our SRAs --
22 AUDIENCE MEMBER: Yes, as part of the TTC
23 training they have SDP training and then as we go
24 through the various counterpart meetings and
25 continuing training, if there's any revisions, we do

1 additional training with any new revisions that come
2 out.
3 SUBCOMMITTEE CHAIR SIEBER: Do they use
4 SPAR?
5 AUDIENCE MEMBER: Excuse me?
6 SUBCOMMITTEE CHAIR SIEBER: To they use
7 the SPAR?
8 AUDIENCE MEMBER: The inspectors typically
9 use the SDP Phase 1 and Phase 2 notebook. The SRAs,
10 the Senior Reactor Analysts are applying the SPAR
11 model.
12 CHAIR WALLIS: They use the SPAR. These
13 folks don't get that far.
14 AUDIENCE MEMBER: No.
15 VICE CHAIR SHACK: My understanding was
16 they sort of dropped that screening and you really
17 ended up with an SRA, is the right, or have I got that
18 wrong?
19 AUDIENCE MEMBER: No. The way we do
20 things in the region, though, the SRAs will review all
21 the findings to make sure we have consistency in the
22 findings between all the inspectors. The inspector
23 when they have a finding, they'll apply it to Phase 1
24 if it doesn't apply to Phase 1, then they'll apply it
25 to Phase 2 and then we'll support that if they need

1 any help in Phase 2. If it goes beyond Phase 2, we'll
2 take that up and take it through a more detailed risk
3 analysis with a SPAR model.
4 MR. MANNING: One of the other components
5 is on the job training. We also help individuals that
6 are going through their formal training process or
7 external training. The specific things that they do
8 on the job; they make the observations as part of an
9 inspection team or they may be a part of just
10 observing what's going on to kind of see how things
11 are interfacing, the interactions at the plants, to
12 becoming a contributing member of the team where they
13 actually may do some smaller subsets of the actual
14 inspection effort to becoming maybe more of an
15 independent inspection as they continue going through
16 the process.
17 And there, of course will be some
18 oversight as well, depending on the level of expertise
19 developed with these individuals that are exhibiting
20 as they're going through a qual process. And finally
21 maybe leading up to becoming a team leader of an
22 inspection team as well.
23 Expert development, there could be any
24 technical topic areas or procedures or processes of
25 interest, NOEDs, Notice of Enforcement Destruction for

1 example, can be discussed as part of expert
2 development. Independent study assignments where they
3 could look at various historical events if you will
4 and look at the significance of that and on an
5 independent basis and report back what they've learned
6 through that assignment.
7 Job rotation opportunities, I noted
8 previously that the NSPDP candidates go through
9 rotations but there may be opportunities where folks
10 may have some flexibility to maybe go and interface
11 with maybe another region for like a six-week period
12 or something like that and then benchmarking
13 objectivity business to make sure that there's
14 consistency, if you will, in implementation of the
15 regulations and the inspection procedures as well. So
16 that's part of the OJT process for helping individuals
17 get to their qual.
18 And then finally, the last slide deals
19 with the reference section. There are inspection
20 procedures, which are overarching, if you will, of
21 what the individuals learn as their qualification
22 process. We have our regional website, where we post
23 various topics of interest to help leverage maybe IT,
24 operating experience, which you'll have a briefing on
25 that later on and also construction inspection page,

1 which deals with construction inspections and various
2 topics of interest with regard to that.
3 The regional instructions and divisional
4 policies and procedures, they're the last reference
5 guides and there may be individuals who have a
6 specific expertise in some of the areas that are
7 covered in these regional instructions or division
8 policies and procedures that can help facilitate and
9 make sure that the individuals going through the
10 qualification process have what they need in the tools
11 for success as an inspector, and inspector field
12 observation and best practices is the last.
13 MS. GAMBERONI: We wanted to pass that
14 around.
15 MR. MANNING: Any additional questions
16 that you may have that we didn't cover in the
17 presentation?
18 MEMBER MAYNARD: Do you get feedback from
19 the students after they've been out in the field for
20 awhile, any feedback for improvements to the training
21 program, something that they thought they would have
22 benefitted from? Is it kind of a living thing, or is
23 it pretty much --
24 MS. GAMBERONI: Well, there's feedback
25 associated with each class, and so there's feedback

1 forms with that, whether it's TTC or -- and then real
2 time feedback to their peer sponsors and continue the
3 feedback forms associated with the inspection
4 procedures and also our individual policies within the
5 region and processes.
6 MS. SNELL: This is Michelle Snell, DRS.
7 We also do feedback to Marc Dapas. He meets with us
8 every -- I don't now how often.
9 MR. DAPAS: I was striving for quarterly.
10 MS. SNELL: Quarterly, and it's a pretty
11 open meeting where we can discuss any questions we
12 have or we can supply pretty open feedback on any
13 issues we have or ideas we have for the program.
14 MS. O'ROURKE: This is Chris O'Rourke,
15 Human Resources. I also get feedback from all the
16 NSPDP participants and often times from the
17 experienced participants also as they complete their
18 program on what the went through and any suggestions
19 they might have for changing during the programs.
20 VICE CHAIR SHACK: I think Otto's question
21 was sort of a year or two later after they've been out
22 in the real world, you know, "We should have learned
23 this", do you solicit that kind of feedback?
24 MS. GAMBERONI: Well, part of that I
25 think, comes through with our discussion annually,

1 semi-annually on our training. We talk to individuals
2 about what sort of training they want and this past
3 year I think we had at least over 50 courses that were
4 provided to DRS inspectors, the experts. And so some
5 of that, we'll have discussions about the basics.
6 We'll talk about maybe a pump course that was given
7 and it would be -- so we'll get the feedback that it
8 would be helpful if how to tailor that course in terms
9 of the basics for the basic inspector and who should
10 take that course when, if that should be given
11 earlier, that sort of thing.
12 MR. BLOUGH: Did we mention that the
13 Region 1 Training Council has a role and there's an
14 agency steering committee on that Manual Chapter 1245
15 as well.
16 MS. GAMBERONI: And as far as discussing
17 the training, we do have, as Randy mentioned, a
18 training council. We meet monthly to discuss the
19 training, not just the 368 training which costs
20 dollars and is external but to discuss, we have
21 monthly training, DRS, DRP, where we talk about topics
22 and they could be historic issues, Browns Ferry Fire,
23 TMI, or current events. We also have then the
24 Thursday weekly training and then there's a number of
25 courses that we hold in-house. So we have -- Chris

1 has put together a whole training calendar and for a
2 month, it's actually -- any one month there's probably
3 at least half dozen to 10 training opportunities on
4 that. And that's continuous, and so that's something
5 as Randy said, we have a training council and we talk
6 about whatever feedback we have whatever input we
7 have, whatever requests we get, we prioritize those
8 appropriately.
9 We mentioned the strategic workforce plan.
10 That's another opportunity to determine whether it's
11 an individual saying, "Here's something I don't know",
12 or it's a supervisor recognizing a gap within that
13 discipline. So there's an opportunity to feed that in
14 and determine whether that's something we can train
15 in-house, capture the knowledge from somebody who has
16 the knowledge in-house or we need to bring that
17 experience from outside or go down to NRR research and
18 get information from them, ask them to come up or send
19 some HR rotation there. So with our gap analysis this
20 year we actually identified maybe a half dozen gaps
21 and have an action plan associated with how we're
22 going to close those gaps. So I think that's a source
23 of feedback also.
24 MR. DAPAS: This is Marc Dapas, one thing
25 to add to your question about what type of feedback do

1 we receive on the quality of training; one of the
2 things that we do do which is a function of the
3 training council is, we assign a senior manager as a
4 sponsor of any course that we are bringing in-house
5 and that individual attends the training, evaluates
6 the quality of the instruction and then reports to the
7 training council on the value of the training and
8 then, of course, talks to of course participants to
9 obtain their feedback.
10 Another avenue in terms of feedback as I
11 mentioned, we do have NT managers and others that
12 mentor some of our newer employees. I mentor some
13 folks and one of the questions that I ask when I meet
14 with them is, "How are things going", to get a sense
15 to what degree those individuals feel that they are
16 gainfully employed. I talk about the qualification
17 process, to get a sense of how that is proceeding and
18 I have gotten some valuable feedback there that I've
19 been able to address appropriately through the
20 management chain. So that's another venue that we
21 have to gain feedback on the training process.
22 And then the other thing I wanted to
23 mention is, as part of the appraisal process we expect
24 each supervisor to engage in a discussion when they're
25 going through the performance review about training

1 that they should receive during the following year and
2 that feeds into the training plan that is then brought
3 before the training council as we prioritize the
4 expenditure of funds. That's another opportunity to
5 talk about training and I would offer as a forum for
6 someone to communicate, "You know, I supported this
7 inspection and I really didn't feel that I had the
8 training I needed to be successful," and that would be
9 an avenue to engage in that type of discussion and
10 then target specific training to address that.
11 MS. GAMBERONI: And then Randy also
12 mentioned the steering committee for Inspection Manual
13 Chapter 1245.
14 MS. O'ROURKE: Chris O'Rourke, Human
15 Resources. Region 1 as well as the other regions, are
16 part of a working group that continually looks at the
17 Inspector Qualification Manual Chapter 1245 and
18 presently they are working on developing another set
19 of appendices to go beyond the basic qualifications
20 for inspectors into some of the more advanced
21 qualifications such as fire protection, electrical and
22 mechanical. And we, with other teams, are working on
23 developing those appendices as well.
24 MEMBER ARMIJO: Do you benchmark your
25 training program with the other regions for

1 consistency or identification of best practices or --

2 MR. MANNING: We had a senior reactor

3 management out of the meeting that was held in the

4 fall that came out with -- actually dealt with that

5 specific subject matter for the regions and we've --

6 myself and Chris O'Rourke actually sat and represented

7 Region 1, specifically where we looked at how the

8 regions implement training for experienced entry level

9 training councils and we kind of benchmarked, came up

10 with best practices, if you will, and we have a paper

11 that's out or with -- that deals with specific areas

12 where we've come to agreements on what's the best

13 practice and training and trying to leverage that now

14 as we go forward in our training process.

15 MS. GAMBERONI: Any other questions?

16 MR. BARKLEY: Thank you, Marsha. Our next

17 presenter is Karl Diederich. Karl?

18 MR. DIEDERICH: Good morning. My name is

19 Karl Deiderich. I'm an Inspector in the Division of

20 Reactor Safety. Don Jackson is my Branch Chief and

21 Bob Marshall and Marsha Gameroni are the Divisional

22 Management. Next slide.

23 My agenda for this talk is to discuss the

24 history of the Operating Experience Program, where it

25 comes from, how it's used, what processes support that

1 and then give some example applications here in the
2 region. The view is going to be the regional view of
3 the Operating Experience Program, how it integrates
4 with the one up at headquarters. Next slide.
5 So what is operating experience. And we
6 just talked about knowledge management. So here is a
7 type of knowledge management, a body of knowledge that
8 comes from industry activities and that can
9 beneficially inform our actions, both our actions and
10 industry actions. And so it's going to have two
11 primary characteristics; one is generic applicability
12 and the second is that it has some safety
13 significance. If it's going to be a benefit, it will
14 have some safety significance associated with it.
15 This is just a brief history, it's
16 obviously, not complete and comprehensive, but
17 operating experience was brought to the limelight
18 after the Three-Mile Island accident and the formation
19 there of NRR of an organization to specifically look
20 at it, and jumping to the more recent times, with the
21 Davis-Besse task force lessons learned came out with
22 a set of recommendations and also at that time, an
23 internal organization looked at operating experience
24 and so in the '03, '04 time table they came out with
25 the expectations and came up with attributes for a

1 program and they've been implementing it. So some of
2 the key implementations are NRRs, you know, rolling
3 out, clearing out in '05 and the regional
4 implementation with policy a little bit later.
5 And so it's been a phased approach to
6 implement the operating experience program, where
7 first we implement the collection of the operating
8 experience items, events and then actually employing
9 it's use to greater and greater degrees. And it's
10 relatively new and its current information and so it's
11 -- the process is still ongoing in its development.
12 CHAIR WALLIS: I notice that this
13 experience and what's in this book seems to focus on
14 negative aspects of observations. You noticed
15 something wrong. Is there any guidance on what makes
16 a plant good?
17 MR. DIEDERICH: Guidance on what makes a
18 plant good.
19 CHAIR WALLIS: What you look for -- what
20 to look for that they should be doing that you can
21 say, "That makes them a good plant". Is there some
22 positive aspect of this experience that you've learned
23 that's useful to inspectors?
24 MR. DIEDERICH: I think it's primarily
25 appropriate program implementation but that's, perhaps

1 a question that's better addressed.

2 MR. COLLINS: This is a policy issue and -

3 - this is Sam Collins.

4 CHAIR WALLIS: Policy?

5 MR. COLLINS: And the way I would explain

6 that is when the reactor oversight process was

7 formulated, there was a debate over whether the

8 reactor oversight process should include positive

9 observations as well as those observations on

10 compliance and performance in a negative light or

11 meeting the requirements as a threshold. A Commission

12 decision was made at that point that we would not

13 enter into the coaching, I won't say consulting but

14 coaching aspect of putting forth what, in our view was

15 best practices or good practices in a formal sense.

16 We have matured since then to the point

17 were it's recognized and it's contained within the

18 process that we have the formal inspection results,

19 which is conducted at the exit, which is the basis for

20 the agency's conclusions that's articulated in the

21 inspection report, and we also have -- we also have

22 the observations. Those observations do contain

23 positive aspects of performance as well as

24 observations of individual's performance and

25 processes that would be looked at as a good practice

1 that the inspector would take away to observe,
2 perhaps, on other places.
3 So that's where we are today. Now, your
4 question is do we have formal training to recognize
5 those? I would say, no. We do have operating
6 experience, on the job training. We have individuals
7 who are I think keen observers who understand what's
8 effective and what's not, but we don't go into a
9 formal practice in that sense.
10 MEMBER MAYNARD: And I think that what now
11 is probable is -- is valid at the appropriate level.
12 I think it's difficult for the regulator to get into
13 the role of formally documenting best practices. It
14 starts becoming a blurred line then as to what's
15 required versus an expectation that's not really part
16 of the regulation.
17 The industry has a group that does, IMPO
18 and they have other mechanisms for doing that, and I
19 think from a regulatory perspective that's probably
20 what's being done right now.
21 CHAIR WALLIS: Well, I would think some of
22 what's passed on from these role model people, the
23 mentors, has got to involve some of the thing that you
24 look for in a plant which gives you assurance that
25 they're on the ball doing what's right as well as

1 looking for things that are wrong. There must be
2 something like that. Maybe it's not a formal thing
3 but without that, it's very difficult to do your job
4 properly.
5 MR. COLLINS: I understand. I think it's
6 almost a threshold and maybe it's the way it's
7 articulated. We look for effective and efficient
8 processes that result in compliance with our
9 regulations. That can be done a lot of different
10 ways. Some are more effective and more efficient than
11 others. Some are ineffective.
12 CHAIR WALLIS: You could say -- you could
13 go to a plant and say, "Well, they're not exactly out
14 of compliance" or, "If they continue doing these
15 things, they will be". So you're looking for things
16 that are sort of indications of not having the best
17 practice maybe.
18 SUBCOMMITTEE CHAIR SIEBER: It seems to me
19 that you're either in compliance or you aren't. You
20 read the inspection report, the inspector identifies
21 and lists everything that he looks at and makes a
22 statement as to whether they're -- whether violations
23 came out of that. And that's the regulator's role,
24 you know. That sets the minimum standard. Beyond
25 that is the industry and management of the licensee's

1 role which is X and once the NRC, as an agency, moves
2 beyond what's required by law into an area that's less
3 well-defines as to what a good practice is, I think
4 that that's sort of dangerous territory.
5 MR. COLLINS: I would like to think that
6 particularly in response to events, when we do a
7 follow-up inspection in 90-002 to findings, I'm just
8 reading now the inspection report at Oyster Creek that
9 M.C. McNamara had as a result of the two white
10 findings in EP. A reading of that report will come to
11 a conclusion that whether the licensee's corrective
12 actions as a result of their shortcomings in those
13 events was effective enough, that's the threshold.
14 SUBCOMMITTEE CHAIR SIEBER: Right.
15 MR. COLLINS: But in the way that the
16 narrative is articulated, it sends a direct message of
17 what was effective and what was not effective. And in
18 this case, one effort was effective, the other one was
19 not. So I think we can do that --
20 CHAIR WALLIS: So it does reinforce the --
21 MR. COLLINS: -- by requiring that the
22 licensee attain that goal.
23 SUBCOMMITTEE CHAIR SIEBER: Yeah, well,
24 there's another aspect where you actually -- you know,
25 a licensee can perform a minimum corrective action and

1 just solve that specific problem or he can take a more
2 comprehensive view and say, "This problem looks like
3 a number of other problems, I'm going to solve all
4 these problems". I think that it's appropriate for
5 the agency to say, "You did a good job, a more
6 comprehensive look, your problem-solving and
7 corrective action program was effective", as opposed
8 to minimally effective and just answered the
9 violation. I think that's where the leeway is.
10 MR. COLLINS: And we approached that
11 through the question of Criterion 16 of a significant
12 condition adverse to quality as opposed to a condition
13 adverse to quality. The requirements for a response
14 in trending is much more significant at that higher
15 level of significant condition adverse to quality.
16 Now, the industry would say, "NRC, you've got to be
17 sure you know the difference between those two".
18 Many times we engage and we get feedback
19 from the industry of what's a significant condition
20 and what's not.
21 MEMBER MAYNARD: There's a big difference
22 between say this represents an acceptable way of
23 meeting the program as opposed to saying, "Plant X
24 does an excellent, we think everybody should be doing
25 it like that". I mean, there's a huge difference

1 there. It's fine to show an example of what is
2 acceptable but you have to be careful when you start
3 judging the best and implying that you want everybody
4 to change to match the way somebody else is doing it.
5 SUBCOMMITTEE CHAIR SIEBER: Well, and for
6 a plant that you think is excellent based on random
7 observations may have little thing in there that can
8 destroy it and you in the process.
9 MR. COLLINS: I mean, an astute licensee,
10 if they know that they have a challenge on site, and
11 they have particularly one of our DRS inspectors who
12 sees multiple sites, come on site, they will engage
13 that inspector and say, "We have a challenge here.
14 Are you aware of a high performing program", and
15 that's on the observation side. That's not on the
16 regulation side. That's on the observation part. And
17 we will provide those observations with no onus or no
18 requirement that the licensee implement it or adhere
19 to it.
20 MR. BLOUGH: And that's an important point
21 whereas with the ROP we're very careful to stay within
22 that framework. Licensees are hungry for our
23 observations, so long as they're sure we won't abuse
24 them, we won't come back the next time and say, "Hey,
25 I told you this. It wasn't in the report but we

1 talked about it in the exit, you didn't do anything",
2 because that's --
3 MR. COLLINS: It's a two sets of books
4 issue.
5 MR. BLOUGH: Yeah, so we're careful in
6 that. Actually, operating experience, that's one
7 place where it can have a role be because if, for
8 example, we got to the point of a generic
9 communication that was informational in nature and the
10 inspector becomes aware that this plant doesn't have
11 a problem yet but they really didn't pay enough
12 attention or they aren't doing a number of things
13 that, you know, you would need to do according to the
14 generic communication to avoid the problem that some
15 plants have had. That would be the sort of thing you
16 would expect the inspector to discuss when he's
17 discussing his observation and that would take you
18 right back to operating experience.
19 MR. COLLINS: While I'm here, I want to
20 recognize your question about do we associate feedback
21 two or so years, I think it was your question, on
22 training. The direct answer to that is, no, and we
23 should. We received input also from a TTC instructor
24 who was at our last counterpart meeting, who
25 interfaced with the staff and listened to the

1 presentations. He raised that same issue. He said it
2 would be very valuable to the TTC if a number of years
3 after an individual is trained once they are a
4 practitioner in the field that we get feedback on the
5 effectiveness in the scope of our programs. We will
6 take that away.
7 SUBCOMMITTEE CHAIR SIEBER: Thank you.
8 MR. DIEDERICH: All right, thank you, Sam.
9 This brief history, we're going to focus more on the
10 recent and how the regional implementation interacts
11 with the NRR implementation of operating experience.
12 So the first is uses of operating experience. Next
13 slide, please. On the left are some of the sources
14 and on the right are some of the uses and so here the
15 sources are grouped by where they come from, whether
16 they're items that the NRC picks up and has or whether
17 they come directly from industry or whether from
18 international operating experience. And on the right
19 are some of the applications of operating experience.
20 The informing both internally and of
21 course, we inform externally through information
22 notices, and informing comes in both a push format
23 where we put out information, operating experience at
24 different levels, either an information notice or a
25 communication from the operating experience

1 management. It also works in a pull format, from that
2 storage down there when that inspector goes to inspect
3 and he reviews operating experiences, so that's a pull
4 function. It's used to evaluate events.
5 When an issue comes up at a plant and
6 management needs to evaluate it, we can look at past
7 cases and again, that's a pull function from the
8 storage, and it can influence ANC programs and it does
9 in regulatory actions, and so that's principally at
10 headquarters but a --
11 CHAIR WALLIS: What is a morning report?
12 MR. DIEDERICH: A morning reports is an
13 item from a plant, some issue that has come out of a
14 plant. They'll make a morning report on that item.
15 CHAIR WALLIS: Because it's not very
16 descriptive of what it is, is it? It's always done in
17 the morning or something?
18 MR. BARKLEY: Let me try to help you. FAR
19 Part 50.72 defines criteria for morning reports and --
20 CHAIR WALLIS: So it's a technical term.
21 MR. BARKLEY: It is a technical term.
22 Depending on how much information is available and how
23 much time they have, they vary in the level --
24 CHAIR WALLIS: It's illegal to give it in
25 the afternoon?

1 MR. BLOUGH: Can I interject here? I
2 think we may be mistaking terms here. I think what
3 Rick, you're talking about event notifications on your
4 industry operating experience.
5 MR. BARKLEY: Yes.
6 MR. BLOUGH: I could be wrong, but, you
7 know, a morning report is an NRC collected document
8 and it's where there may be an event notification
9 where -- or there may be a generic issue that's
10 identified and some aspect becomes known at a plant
11 and it's where the NRC wants to amplify on some
12 information that's already known within itself. So
13 it's one of our own -- it's one of our own --
14 CHAIR WALLIS: It's not a generic issue
15 but it's something which is important enough that it
16 might someday become one or something like that. It
17 gets more attention than it would if it weren't a
18 morning report in some way.
19 MR. BLOUGH: It's really a chance for the
20 region to add specific amplifying information on
21 something that may be --
22 CHAIR WALLIS: Is it to bring itself to
23 the attention of headquarters? Is that what it is?
24 Here's something you need to think about and maybe it
25 applies to other plants and that sort of thing? Is

1 that it?

2 MR. BLOUGH: Right.

3 MEMBER MAYNARD: Really it has a very

4 broad -- it can be something of interest that may make

5 the newspapers. It may be something technical that

6 happened. It's just kind of a heads up on --

7 CHAIR WALLIS: We get that too. We get

8 something and we are not quite sure what they are.

9 This was in the morning report. What should that mean

10 to me?

11 MR. DAPAS: This is Marc Dapas. Let me

12 attempt to address where I think there may be some a

13 little misunderstanding in the communication vehicles

14 we have. As Randy mentioned, the morning report is a

15 vehicle that we use to communicate things such as

16 there's been an organizational change at the

17 engineering manager level or plant manager level,

18 where we want to communicate that to a certain

19 internal audience. What has happened is the event

20 notification has colloquially been called the morning

21 report because you typically come into the office in

22 the morning and you have the plant status and then you

23 have any event notifications. And then so someone

24 will say, "Gee, is there any morning reports here".

25 And that's why, I think there's sometimes

1 been confusion. The formal term as Rich pointed out,
2 is the Event Notification and as Randy pointed out,
3 the morning report is a separate communication
4 vehicle. And then we also have things that we call
5 EDO daily notes and that's a communication form to
6 elevate things to the Commission's attention. So there
7 is guidance on what each of these communication
8 vehicles are and that's information that's put out by
9 the EDO's office and we have regional instruction that
10 addresses those to insure that the staff understands
11 to the extent that we can insure success that the
12 difference between those communication vehicles --
13 CHAIR WALLIS: It sounds as if something
14 could be hidden in a morning report and you have a
15 morning report that's full of A was assigned to here,
16 and B is moved to there and that something has
17 happened in --
18 MR. DAPAS: Well, we --
19 CHAIR WALLIS: -- and all of a sudden down
20 there, there's an incident you want to highlight is
21 hidden in this morning report.
22 MR. DAPAS: Well, just to clarify, the
23 morning report is something we generate. We would not
24 include something that's significant, let's say, in a
25 morning report. We would use another communication

1 vehicle like preliminary notification, if we decide we
2 need to communicate or an EDO daily note, or depending
3 on the issue, we would have direct verbal
4 communication on the issue to make sure the
5 appropriate stakeholders are aware. So I just want to
6 make sure that there's not a misunderstanding that the
7 morning report in its formal context is something that
8 a licensee generates.
9 They generate an event notification and
10 there's specific reporting criteria. Does that help,
11 Dr. Wallis?
12 CHAIR WALLIS: Yes.
13 MS. SEILLER: May I ask -- this is Nicole
14 Seiller, I work in DRP but I just completed a rotation
15 to Operating Experience Branch in headquarters. A
16 morning report doesn't come out every morning. We may
17 have one a week, one every few weeks and it usually
18 pertains to just one item. So nothing is going to be
19 lost at the bottom. The two main uses that I've seen
20 for morning reports is to relay an organizational
21 change that other plants might be interested in. A
22 morning report is not only accessed by the NRC, it's
23 accessed by all of industry and that makes it an
24 effective way for us to relay information that we
25 think other plants might want to know but it's not too

1 critical, too important.

2 The second way I've seen them used besides

3 organizational changes is if we get a Part 21. For

4 the Part 21, the vendor making the 21 notification,

5 has to notify all the effected plants, but we

6 typically like to let all the plants know that this is

7 going on, just in case they may have this part and

8 that went under the radar and we'll often use a

9 morning report to let everybody know, "We got this

10 Part 21, we spoke with the vendor. We believe only

11 three plants are impacted but you should check your

12 own site to make sure that you're not impacted as

13 well", and I've only received one of those a week.

14 SUBCOMMITTEE CHAIR SIEBER: Actually, on

15 Part 21s, the manufacturer only knows the first person

16 he sold it to and you know, that could be traded from

17 plant to plant or sold as scrap and then reclaimed.

18 There are a lot of things that could happen.

19 MR. DIEDERICH: Particularly shared within

20 fleets and so the point is that NRR collects all these

21 different sources that may potentially be relevant

22 operating experience items and then they're going to

23 screen them and we'll look at that process here in the

24 next slide. And they will then communicate them and

25 apply them as applicable. And so that will depend

1 upon their applicability, their generic applicability
2 and their safety significance.
3 Some of these sources of operating
4 experience could also be grouped by a different
5 maturity level. Some of them are at the event
6 notification level. We know in effect, something
7 happened at one plant and a greater more analyzed
8 level would be inspection findings, information
9 notices any generic letters. So there's also a
10 different maturity level grouping that you could do on
11 these different sources of operating experience. Next
12 slide, please.
13 So some of the sources there are --
14 CHAIR WALLIS: How much input do you folks
15 have on generic letters? Headquarters sends out these
16 documents from on high.
17 MR. DIEDERICH: Right.
18 CHAIR WALLIS: Do you folks have a chance
19 to give input as to feasibility and reasonableness of
20 the requirements in the generic letters and things
21 like that?
22 MR. DIEDERICH: I believe there are a
23 number of feedback processes. I have not done a
24 generic letter, though. I know people who have --
25 CHAIR WALLIS: Well, we often ask these

1 questions as a committee.

2 MR. DIEDERICH: Right.

3 CHAIR WALLIS: Here you're making this
4 statement, a plant must do this in 90 days, or
5 something, and we say, well, is that a reasonable
6 requirement. I would hope that you folks have already
7 given your advice on that issue.

8 MS. GAMBERONI: Well, on some of the
9 technical issues when it's started at a particular
10 plant and we might have the inspector who is most
11 familiar with that, our technical experts will
12 interact with NRR. More frequently are the
13 information notices, so we definitely have involvement
14 with them. The generic letters, we do have discussion
15 but once you get into that process as far as the time
16 frames associated with that, NRR might request our
17 subject matter expert in that area for some
18 information but they are really the ones more involved
19 with the --

20 CHAIR WALLIS: But the problem is when
21 there's some kind of pressure, maybe it's pressure
22 from the Hill or something to resolve some issue and
23 the generic letter is put together at headquarters.
24 It's going to request something which can be actually
25 implemented sensibly in the field. And I just hope

1 that they get input soon enough to enable us --

2 SUBCOMMITTEE CHAIR SIEBER: Well, that's

3 what --

4 MS. GAMBERONI: Well, and depending on the

5 issue, usually NRR who has the lead on those, will put

6 together a team, and for some of the ones that are

7 really critical, the generic letters go into the

8 bulletins, they're going to request information from

9 all our stakeholders, including the region. So they

10 will ask --

11 CHAIR WALLIS: So you will send people to

12 headquarters --

13 MS. GAMBERONI: It might be a telephone

14 call or something like that, but probably our most

15 involvement is really with information notices and

16 then -- or we'll actually write portions and provide

17 information on what's occurred at a plant and you

18 submit that into --

19 MR. DAPAS: Just one thing to add, this is

20 Marc Dapas. I think a good example of the type of

21 communication you're talking about is the generic

22 communication on the steam generator tube inspections.

23 There's been a lot of back and forth on that. There

24 is an effort to identify guidance criteria in the

25 communications, and I'll offer that the regions have

1 had an opportunity to weigh in and be involved in that
2 but when there is a decision to communicate an
3 expectation in terms of what constitutes an
4 appropriate method for addressing the regulatory
5 requirements, as you know, generic communications
6 cannot -- are not in and of themselves, a requirement.
7 They outline viable and acceptable approaches to
8 address a regulatory requirement.
9 There are vehicles such as temporary
10 instructions that is the inspection piece where we
11 would receive guidance on how to go out and inspect
12 the degree to which the licensee is meeting that
13 particular requirement and if they choose to adopt the
14 approach that's embodied in the generic letter, that
15 TI or bulletin, if you will, temporary instruction,
16 will prescribe inspection guidance and we have clearly
17 input into that process regarding the viability and
18 expectations, number of hours and things that we would
19 be looking at as part of the inspection process.
20 CHAIR WALLIS: Well, when you inspect
21 these new sump screens, you're going to be going in
22 and you're going to be verifying that what's installed
23 is what they said was installed. You're not going to
24 be doing anything to check that they work.
25 MR. DAPAS: I don't know if the temporary

1 instruction has been developed yet but I know that
2 licensees need to respond saying, "Here is the screen
3 design".
4 CHAIR WALLIS: They will respond.
5 MR. DAPAS: Right, and then NRR looks at
6 that and decides whether that is acceptable and then
7 there will be an inspection piece. What exactly that
8 consists of though, I think we're still in the process
9 of refining that.
10 CHAIR WALLIS: It probably will be
11 verifying that they've done what they said they'd do.
12 MR. DAPAS: Correct, essentially, from an
13 over-arching perspective, yes.
14 MS. SNELL: Michelle Snell, DRS. The TI
15 has actually has been developed. We actually have
16 inspected Indian Point. We've inspected what they've
17 done so far. They installed most of the modifications
18 during their most recent outage, so we had inspectors
19 on site and we looked at the modifications they had
20 done up to that point. They still have some
21 modifications to be done outside of the wall and they
22 still have to do some procedural changes and things
23 like that.
24 Headquarters has not done their aspect of
25 the inspection yet and so we still have some

1 continuing inspection left.

2 MR. BLOUGH: Thank you. Would you agree

3 that when we inspect, it's mostly that they've

4 actually done what they said they're going to do?

5 MS. SNELL: Yes. For instance there was

6 a TI for the sump at Indian Point, we're looking that

7 they meet the improvements that they've committed to

8 to headquarters. Headquarters is looking that they're

9 actually doing the proper -- they're installing the

10 proper screens.

11 CHAIR WALLIS: So you go and you count the

12 modules. They say, "We're going to put in 100 modules

13 of this design", or something and you count the

14 modules and yes, there's 99 plus one so that's okay.

15 SUBCOMMITTEE CHAIR SIEBER: Yeah, the

16 regions would not do any technical evaluation of --

17 for example, the flow across the screen, the ability

18 to trap products, the head loss, that's somebody

19 elses.

20 MS. GAMBERONI: But if there were issues

21 there would be coordination.

22 MS. SNELL: Oh, definitely. There would

23 definitely be coordination. I mean, headquarters, we

24 were coordinating. We were there at the same time the

25 headquarters group was there and they knew what we

1 were looking at, we knew what they were looking at.
2 If we had any issues we brought it to them and vice
3 versa.
4 MR. DAPAS: If we were performing a
5 temporary inspection against the TI, and there's a
6 test that the licensee conducts and it appears from
7 the test that the design criteria is not being
8 satisfied as borne out by the test, we would
9 communicate that to the program office and then the
10 program office would do the technical evaluation on
11 the acceptability in light of that test information.
12 As you pointed out, we think we'd be getting into the
13 technical viability that gets into design evaluations.
14 But there is a certain level of technical
15 expertise that you need to understand whether there is
16 a technical issue that needs further exploration by
17 the program office.
18 CHAIR WALLIS: If you're a smart
19 inspector, you might not be able to help asking
20 yourself is it going to work right and satisfy
21 yourself.
22 MR. DIEDERICH: I believe all our
23 inspectors ask exactly that question.
24 MS. SNELL: I agree and we did sit in on -
25 - we went to the headquarters meeting on the

1 downstream effects and all the other meetings, so we
2 were involved with the technical issues, so we
3 understand what the issues are, if a sump screen was
4 appropriate or not.
5 MR. LEW: My name is Dave Lew, Deputy of
6 DRP. I just wanted to add to that in terms of
7 regional review for requirements such as generic
8 letter. We do go through an organization, a panel
9 called CRGR which does involve representation of at
10 least one of the regional deputies is on that panel.
11 MR. DIEDERICH: All right, thanks. So I
12 talked about the sources. I'm going to talk more a
13 little bit later about the applications but right now,
14 I'm going to talk about the piece in between the black
15 box of the process for the operating experience. And
16 so it happens on both the local regional level and it
17 happens at headquarters at NRR and so there's parallel
18 functions and multiple interactions and I'll try and
19 briefly describe those for you.
20 CHAIR WALLIS: These INPO SEE IN reports,
21 is there a history that they're coming out with useful
22 information?
23 MR. DIEDERICH: I've looked at those and
24 reviewed them prior to going to my inspections and I
25 know the Operating Experience Branch looks at them

1 when they come out. They review those.

2 CHAIR WALLIS: They find that without them

3 they'd be lost or are they -- they're not a key

4 element of what you get.

5 MR. DIEDERICH: It's as we said earlier,

6 we don't make recommendations so many times INPO will.

7 If a plan identifies a generic issue, we will

8 eventually put out an Information Notice if it has the

9 right criteria. Industry, on the other hand, has a

10 parallel path, INPO, those CN notices, SOERs and SERs.

11 MEMBER MAYNARD: And I'm not sure on the

12 CN report but for a number of years basically INPO

13 would not and couldn't share their information but ti

14 took a big effort with the NRC and INPO to figure out

15 ways to share their industry operating criteria

16 without violating some other criteria. So I take it

17 just recently they've been able to share some of that.

18 MR. DIEDERICH: Yes.

19 SUBCOMMITTEE CHAIR SIEBER: The CN's are

20 more good ideas as opposed to information notices from

21 the NRC which is this thing doesn't work right.

22 CHAIR WALLIS: They're causative.

23 SUBCOMMITTEE CHAIR SIEBER: Yeah, well,

24 but that's the different roles of the two different

25 organizations.

1 MR. DAPAS: If I could again offer -- Marc
2 Dapas. We have different generic communication
3 vehicles. We have a risk, right, which can
4 communicate lessons learned, let's say regarding --
5 and I'll just pick something outside the reactor
6 program, decommissioning. You know, it will go
7 through what we have seen in a number of
8 decommissioning plants as an example, and we will
9 communicate back to the industry as a means of helping
10 them be positioned when they then need to make a
11 submittal to the NRC, they can benefit from some of
12 the lessons learned of their counterparts that have
13 already gone through that process.
14 The same thing with risks in the reactor
15 program. So I offer from that perspective, it's a
16 positive in that you are providing guidance that will
17 help the industry be successful when they are engaging
18 in different regulatory applications.
19 SUBCOMMITTEE CHAIR SIEBER: I think
20 overall one of the important communications methods
21 that the agency has is their website. I think it's
22 very good. Does the region have a website?
23 MR. DIEDERICH: Yes, specifically, in
24 fact, I'll discuss that some right here on this --
25 CHAIR WALLIS: I have one other question,

1 John, sorry. You have this international incident
2 reporting system. Is that useful?
3 MR. DIEDERICH: Yes.
4 CHAIR WALLIS: Are there instances where
5 something has shown up internationally which you
6 didn't know about which really made a difference.
7 SUBCOMMITTEE CHAIR SIEBER: That's why
8 we're doing sumps.
9 CHAIR WALLIS: Well, we're way behind in
10 doing --
11 SUBCOMMITTEE CHAIR SIEBER: Well, I can't
12 speak to --
13 MR. JACKSON: This is Don Jackson. I have
14 an example from last week I provided to the management
15 team and also sent that international event out to the
16 senior resident inspectors. It had to do with blind
17 flanges being found in the AFW system backup supply to
18 steam generators. So like your service water, cross-
19 connect to the steam generators, one of the plants, I
20 think it was Sweden, found blank flanges as a result
21 of construction.
22 CHAIR WALLIS: There's no connection.
23 It's just closed off?
24 MR. JACKSON: No, it's closed off. And I
25 know from my experience of being an SRO, if you do a

1 valve lineup on that, you never actually push water
2 from the river or lake or whatever to the steam
3 generators. So I sent that out to the senior
4 residents so when they do their --
5 CHAIR WALLIS: This goes out pretty
6 quickly, this sort of thing?
7 MR. JACKSON: The same day I got it,
8 screened from headquarters, it went out to the senior
9 residents.
10 MR. BLOUGH: Well, that part of it. The
11 information from overseas can vary quite a bit, I
12 think, in when we get it, but once we have it, we
13 recognize it for what it is, it goes forth through the
14 agency just as quickly as anything else, I think.
15 MR. DIEDERICH: Right, and so that's an
16 exact case here, where the thing was identified,
17 screened in by in this case a clearing house, NRR up
18 here and evaluated to be of substantial significance.
19 They put it on their website, the NRC internal website
20 that headquarters maintains, and they e-mailed it to
21 us and then we furthered that onto the residents.
22 And so in this case, we're finding out
23 directly from the communication to push that out in
24 case it was something that the residents could find
25 useful in their inspection activities. And so NRR

1 does that with the operating experience role. We have
2 a parallel role here in the region where our
3 inspectors will identify issues that may have generic
4 applicability. I have some examples in the next
5 slide. And they'll evaluate them. They'll -- the
6 inspector will perform a screening, "Hey, this may
7 have generic applicability", you know. It can undergo
8 evaluation there in the region and then it could
9 either be communicated back up to the region or up to
10 headquarters and then out. And so we have that good
11 example.
12 We can also store operating experience
13 information on our Region 1 website. Louis Manning
14 and Rich talked about our knowledge management and our
15 Region 1 website and we have an operating experience
16 section where we maintain specific information on
17 that, particularly some of the information that we
18 send out, so that it's available for later retrieval.
19 MR. DAPAS: Karl's very familiar with that
20 through the effort he expended to get that operating
21 experience website up and running in Region 1.
22 MR. DIEDERICH: Also when we communicate
23 operating experience out, if we have a piece and we
24 send it out to the inspectors, we can get feedback frm
25 them to say, "Yes, I've seen that, too", or maybe if

1 we don't hear anything back, and we're not then -- or
2 we find out that's not as significant. So there's
3 feedback and just communicating an early event.
4 And then also we do on a six-month, a
5 semi-annual basis, what's called the TRG, Technical
6 Review Group. NRR is divided into 30 different groups,
7 areas that these operating experience events fit into.
8 And semi-annually technical review groups will review
9 these to try and get a trending, a synthesis of those
10 different events. And we participate on that. We
11 have a member on each technical review group here in
12 the region. Each region has one member on each
13 technical review group, several members from NRR on
14 each group.
15 CHAIR WALLIS: This feedback from
16 community is all from the licensees, essentially.
17 MR. DIEDERICH: It would be more from the
18 inspectors. One case that we had, for instance, for
19 some vials from Swelapack on some cards and so we --
20 they wanted to find out whether or not this was the
21 case on other plants on some of their systems
22 installed. So we put out that operating experience
23 and in that case, there was a high enough importance
24 that we simply asked for the feedback and so then we
25 will find out whether or not and the degree to which

1 it has generic applicability.

2 So again, information is to be pushed out

3 to the inspectors and also it can be pulled when the

4 inspector is getting ready for an inspection, he can

5 go to the operating experience and it's been a

6 longstanding practice, though in some cases it's hard

7 to differentiate whether or not our new implementation

8 here, our operating experience, is having a dramatic

9 big effect. I mean, I've always and we've always had

10 a policy to check operating experience when we were

11 preparing for an inspection to help you with your

12 samples.

13 And so that's becoming much easier. It's

14 becoming more thorough, a whole collection of links

15 all in one spot and it's much easier to search now, so

16 the degree to which that's helping is sometimes

17 difficult to determine because we've always done it

18 just, I think we're doing it a lot better now.

19 So the subject matter is evaluated and

20 helps us to communicate the information and some of

21 the subject matters are designated technical review

22 group members that provide the semi-annual review and

23 the synthesis stuff as well. So with that, I'll go

24 into a couple of examples.

25 I'm going into the application here. And

1 I guess the one other point that I'd like to make is
2 that -- and I've already made it, is that operating
3 experience supports many of the inspection and nuclear
4 safety functions that we do here in the region and in
5 the NRC. It helps you collect samples, help you
6 evaluate events that come from licensees and it will
7 also aid in the internal communication because when
8 you do a broader number of cases before we sent out an
9 information notice or a generic letter.
10 And you'll notice from an operating
11 experience for example, that's coming down and the
12 idea there is to provide instead of just a spot array
13 of events, and some communications on different
14 operating experience, there are recommended samples
15 for inspectors and the potential that that has,
16 amongst other things, is that inspectors can call out
17 in a report they looked at this voluntary sample and
18 specify -- and then NRR can go up and see whether or
19 not there were any findings and then we'd be able to
20 better determine, you know, its direct impact of the
21 operating experience.
22 The other thing that voluntary samples can
23 do is by putting out that we need to look at or that
24 there's a potential generic issue and that, "Hey, here
25 would be a great sample to look at in your next

1 inspection", is that out of the 100 plants, if 10
2 plants get looked at and that feedback goes back to
3 NRR, then they can have a better idea of whether or
4 not they need to put out some generic communication,
5 particularly the generic letter that have requirements
6 attached to it because they'll have had the feedback
7 from in-plant and they'll have had that without having
8 to go to the licensees and the residents and
9 separately task them to look at. So it has the
10 benefit as well.
11 Obviously, operating experience forms some
12 of our regulatory decision making and processes with
13 respect to procedure, revisions and rulemaking and
14 licensing issues. All right, so I have three quick
15 examples here. One is that Millstone had tripped to
16 a "tin whisker" in a circuit card. A tin whisker
17 happens due to the way the items are soldered onto the
18 board. It was the first case that was identified here
19 in the nuclear industry. One of our inspectors was at
20 the plant when the plant licensee personnel identified
21 that this was an issue.
22 His research indicated that this had
23 potential generic applicability. It had been seen in
24 other industries to a number of cases and so we
25 communicated that within the region because this

1 reactor system card and it's a function more of how
2 it's soldered on there, the type of solder and whether
3 it's low in certain trace elements and the we informed
4 NRR. So this is a case where we were communicating it
5 up. Eventually NRR also communicated it across the
6 broader agency. This is also a case where it became
7 an information notice that was drafted here at the
8 region. We, obviously, had it put on the generic
9 communication. That has been sent out.
10 The second case I want to mention is a
11 Barton gauge. We had -- one of our inspectors was
12 informed by the licensee that they had received a
13 letter from a manufacturer that cleaning Barton gauges
14 in a certain way can potentially damage them, and the
15 inspector wondered why or whether or not this had some
16 generic applicability and handed that to the Branch
17 Chief and then it went to the subject matter expert
18 and his evaluation was that this potentially should
19 have been a Part 21 letter to all residents, just a
20 letter to the plant. And so that was passed up to
21 NRR. So operating experience, in this case, has made
22 a regulatory process a little bit more effective.
23 And fire prevention and internal flooding,
24 there's been some samples that -- cases that have come
25 out and so it's helped inspectors better develop what

1 they're going to look at and this is related back to
2 that voluntary sampling I mentioned earlier, where
3 it's aiding that sample selection issue and hopefully
4 that will be fortified.
5 With that, are there any other questions?
6 I thank you for your attention.
7 SUBCOMMITTEE CHAIR SIEBER: Thank you very
8 much.
9 MS. GAMBERONI: I'll just add, Karl did
10 recently complete our regional instruction on
11 operating experience and if you're interested, we can
12 provide you a copy of that.
13 MR. BARKLEY: Mr. Sieber, based on our
14 schedule, what I was hoping to do at this point in
15 time was do this next presentation by Mr. Bhatia. And
16 this Bhatia actually, to support it, we've asked two
17 inspections who are on inspection at Pilgrim right now
18 to listen in via phone, so I'll make a phone link here
19 in a second. Then we can go to the lunch break and
20 then have the Limerick discussion after that, if
21 that's acceptable to you.
22 SUBCOMMITTEE CHAIR SIEBER: That sounds
23 good.
24 MR. BARKLEY: Okay, and we can discuss
25 possibly shrinking the lunch period maybe just a

1 little bit to try to make up some of the other time,
2 if that's okay. The food is already here and we'll be
3 dining on these tables right over here.
4 SUBCOMMITTEE CHAIR SIEBER: All right.
5 MR. BLOUGH: Grid reliability, the same
6 branch that has fire protection in Region 1 has
7 electrical issues and it turns out this week most of
8 our inspectors are in the field. In fact, we've got
9 a fire protection team inspection going on at Pilgrim.
10 So Rich is dialing into them and we'll just take a
11 second here. But in the meantime, I'll just tell you
12 our presenter will be Mr. Ram Bhatia and he's got
13 extensive experience, I guess, best described as many
14 years as an electrical specialist and he's been an
15 inspector for many years as well.
16 This is Randy. Ram's about to start. The
17 -- you're with the ACRS, so when you speak and you're
18 by telephone, so please identify yourself by name. If
19 you want to speak and speak loud so everyone in the
20 room can hear us. We've got staff throughout a large
21 conference room. Thanks for joining us. Okay.
22 MR. BHATIA: You know, the heat wave is
23 all over the country, so this is a good subject today
24 to -- I'm going to present the Region 1 perspective
25 from the grid reliability point of view. What -- I'm

1 going to cover the Region 1 grid environment, offsite
2 power temporary instruction results which we have been
3 doing it for the last three years, to cover the summer
4 activities and the Limerick Station, I understand
5 you're going there, so I'll spend a minute or two here
6 to give you perspective of the Limerick operability
7 readiness and then I'll outline two or three issues in
8 the region.
9 The environment in Region 1 is like this.
10 We have 17 nuclear sites or 26 nuclear operating
11 plants and we have no vertically integrated utilities.
12 What it means is all parts of the utilities,
13 transmission, operation, and generation, they are
14 split up based on the devaluation now in the Region 1
15 area. And we have three ISOs in our region, ISO New
16 England and New York ISO and the PJM which covers
17 quite a bit territory.
18 SUBCOMMITTEE CHAIR SIEBER: I'm surprised
19 that there are no longer any vertically integrated
20 utilities. That's something new to me.
21 MR. BHATIA: Well, I agree, our Region 1
22 territory is the first one which is fully regulated.
23 So obviously, by regulations they have to split up.
24 And as we know, each site communicates with respective
25 transmission operators. So we have a different

1 communication level from different plants and based on
2 the utilities and the transmission operator. All
3 right, this is just a general overview of the
4 transmission network throughout the country and new
5 one is basically sitting up on the northeast corner.
6 This slide shows our nuclear power plants with the
7 red dots on the northeast Region 1 territory.
8 CHAIR WALLIS: So Vermont's attempt to buy
9 power from Canada didn't --
10 MR. BHATIA: Well, there is a big DC
11 transmission line coming from the Canada, basically
12 which imports power to our country.
13 CHAIR WALLIS: It doesn't seem to go to
14 the State of Vermont.
15 MR. BLOUGH: I guess that would be a
16 tortuous path to try to get into Vermont or is it not
17 even possible?
18 CHAIR WALLIS: Now, we know that Vermont
19 Yankee supplies Philadelphia and New York.
20 MR. BHATIA: It's possible but most of the
21 power comes into New England comes into the northeast
22 corner, comes down to the New York area and then --
23 CHAIR WALLIS: And back up.
24 MR. BHATIA: So they are running kind of
25 behind the demand in the New York high demand area

1 basically. We've been very actively involved with the
2 headquarter on these TI issues preparation review,
3 and, you know, feedback to them. We were part and
4 parcel of the questions that were put together back
5 in 156, 163 and 165.
6 And this is the general responses which we
7 have received and we have forwarded these responses in
8 April 3rd to the headquarters for the review on the
9 latest TI 165. And as a result of how these TI's, we
10 have made a lot of improvement in procedures for post-
11 trip voltages inadequacy which was existing before but
12 with these TI's we have made a lot of improvements at
13 the plants procedures and a lot of them have realized
14 what the real time contingencies are and how they are
15 monitoring them.
16 And overall results are the Region 1 has
17 no outliers with respect to the TI responses and we
18 had general feedback from the rest of the region.
19 MEMBER MAYNARD: Have most of the plants
20 been able to meet the requirement with their existing
21 equipment or have some of them had to install tap --
22 automatic tap changers or, you know --
23 MR. BHATIA: Certain improvements they
24 have been making based on their design basis at like
25 Oyster Creek had outage low tap changes and up in the

1 northeast possibly in the Nine Mile area. That was a
2 part of overall design basis compliance as well as the
3 general improvement in the liability in the --
4 SUBCOMMITTEE CHAIR SIEBER: I think the
5 interesting things is that there was a time frame of
6 maybe 20 years ago when a lot of line loss load flow
7 studies were done that caused utilities to either put
8 in tap changers or capacitor banks or what have you in
9 order to be able to insure the quality of the offsite
10 power, that all of those changes were based on
11 analysis of 20 to 25 years ago and I'm sure the
12 conditions have changed since then. And so I wonder
13 if all that is still adequate.
14 MR. BHATIA: I was, in fact, on the web
15 yesterday looking at the ISO New England and ISO New
16 York. Each one of them have put up a report on the
17 liability aspect and the other aspect. So it seems to
18 me every year they are coming up with a complete
19 package of improvement on individual ISO territory.
20 SUBCOMMITTEE CHAIR SIEBER: Okay.
21 MR. BHATIA: So there a lot of discussion
22 was what they want to do in the future at the
23 transmission lines where they want to add capacitor
24 banks. So I found that on both the ISOs special
25 report in with the PGM is also earning almost $2.3

1 billion transmission line to improve the, you know,
2 transportation going out in the different regions.
3 SUBCOMMITTEE CHAIR SIEBER: I understand
4 that -- and I think it's in Region 1, you can tell me
5 whether it's true or not, that they may be operating
6 the system out of the best economic balance and making
7 cash charges for that in order to balance the voltages
8 in different places. And I suspect that the process
9 for doing that is to support the higher quality at
10 some of the nuclear power plants. Is that taking
11 place in Region 1?
12 MR. BHATIA: What I have heard is they
13 were going to come up with a megabar per unit dollar
14 figure value so that the utilities, our generation
15 units would sell that to improve the quality of the
16 area, but I haven't heard the complete assessment.
17 SUBCOMMITTEE CHAIR SIEBER: That's
18 something, I think, I'd need to follow because grid
19 reliability is my responsibility to the Committee.
20 MR. BLOUGH: From the site, did you have
21 anything to add so far?
22 MR. SCHOLL: No, I had a little difficulty
23 hearing the last question.
24 MR. BLOUGH: Okay, and the last question
25 was yeah, whether there were operating areas of the

1 grid outside the best economic setup and whether there
2 were short voltages throughout this system and they
3 were coming up with an economic compensation and Ram
4 said he's heard that they were trying to come up with
5 a dollar value per megabar but that was all we know
6 right now. So I was just asking was there anything to
7 add on what you've heard so far or on that point
8 specifically.
9 MR. SCHOLL: Well, I think at that point
10 that Ram is correct. I think that if they financed to
11 put out additional megabars, they get compensated for
12 that.
13 SUBCOMMITTEE CHAIR SIEBER: Okay.
14 MR. BLOUGH: Okay, thank you.
15 MR. BHATIA: Okay, since you're going to
16 Limerick, I have added these three elements here. At
17 Limerick there's no transmission operator, obviously,
18 PJM. And then transmission owner is PECO Energy. We
19 are part of the same system but one is regulated and
20 one is deregulated. So I'm qualifying it as
21 vertically not integrated.
22 SUBCOMMITTEE CHAIR SIEBER: Okay.
23 MR. BHATIA: And the agreement exists
24 between the Limerick and the PECO and the Limerick and
25 the PJM for the notification requirements. And the

1 last bullet say, the Limerick has not experienced a
2 load event in the last 20 years. So it's a pretty
3 good strong system in this area.
4 SUBCOMMITTEE CHAIR SIEBER: My impression
5 was that PJM was pretty strong every place where it
6 hits. Is my impression correct?
7 MR. BHATIA: PJM is probably the leading
8 ISO right now in the nation. They have a bigger
9 territory and the largest power generation in the
10 dispatch area.
11 SUBCOMMITTEE CHAIR SIEBER: Okay.
12 MR. BHATIA: And I can give you a figure,
13 basically. Just, I'm going to go over later our new
14 record in the PJM area so we can talk about it.
15 SUBCOMMITTEE CHAIR SIEBER: Okay, thank
16 you.
17 MR. BHATIA: Okay, there are two, three
18 grid issues which we have figured out may be of
19 interest to you. The Seabrook station, which is -- I
20 believe it's putting onboard 1225 megawatt electric.
21 It varies basically on the terminal.
22 SUBCOMMITTEE CHAIR SIEBER: Right.
23 MR. BHATIA: And we found out there is an
24 agreement with an ISO New England PJM and the ISO New
25 York. And what -- the stability limit in that part of

1 the country, because it's towards the end of the
2 transmission line, they have done the study way back
3 and it has limited the largest unit in that area to be
4 1200 megawatt. And that agreement has been there from
5 the last two decades and they have recently evaluated
6 and they still want to stay with the 1200 megawatt.
7 So since the Seabrook exceeds the limit of
8 the largest stability limit, occasionally around the
9 country the agency arrives in either one of the ISOs
10 and Seabrook has requested to down-power from 1225
11 where they are and they have to go down to 1200. And
12 that's very unique circumstances which our Seabrook
13 Station is experiencing.
14 SUBCOMMITTEE CHAIR SIEBER: Huh,
15 interesting.
16 MR. BHATIA: And we understand that
17 Seabrook has talked to the -- we are involved,
18 headquarter is involved and the FERC is involved and
19 the station is involved and so are the ISOs and
20 there's an ongoing dialogue on this thing.
21 SUBCOMMITTEE CHAIR SIEBER: Okay.
22 MR. BHATIA: And my understanding is they
23 are going to review the study and see if the number
24 1200 gets to upgraded because otherwise I know there
25 are 1225 and there is another set of upgrading at the

1 Seabrook Point, too. And that's the kind of thing to
2 down-power.
3 MR. BLOUGH: And when they're asked to
4 down-power it could be several times over the course
5 of a day or a few days, down, up, down, up, down, up
6 and of course, that's --
7 SUBCOMMITTEE CHAIR SIEBER: It's a small
8 amount.
9 MR. BLOUGH: Yeah, like two percent.
10 SUBCOMMITTEE CHAIR SIEBER: On the other
11 hand, those are revenue dollars also.
12 MR. BHATIA: That's --
13 MEMBER MAYNARD: At certain times of your
14 fuel cycle, even small changes are --
15 SUBCOMMITTEE CHAIR SIEBER: Are not good.
16 Yeah, well, the issue is if you're putting power out
17 beyond the stability limit, if you trip, then you're
18 going to have a low voltage event because of the
19 existing system configuration at the time of the trip
20 which creates a new vulnerability.
21 MEMBER MAYNARD: Based on the reserve.
22 SUBCOMMITTEE CHAIR SIEBER: Well --
23 MR. BHATIA: It's the largest unit
24 disappearing from the grid which causes the
25 instability.

1 SUBCOMMITTEE CHAIR SIEBER: That's
2 sustaining the voltage at that end. When you take the
3 unit away, the voltage that exists at the trip
4 terminals goes down further than it otherwise would.
5 MR. BHATIA: Yeah, and the phase will
6 change and then you could isolate from each other.
7 SUBCOMMITTEE CHAIR SIEBER: And spending
8 reserve has no impact because all these things take
9 place within 15 or 20 seconds.
10 MEMBER MAYNARD: Yeah, it can either be
11 the larger plant or it could be one of the lines. If
12 you have three lines going in or out of a station, you
13 lose one it's not big deal. If you have one out and
14 then you lose a second one, one line may not be able
15 to handle it to get to a grid stability. So there's
16 other plants that if one of the main power lines is
17 down, they may have to reduce a little bit for grid
18 stability for that, but that's usually once every
19 three or four months as opposed to four or five times
20 a day.
21 MR. BHATIA: Yeah, but there is another
22 avenue to this one is when they are pushing power
23 heavily towards New York and it's being consumed in
24 the New York area. Then all of a sudden if you lose
25 the largest unit, then you could go into an

1 instability mode and --

2 SUBCOMMITTEE CHAIR SIEBER: Where it all

3 starts to fall apart.

4 MR. BHATIA: It all depends on how the

5 configuration is at that point. Okay, the second

6 issue here is the Fitzpatrick 4160 volt AC safety bus

7 relay. This back in March 29, 2005, all of a sudden

8 there was a large hydro-station in St. Laurence in the

9 New York area, still in our site. About 1,000

10 megawatt of power was tripped off. So as a result the

11 345 carry line at Fitzpatrick area which normally

12 feeds the Fitzpatrick Station and generally loss a

13 part of it. It passed from 358 to all -- all the way

14 to 325 which was since down 4160 volt bus and as a

15 result the graded one or the other was actuated, where

16 fortunately it was only for a couple of seconds only

17 because there was a timer which counts the time so

18 that it -- because momentarily, you don't want to

19 disconnect the off-site power, the mono-power and go

20 to the standby power.

21 SUBCOMMITTEE CHAIR SIEBER: Right.

22 MR. BHATIA: So it was sensed and then the

23 Fitzpatrick Station called them, the TO's the national

24 grid and it was confirmed that they are a disturbance

25 back there due to the trip-off of the large unit in

1 that area.

2 SUBCOMMITTEE CHAIR SIEBER: Is this alarm

3 part of the under-voltage relay system?

4 MR. BHATIA: That's right.

5 SUBCOMMITTEE CHAIR SIEBER: So ultimately

6 it resulted in a trip?

7 MR. BHATIA: No, since it had the 90-

8 second timer, it's only went on for two seconds, so it

9 was considered as a disturbance for a few seconds and

10 was normalized.

11 SUBCOMMITTEE CHAIR SIEBER: That's so you

12 can start heavy loads on 4160.

13 MR. BHATIA: That's correct, yeah.

14 SUBCOMMITTEE CHAIR SIEBER: Okay.

15 MR. BLOUGH: That's if it had continued

16 for 90 seconds.

17 MR. BHATIA: It continued for 90 seconds,

18 maybe it would be going from here to over on standby

19 power which --

20 SUBCOMMITTEE CHAIR SIEBER: Right.

21 MR. BHATIA: Yeah.

22 SUBCOMMITTEE CHAIR SIEBER: Okay.

23 MR. BHATIA: So this was a good chance to

24 see our communication between our Fitzpatrick, Nine-

25 Mile and the TO's in the grid. And the second example

1 is also basically along the same line. The Nine Mile
2 Unit 1 had one of the A-phase line open due to some
3 unknown reason and one of the Phase 1s stayed open for
4 a good amount of time, 20 days. And even though
5 there was a monitoring system at Nine-Mile, A phase
6 was indicating some current. B phase was -- A was not
7 showing any current, B was showing some current and C
8 was showing nominal current. It is not normally
9 connected. It's a standby power.
10 SUBCOMMITTEE CHAIR SIEBER: Yeah, on the
11 other hand, it still has relay protection phase on
12 balance, so it should have tripped the alarm.
13 MR. BHATIA: Yes, it had relay balance.
14 As I showed the picture up there, standby A way up
15 close to the breaker. The conductor was open at the
16 transmission line.
17 SUBCOMMITTEE CHAIR SIEBER: Okay.
18 MR. BHATIA: So it wasn't visible. Only
19 it was visible at Nine-Mile where the metering is
20 available. They were reading the phase A zero, B as
21 some current, leakage current only.
22 SUBCOMMITTEE CHAIR SIEBER: Okay.
23 MR. BHATIA: And the C was also --
24 SUBCOMMITTEE CHAIR SIEBER: There was
25 really no load on this.

1 MR. BHATIA: There was no load on it. It
2 was just a standby.
3 SUBCOMMITTEE CHAIR SIEBER: Go ahead.
4 MR. BHATIA: So, it stayed in this
5 condition for almost 20 days until we got a phone call
6 from TO, Transmission Officer of the national grid.
7 SUBCOMMITTEE CHAIR SIEBER: Okay.
8 MR. BHATIA: And then we went back, the
9 station people went back and checked them physically
10 on the A phase was in open condition.
11 MR. BLOUGH: So the station was
12 interpreting the currents as you're very low on two
13 lines and zero is -- being essentially zero and okay
14 on all three lines, but that wasn't the case and then
15 they found out --
16 MR. BHATIA: My belief maybe their
17 metering is not in good condition. I mean, metering
18 was showing some error.
19 SUBCOMMITTEE CHAIR SIEBER: It's hard to
20 say because those currents --
21 MR. BHATIA: So simply the two phases were
22 energized.
23 SUBCOMMITTEE CHAIR SIEBER: Yeah, but the
24 currents are probably very low so --
25 MR. BHATIA: Very low.

1 SUBCOMMITTEE CHAIR SIEBER: -- so you
2 wouldn't see anything on an analogue meter. A digital
3 you might see something.
4 MR. BHATIA: Yes, so this was a very good
5 example where the TO called us and said, "Hey, I'm
6 seeing something different here. A phase is not
7 showing me anything". And since these lines are the
8 GDC17 offsite sources, and being energized not
9 connected is hard to see. So it was a good example
10 where good people helped the plant.
11 Basically, what I was trying to show is we
12 are a good communication between the transmission
13 operator, ISOs and the plants.
14 SUBCOMMITTEE CHAIR SIEBER: Well, it's
15 better than none, but this condition existed for 20
16 days. So you have to decide how good it is.
17 MR. BHATIA: Yes, from the data.
18 MR. SCHOLL: This is Larry Scholl at the
19 site. One thing, at Nine-Mile they did have the
20 current indication that it was correct. It was a low
21 current on two phases and the third phase they
22 attributed it into an indication problem, that
23 actually they hadn't found the actual cause in the
24 conductor. They did recognize the mismatch but again,
25 didn't find the right cause.

1 SUBCOMMITTEE CHAIR SIEBER: Okay, thank
2 you.
3 MR. BHATIA: This is a -- I thought since
4 we were addressing the heat waiver, we were, I can
5 give you a perspective on the PJM now. This is on
6 July 17th, they broke their old record of July 26th,
7 2005 which was a 133,765 megawatt and the recent, last
8 Monday they delivered 139,746. This is the new record
9 for the PJM. And I checked the web on the New York
10 site and same day the New York website also broke
11 their record also. The record they made was 32,624
12 megawatt. And the recent record the following day the
13 ISO New England also made a new record, 27,374.
14 So as you can see, the records are being
15 broken in all these three ISOs in the recent heatwave.
16 SUBCOMMITTEE CHAIR SIEBER: And that's
17 happening all over the country.
18 MR. BHATIA: All over.
19 SUBCOMMITTEE CHAIR SIEBER: I think the
20 California grid hit 54 yesterday.
21 MR. BHATIA: Yes, California also broke
22 their -- they've been breaking --
23 SUBCOMMITTEE CHAIR SIEBER: Bonneville is
24 -- it's hard to tell there because they -- you know,
25 they have so many independent transmission companies

1 around there that you're not sure where everything is
2 going but they hit a record, too, over 100 degrees.
3 MR. BHATIA: Yeah, in fact California
4 breaking record every other day now.
5 SUBCOMMITTEE CHAIR SIEBER: Yeah, well,
6 they stabilize because of the rolling blackouts.
7 MR. BHATIA: So anyway it gives you a
8 little perspective here. Now, California ISO is
9 around 50,000 megawatt and it's EZM ISO it's almost
10 three times the capacity and then you can see the New
11 England is 32 and 27,000 category.
12 SUBCOMMITTEE CHAIR SIEBER: Right.
13 MR. BHATIA: New England and New York.
14 SUBCOMMITTEE CHAIR SIEBER: It sounds like
15 you're right up to the minute on the information that
16 -- particularly during this stressful period and
17 that's a good thing.
18 MR. BHATIA: Yes, headquarters and region
19 have been following the information and there is
20 enough information available on the web and
21 independent lab also, that you can see the minute-by-
22 minutes information at that point.
23 SUBCOMMITTEE CHAIR SIEBER: Yeah.
24 MR. BHATIA: Every five minutes it gets
25 updated.

1 SUBCOMMITTEE CHAIR SIEBER: That's good
2 for me to know. And --
3 MR. BLOUGH: Well, our headquarters is
4 looking at all the ways get -- monitor the information
5 and trying to consolidate it all, but you know, the
6 fact is, honestly, we don't have good protocols for
7 anyone to tell us from the ISOs you know, NERC has
8 been designated as an electric reliability
9 organization but they've got a lot of work to do
10 before they get to where they've met their objectives.
11 Just last week we started asking all the plants every
12 morning if there's any grid alerts or anything and
13 then we use that to compare with what we've seen
14 ourselves and what headquarter is saying. So there's
15 still work to do at this area, but when the situation
16 gets tight, we're watching is as closely as we can
17 using the sources we have and our Branch Chief, John
18 Rogge, who is tending to a sick relative this week out
19 of town, has cultivated relationships with the -- with
20 the PJM and the New England, New York people as well.
21 And so we still have work to do in that
22 area, but you know, we've got a lot of effort going on
23 to watch the situation.
24 SUBCOMMITTEE CHAIR SIEBER: Well, I think
25 that until the rule is fully implemented and Americans

1 have established a consistent protocol, it's going to
2 be difficult, as I'm sure you're now experiencing, to
3 figure out what everybody is doing.
4 On the other hand, we're better than we
5 were a year ago. Well, I appreciate that, thank you.
6 MR. BHATIA: The last slide, basically,
7 put everything together as I mentioned, the knowledge
8 and utilities are working on integrated utilities
9 here. All three ISOs are fully regulated and then I
10 got this pointer from basically the headquarters
11 because I can't compare with the rest of the region.
12 So they were telling me that Region 1 ISOs are pretty
13 proactive, progressive and forward-thinking for
14 ability to go to the other regions.
15 All Region 1 offsite power TI responses
16 are in line with headquarter expectations and no
17 outliers. And at the same time, the Limerick
18 Generating Station and others we think they are ready
19 for 2006 summer, which so far has been demonstrated
20 pretty good, you know.
21 SUBCOMMITTEE CHAIR SIEBER: Okay.
22 MR. BHATIA: And that's basically what I
23 have.
24 SUBCOMMITTEE CHAIR SIEBER: Okay, thank
25 you very much. I appreciate that. And it's

1 consistent with what I've heard from other sources on
2 the other end. I feel good that you folks are on top
3 of this every day and because I think that's also
4 important. Thank you.
5 MR. BARKLEY: Mr. Sieber, if it's okay
6 with you, I'd like to break for lunch and if we could
7 come back say at 10 minutes after 1:00. Would that be
8 workable, 45 minutes?
9 SUBCOMMITTEE CHAIR SIEBER: I think so.
10 MR. BARKLEY: Okay, we'll reconvene at 10
11 minutes after 1:00. The hoagies are next door and
12 well bring that over here and eat right here.
13 (Whereupon at 12:25 p.m. a luncheon recess
14 was taken.)
15
16
17
18
19
20
21
22
23
24
25

1 A-F-T-E-R-N-O-O-N S-E-S-S-I-O-N

2 1:16 p.m.

3 SUBCOMMITTEE CHAIR SIEBER: I'd like to

4 introduce Carey Bickett and Jim Trapp to tell us about

5 Limerick.

6 MR. TRAPP: I'm Jim Trapp. I'm a Branch

7 Chief here in Region 1. I've been in the nuclear

8 industry for 26 years. I've been with the NRC here in

9 Region 1 for 17 years. I've been an Inspector, a

10 Senior Reactor Analyst and for the last four years a

11 Branch Chief here. We'll add -- I don't know if

12 anybody else added this, but this is a great place to

13 work. I think we all like it and I've certainly loved

14 the 17 years I've been here. So seeing the other side

15 and this is just real fascinating work for us.

16 I have an MS and a BS degree in Nuclear

17 Engineering and I'm one of those guys they were

18 talking about before. I was a former SRO and I worked

19 at Indian Point 2 for a number of years in outage

20 management and reactor engineering.

21 SUBCOMMITTEE CHAIR SIEBER: And you and I

22 have met before.

23 MR. TRAPP: We spent a couple of nights

24 looking at diesel generators.

25 SUBCOMMITTEE CHAIR SIEBER: Diesel

1 generators, sequencers.

2 (Laughter)

3 MR. TRAPP: Jack was like the NCO, Chief

4 Electrical Engineer at Beaver Valley for a number of

5 years and I was the AIT Team Leader for a number of

6 AITs, so we've spent some time together.

7 SUBCOMMITTEE CHAIR SIEBER: Right, we were

8 a profit center.

9 (Laughter)

10 MR. TRAPP: I wasn't going to say that.

11 Carey.

12 MS. BICKETT: My name is Carey Bickett.

13 I've been with the NRC for about three and a half

14 years now. I've been the Limerick Resident for just

15 over a year. Before that, I was a DRS Inspector.

16 Before I came to the NRC I was actually working at the

17 Charleston Naval Prototype as an instructor for about

18 six years and that's about all my experience. I have

19 a Bachelor's Degree in Chemical Engineering from Penn

20 State University.

21 MR. TRAPP: And our Senior Resident

22 Inspector is also a previous SRO, Sam Hansel, is down

23 in Chattanooga for training this week, so he won't be

24 able to join us but next slide, please.

25 We're going to give you a real brief

1 overview of Limerick. You know, tomorrow, we're going
2 to spend an entire day there and you're going to get
3 all sorts of information from Exelon and others on
4 Limerick, so we're going to kind of keep this brief.
5 What we're going to try to do is just kind of give you
6 -- whet your appetite for what we're going to see
7 tomorrow. Both plants at Limerick are owned by
8 Exelon, owned and operated by Exelon Corporation.
9 They're twin GE BWR 4s with a Mark 2 containment, so
10 they have a suppression pool. I guess for Region 1
11 this is about as typical a BWR as we have in the
12 region. There's not much --
13 AUDIENCE MEMBER: Whatever a typical BWR
14 is.
15 MR. TRAPP: Right, well, I'll point out
16 some of the differences but I mean, in Region 1 we've
17 got a lot of the Golden Oldies, so I mean the
18 diversity in BWR is just astounding and if you think
19 you know something, on the site, you probably don't.
20 But these two sites, Susquehanna, Hope Creek and I
21 think we have a few here that are similar. These are
22 our last operating license. These two plants went on
23 line in '85 and '89. So this was -- Unit 2 was
24 actually the last construction plant here in Region
25 1 and luckily when I joined the NRC, I had an

1 opportunity to actually get down in the vessel and
2 fool around down there. So It's our last one on line
3 and they're large. They're 1134 megawatt BWRs.
4 There is a few interesting aspects to
5 Limerick that I'll point out. They have the redundant
6 reactivity control system installed. This is an ATWIS
7 mitigation system. So they have an automatic slick
8 system. They would cut back the feed pumps, cut the
9 recirc pumps and they have an alternate rod insertion
10 off of that. So that's kind of unusual for us here.
11 I think we have three sites in Region 1 and have that
12 feature installed.
13 Onsite power, they have a lot of these
14 little generators at Limerick. They have eight
15 installed diesel generators. They're large, three
16 megwatts each. They're Fairbank Morris diesel
17 generators and they're set up with four diesels per
18 unit. Offsite power, they also have -- they have two
19 offsite power lines, one coming off of 500 KV, one
20 coming off a 220 and they have the ability to hook up
21 a -- they call it the Moser line which is a direct
22 line in from a fossil plant in the Pottsdown area that
23 they can directly hook up into Limerick if they have
24 one or the other alternate off-site power sources out
25 of service, but that does take quite a bit of time.

1 It takes them about 72 hours, I believe to get that
2 line hooked up.
3 Cooling tower makeup, as we -- Limerick is
4 just about 20 minutes up the street and you can see
5 the plumes from almost everywhere around here. So on
6 your way up, you'll see the large plumes. It's kind
7 of flat ground around here and the cooling towers
8 really stand out. And one of the interesting aspects
9 is --
10 CHAIR WALLIS: Does it rain from the
11 plume?
12 MR. TRAPP: It does, yeah, and we'll go
13 right up 422 and if the wind is blowing right, you'll
14 see that.
15 SUBCOMMITTEE CHAIR SIEBER: We should come
16 here in the winter.
17 CHAIR WALLIS: Then you get freezing rain.
18 SUBCOMMITTEE CHAIR SIEBER: Yes, that's
19 true.
20 MR. TRAPP: And the makeup sources are
21 kind of interesting because there's really no large
22 water source, no river near them, hence the need for
23 the cooling towers but they have a number of
24 interesting ways to get makeup to the cooling towers.
25 The most interesting would be as they can pump from

1 the Delaware River to a reservoir. The reservoir
2 dumps into the Perkiomen Creek which is kind of a
3 small creek and they can bring it down the Perkiomen
4 and then pump it out of the Perkiomen which runs near
5 the plant into the cooling towers.
6 A second way would be the Schuylkill River
7 which is also not a very big river up around
8 Pottsdown. That's their primary source of makeup
9 water to the cooling towers. But an interesting
10 aspect here is up near Tamaqua I believe there are
11 some mines that they have that they pump water out of
12 the mines, dump it into the Schuylkill and they use
13 the Schuylkill River sort of as a conduit and then
14 they take the water out, down here near the plant and
15 use that for makeup.
16 VICE CHAIR SHACK: The EPA let's them pump
17 water out of mines?
18 MR. TRAPP: Interesting, yeah. Carey and
19 I were just talking yesterday because they found a lot
20 of manganese in the cooling ponds and we were saying,
21 "Gee whiz, I wonder, you know, with all you hear in
22 the Western States with heavy metals getting, you
23 know, out of the mine leach, I wonder if that could be
24 the source", and we were just kind of throwing that
25 around yesterday, but another interesting aspect of

1 the way they can get water to Limerick and then the
2 Perkiomen Creek which is kind of tiny, is another way
3 they can just directly take water out of that.
4 SUBCOMMITTEE CHAIR SIEBER: What's the
5 ultimate heat sink?
6 MR. TRAPP: The ultimate heat sink are
7 cooling ponds, both for RHR service water and ESW.
8 They have spray ponds.
9 SUBCOMMITTEE CHAIR SIEBER: Okay.
10 MR. TRAPP: And we'll see those on our way
11 in tomorrow. Another interesting aspect is there's an
12 airport. As we go up 422 if you'll look right, you'll
13 see an airport, a small airport. You look left,
14 you'll see the plant. And basically, I'm not a pilot
15 myself, but I think if you lined up for this runway,
16 you would kind of line up on both cooling towers and
17 you'd try to go right between them which, of course,
18 others thought of this and the design basis for the
19 plant includes a small plane crash. It's actually a
20 Lear jet. And interesting enough Exelon owns the
21 airport, so they can control the length of the runway,
22 control the size of the plane and there's just one
23 part of the diesel building, one wall, that I believe
24 that couldn't easily be hit by an airplane that isn't
25 designed for a Lear jet crash; reactor buildings,

1 control building, the rest are. So that's pretty much
2 the things that, you know, when you look at Limerick,
3 I find kind of fascinating or different.
4 MEMBER MAYNARD: You say that Exelon owns
5 the airport. Is it open for public use?
6 MR. TRAPP: It is.
7 SUBCOMMITTEE CHAIR SIEBER: Yes.
8 MR. TRAPP: Yeah, and they can tell this,
9 they can talk about this better than I, but I think
10 they're talking about leasing it out now. So you
11 know, they no longer want to be in the airport
12 business.
13 SUBCOMMITTEE CHAIR SIEBER: You used to
14 have an inspector here who owned a plane that flew in
15 and out of that to his assignments.
16 MR. TRAPP: Yeah. He was actually the
17 Branch Chief of Beaver Valley.
18 SUBCOMMITTEE CHAIR SIEBER: Right.
19 MR. TRAPP: Performance, currently
20 licensee response column, I guess if I could describe
21 it in a nutshell, and I don't know if this is good
22 because this is being transcribed, but they're kind of
23 a perennial good performer at Limerick. We don't have
24 a lot of issues with them. The last green findings we
25 had at Limerick or the last greater than green

1 findings we had are back in 2001. Now this was almost
2 at the start of the ROP and the finding was an EP
3 drill where they didn't declare the emergency
4 correctly. They were in a general emergency and they
5 didn't get there in time. So that was one of the
6 findings.
7 The other is a little bit more
8 interesting. Back in the 2000 time frame they had a
9 lot of trouble with SRVs failing open, they had target
10 rock SRVs, something a little unique. They have three
11 stage target rock SRVs at Limerick and they and one
12 fail open at power. Obviously, they had to shut down
13 but this is kind of an interesting aspect. Limerick
14 is the place that got the suction strainer thing for
15 BWRs going. They actually had an SRV, and this is
16 maybe one of the top ten inspector findings ever, we
17 had an inspector in the control room and the SRV
18 opened. He was watching the RHR amps gauge, saw
19 fluctuations in the amps gauge, followed up that
20 finding and ultimately that resulted in the whole BWR
21 suction strainer issue.
22 So you know, great finding on his part and
23 again, they had trouble here. Since that 2001 period
24 they've taken corrective action and we think they have
25 control over their SRVs much more proactive in

1 shutting down. They shut down this last year to
2 address some leakage in shoes with them and they're
3 being much more proactive in getting the plant down
4 before they have one inadvertently fail open on them.
5 Six screen findings full plant in the last
6 12 months which is below the average. The average
7 runs six to eight per plant, so about maybe half of
8 the average that we'd see out there. Last Scram was
9 in October 12th, 2005 and this was an EHC card failure
10 and interesting enough the corrective actions we were
11 talking about before is to install a digital EHC
12 system. So that's where they're probably ultimately
13 headed. Occupational RAD safety, we'll be taking a
14 whole run around the plant and I suspect we won't even
15 pick up more than a millirem or so, a very clean
16 plant. And refueling outages are -- have always been
17 short and getting shorter.
18 VICE CHAIR SHACK: What kind of water
19 chemistry do they run? Is it no metal water,
20 hydrogen?
21 MS. BICKETT: Yes, no metal hydrogen and
22 water chemistry.
23 SUBCOMMITTEE CHAIR SIEBER: For your
24 information, when we choose the plant that we would
25 like to go to, we try not to choose a plant that's in

1 trouble.

2 MR. TRAPP: Okay.

3 SUBCOMMITTEE CHAIR SIEBER: And that's

4 because we don't want to add additional burden either

5 on the staff or the licensee in those kinds of

6 circumstances and so Limerick fits a plant that is not

7 in deep trouble.

8 MR. TRAPP: Okay, that's a good

9 perspective, because what I was thinking, oh, they

10 picked Limerick. I said, oh, that's kind of

11 disappointing, there's not a lot of -- and Carey is

12 going to go through some of the things that are going

13 on there but not a lot of issues going on there for

14 us.

15 SUBCOMMITTEE CHAIR SIEBER: Yeah, well,

16 that's the intention.

17 MR. TRAPP: It was intentional, good.

18 CHAIR WALLIS: We also went to Davis-Besse

19 because it was supposed to be a good plant.

20 SUBCOMMITTEE CHAIR SIEBER: It was until

21 the instant we were there, it was a good plant.

22 MR. TRAPP: Hopefully, that's not an omen.

23 At this point, I was going to turn it over to Carey to

24 talk about some of the plant issues.

25 MS. BICKETT: Okay, I'll just give a real

1 brief description of some of these plant issues. As
2 far as license renewal, they won't be allowed to apply
3 actually until 2009. That's when Unit 2 hits their
4 20-year point. So that will be something coming up in
5 the future. Currently, no power upgrades are planned.
6 CHAIR WALLIS: All BWRs seem to be going
7 for power upgrades, so presumably they will one day.
8 MS. BICKETT: Possibly. I haven't heard
9 anything on the horizon.
10 MR. TRAPP: They did a small one in the
11 past.
12 MS. BICKETT: Yeah, they had a small
13 operating --
14 CHAIR WALLIS: They didn't have the big
15 ones.
16 MS. BICKETT: No.
17 MR. TRAPP: Yeah, Susquehanna is actually
18 going for the seven and seven, they're going for the
19 14 percent power upgrade but you know, a good question
20 to ask them tomorrow but no indication yet.
21 MS. BICKETT: One of the big projects
22 right now is their Independent Spent Fuel Storage
23 Installation. They just had a vote in the middle of
24 July with the township and the township actually
25 approved the cement pad and the buildings are going

1 along with the ISFSI. So right now the schedule looks
2 like they'll complete their storage facility in the
3 third quarter of 2007. They'll do their first dry run
4 in the fourth quarter of 2007 and they'll be ready for
5 their initial campaign in the second quarter of 2008.
6 MR. TRAPP: This is kind of interesting
7 because there was a whole lot of public interest up
8 there and the township supervisors provided them a lot
9 of support because a lot of the public thought the
10 township supervisors were licensing the ISFSI, not the
11 NRC and they wanted to make it clear that they were
12 licensing a pad, you know, and water run-off, that
13 they had nothing to do with the safety of casks and
14 pursuit of our efforts up there with headquarters
15 folks.
16 VICE CHAIR SHACK: I was sort of astounded
17 here today that they're population density is like
18 Indian Point.
19 SUBCOMMITTEE CHAIR SIEBER: Yes.
20 VICE CHAIR SHACK: That's amazing.
21 MR. TRAPP: It is amazing.
22 VICE CHAIR SHACK: Is it the suburbs that
23 grew out there?
24 MR. TRAPP: If you look at the original
25 FSAR, they're whole license period, they've already

1 hit the population target that the original FSAR
2 thought the region would end up license life. It's
3 just a booming area, a lot of issues with -- they were
4 going to put a casino up at the access road and that
5 had a lot of negative repercussions. That deal has
6 been killed, but it's just a booming area.
7 MR. DAPAS: Marc Dapas, Sam and I were
8 talking about that. I think the difference is when
9 you look at the total number of folks within the APZ,
10 it's similar but the density of population when you
11 look at Indian Point and where it's centered, I think,
12 there's a stat park there, versus it's more
13 distributed around Limerick.
14 MS. BICKETT: Like all the other Exelon
15 plants, they have a pretty wide tritium monitoring
16 program at Limerick. They have sampled about 14 miles
17 on site. Some of them are from construction days,
18 some of them are new wells. They've only found one
19 well that had any indications of tritium in it and
20 that was only around 4300 millicuries per liter. But
21 they do have some followup actions on that to see, you
22 know, how far spread it is and whatnot. They have
23 drilled a couple of new wells and they're still
24 waiting on information on the results of those
25 samples.

1 MR. TRAPP: Yeah, Limerick would believe
2 it's all on site at this point.
3 MS. BICKETT: Right, nothing has been
4 found offsite yet as far as tritium.
5 MR. TRAPP: It's likely a CST scope.
6 SUBCOMMITTEE CHAIR SIEBER: Well, they do
7 have some radioactive discharges from the processing
8 equipment there. Where do those discharges go?
9 MS. BICKETT: Well, after the rad waste
10 processing, there's actually a hold pond on site.
11 That is sampled before they release that anywhere.
12 They have taken tritium samples on that and they were
13 all found to be, I think, less than the lower limit at
14 the temperature.
15 SUBCOMMITTEE CHAIR SIEBER: Okay.
16 MR. TRAPP: Ultimately rad waste goes to
17 the scoop hole.
18 MS. BICKETT: Right, and they've sampled
19 the scoop hole and all those areas and haven't found
20 anything substantive.
21 VICE CHAIR SHACK: How's their fuel
22 departments, do they have any leakers?
23 MS. BICKETT: Right now, they do not have
24 any leakers. They had a minor leak in Unit 1 prior to
25 the shutdown which was in March and they had one on

1 Unit 2, not this cycle, but the cycle before, but as
2 of right now, they don't have any leakers.
3 Something else coming up for Limerick is
4 they will be involved in Initiative 5B which is the
5 pilot risk informed technical specification
6 surveillance intervals. Basically what that will do,
7 that will take the intervals out of tech specs and put
8 it in a licensee controlled program that we approve.
9 Surveillance requirements will still remain in tech
10 specs. It's just they'll take the surveillance
11 intervals and base it on risk insight, equipment
12 performance, reliability and that kind of thing. So
13 they were going to implement that at around November
14 of this year.
15 They just had a meeting recently in July
16 talking about more requests for additional
17 information, so it looks like November is the target
18 date. The last think is alternate source term. They
19 are in the process of getting a license amendment
20 request for alternate source term and the target date
21 for that amendment issuance is August of this year.
22 MR. TRAPP: I guess in a nutshell, Jack,
23 that's kind of what you'll hear tomorrow and like I
24 said, I know they're set up for you and they're
25 looking forward to hosting you folks up there

1 tomorrow.

2 SUBCOMMITTEE CHAIR SIEBER: And we are,

3 too. Thank you.

4 MR. TRAPP: You bet.

5 MR. BARKLEY: I think you may have met the

6 next presenter here once or twice before. He's been

7 before the ACRS I think more than anybody else in

8 Region 1, so he's going to go over license renewal.

9 SUBCOMMITTEE CHAIR SIEBER: Okay, thank

10 you.

11 MR. MODES: Nothing you haven't heard

12 already.

13 SUBCOMMITTEE CHAIR SIEBER: You'd be

14 surprised.

15 MR. MODES: I thought first I'd tell you

16 where we've been, where we are and then sort of where

17 we're going in the region. Next slide. So these are

18 the applications we've completed so far. Of course,

19 Calvert Cliffs was the very first ever ever done and

20 when you do the very first ever, apparently you get

21 stuck with all the rest, so I had the pleasure of

22 doing Peach Bottom, Ginna, Millstone and we just did

23 Nine-Mile. ACRS did the full review on July 12th. I

24 didn't have the pleasure of coming but I was on hot

25 standby on the phone, if you'll recall.

1 SUBCOMMITTEE CHAIR SIEBER: The big time
2 is yet to come.
3 MR. MODES: Yes. Speaking of which, next
4 slide, the current applications, we have Oyster Creek,
5 which we received as an agency on July 27th and we
6 actually completed the onsite inspection in March of
7 this year and we're waiting for NRR's resolution of an
8 open item on containment liner integrity, you probably
9 -- I know you've heard about that one already. And of
10 course, that's tied to the understanding of the
11 refueling cavity leakage, the analysis for the lower
12 portion, the pressure eliminating analysis for the
13 upper portion, et cetera.
14 I just heard yesterday that Sandia
15 National Laboratories finally received the original
16 seismic design data which was somewhat difficult to
17 acquire because it is an old plant, and we're
18 anxiously awaiting the model results which will be --
19 they're still staying to the original schedule of
20 August 25th. We're going to get the output analysis
21 on 9/29. The reason I'm saying that is because we go
22 to the subcommittee on the 3rd of October. So we're
23 going to get the 29th and then the 3rd, so it should be
24 interesting trying to pull all this together.
25 We're not getting the consolidated report

1 until after the subcommittee presentation.

2 Another one is Pilgrim. We received that

3 one this year and the inspection is already in the IPM

4 plan for September of this year as well and it's

5 surely going to show up on the website. The next one.

6 We received Vermont Yankee concurrently, both of them

7 are Enerty plants. This one we are still waiting for

8 the dust to settle a little before we figure out when

9 the inspection is. Tentatively, it's sort of a TBD.

10 We're putting it somewhere in the November/December

11 area, a lovely time to go up to Vermont Yankee but got

12 to go.

13 The next one, so for the current

14 challenges, Oyster Creek, of course, is the former

15 sand bed area.

16 CHAIR WALLIS: This inspection at VY, how

17 will that differ from the inspection that was done for

18 power upgrade?

19 MR. MODES: Well, it is a license renewal

20 inspection, so its guidance is completely deferred.

21 CHAIR WALLIS: Will you not be redoing

22 what you did before? You're just picking other areas

23 to inspect?

24 SUBCOMMITTEE CHAIR SIEBER: No, you have

25 an inspection and audit section on the scoping and

1 then examination of --

2 CHAIR WALLIS: So paperwork?

3 MR. MODES: Oh, no, heavens, no, no, no.

4 SUBCOMMITTEE CHAIR SIEBER: You go out in

5 the field and --

6 MR. MODES: There's multiple parts to the

7 process of arriving at a license renewal. And if you

8 will, the paperwork portion is the audit function. So

9 there is a scoping and screening audit review and

10 that's to check for conformance with the goal. Then

11 there's the --

12 SUBCOMMITTEE CHAIR SIEBER: The amps.

13 MR. MODES: -- the amps audit. Again,

14 that's trying to make a nexus between the application

15 and the goal and what's actually the supporting

16 document. The license renewal, I try to tell people

17 this, it's like doing a tunnel from two ends, we try

18 to meet in the middle. So these guys are working from

19 one end and then the region comes from entirely the

20 other end. The thrust of the examination that we do

21 is two parts. It's pretty obvious that you can't

22 discern the non-safety effects safety portion of an

23 application through the application with a drawing, so

24 that's where we find out greatest strength. We're the

25 guys who usually walk around the plants anyway. We

1 know our way around. We know the weaknesses. So we -
2 - and I'm jumping ahead a couple of slides here on how
3 we do this.
4 And so what we do is we do the non-safety
5 effect safety. On inspector an entire week does
6 nothing but take our guidance, the one that we've
7 embraced, licensing structure and then the application
8 and he walks through the plant and he looks for
9 weaknesses in how they applied it and how it should be
10 applied. And it's -- and then we parse out a
11 representative sample on all these management programs
12 and even go deeper. We start completely at the back
13 end. We look at the health reports, the system
14 reports, the aging reports, the corrective action
15 reports and then work our way toward the procedures to
16 try to ascertain whether or not you can give them
17 credit in that area.
18 SUBCOMMITTEE CHAIR SIEBER: A way to look
19 at it is that licensees use PNIDs for the most part to
20 mark up and identify systems that are in scope.
21 MR. MODES: Correct.
22 SUBCOMMITTEE CHAIR SIEBER: PNIDs don't
23 show anchor points. PNIDs don't tell you what room
24 their in. You can't tell a two over one configuration
25 from a PNID. The only way you can do any of those

1 things is to go out and use your feet and your eyes
2 and go look for them, which is what the inspection
3 does.
4 VICE CHAIR SHACK: Well, hopefully the
5 licensees --
6 SUBCOMMITTEE CHAIR SIEBER: Well, you'll
7 find out after the inspector finishes his inspection
8 but that's one phase of it. And the same way you
9 have to look at really how aging management programs
10 are implemented. You know, what they write on paper
11 and what promise they make is only one item and one
12 issue compared to does the program really work, do
13 they have detailed procedures to implement it? Is it
14 effective and so forth. And so there's a lot of work,
15 there's a lot of field work that has to go into these
16 things in order to make them effective.
17 MR. DAPAS: Correct me if I'm wrong, but
18 in it's most simplistic terms, I would offer that the
19 licensee submits the renewal application which
20 describes that aging management programs and the
21 inspection piece consists of verifying that those
22 programs can be practically implemented and that the
23 commitments to licensee makes in terms of programs
24 that they are actually going to institute that there
25 is -- through the inspection process, we're validating

1 that structure is in place and that's the level of
2 scrutiny that the inspectors apply. So that's how I
3 would differentiate it in its more simplistic terms.
4 Is that a correct understanding?
5 MR. MODES: Sure, sure. Well, we
6 obviously can see that Mr. Sieber has some experience
7 at this. He's run the Subcommittee for -- Oyster
8 Creek, obviously, you've already heard about
9 stakeholder involvement here. Oyster Creek is
10 obviously one of the applications that has a lot of
11 external interest. There is the NRRs petition which
12 ASLB refined to the sand bed and accepted. Amergen
13 then responded on the docket with a number of
14 commitments. ASLP, I would say attempted to vacate
15 the contention but gave it a 20-day timeout. NRR's
16 rebuttal was immediate and inadequate. They really
17 didn't have the strength of the rebuttal. So what
18 they did is they begged the ALSB to defer for an
19 additional time. They were given until yesterday to
20 rebut in full, which they did.
21 The rebuttal which we received yesterday,
22 not only rebuts the Amergen response, it focuses their
23 contention and now it expands it in other areas. So
24 the story here, the story is not done. ASLB still has
25 this, it's still going back and forth. Next one.

1 The New Jersey state petitioned as well in
2 the area of severe accident management alternative.
3 The interim compensatory measures, spent fuel pool,
4 vulnerability attack, fatigue cumulative usage, SBO
5 combustion. The first three of course, I'm not going
6 to talk about but the last two we took up as part of
7 the inspection. The inspection attempts to focus on
8 areas that are of contention and so we looked at the
9 fatigue cumulative usage factor and the SBO
10 combustion.
11 In the area of fatigue cumulative usage
12 factor, essentially the contention was the reactor
13 vessel was originally designed to a CUF of .8. The
14 state felt that it was inappropriate to use 5059 to
15 move from that design basis to a CUF of 1 and there is
16 some disagreement even now about whether that's
17 acceptable. I looked -- personally looked, since I'm
18 a metallurgical engineering, I personally looked at
19 their new proposed usage factor monitoring program
20 bases calculations and found it to be a very rigorous
21 and well-structured program. So the contention is
22 really about how you move from one to the other. It
23 is a Section 8 vessel. It was built prior to all of
24 us embracing all of the new design features.
25 VICE CHAIR SHACK: But this is basically

1 the thermal fatigue on a nozzle, is that --

2 MR. MODES: No, it's just -- no, the

3 contention was an over-arching contention. Yeah, it

4 was just about could they move from the more

5 conservative .8 CUF design input to a 1, yeah, through

6 5059.

7 VICE CHAIR SHACK: I'm just trying to

8 figure out where in a BWR vessel you get close to

9 either limit.

10 MR. MODES: That was the contention. As

11 you well know, you're not going to get near to that on

12 anything except perhaps --

13 VICE CHAIR SHACK: A nozzle on some of

14 the others.

15 MR. MODES: Yeah, right, maybe a nozzle,

16 maybe.

17 SUBCOMMITTEE CHAIR SIEBER: Actually, to

18 my mind this is looking at an issue that we're just

19 now beginning in the ACRS to examine which is what are

20 the margins and who owns them.

21 MR. MODES: And what do you do as you

22 drive closer to 1.

23 SUBCOMMITTEE CHAIR SIEBER: Yes.

24 MR. MODES: How do you embrace 1?

25 SUBCOMMITTEE CHAIR SIEBER: And do --

1 MR. MODES: Yeah, what are the underlying
2 inspection processes that you're going to use as you
3 get closer and closer. Really, I question the
4 philosophical reality of 1, right. The Japanese data
5 has thrown a cast of confusion over it because it's
6 you know, water inputs et cetera, so this was about
7 how you go from one to another. It wasn't about how
8 near they were.
9 The SBO combustion turbine control, the
10 contention was essentially that they didn't have --
11 well, the SBO combustion turbine is not owned by
12 Exelon. It's actually owned by FENOC and so there was
13 -- they proposed putting in place some aging
14 management program so then the question was, yes,
15 exactly how are you going to put them in place if you
16 don't own the turbine? So we got that sorted out
17 through both legal departments talking to each other,
18 finding a nexus in the contracts, understanding how
19 the programs were going to be implemented and then
20 apply. So the team looked at that as well, from the
21 aging management program.
22 SUBCOMMITTEE CHAIR SIEBER: Who did you
23 say owned the combustion turbine, FENOC? That's First
24 Energy.
25 MR. ANDERSON: It's First Energy by GPU a

1 number of years ago.

2 SUBCOMMITTEE CHAIR SIEBER: Oh, yeah, all

3 right.

4 MR. MODES: Right, so they still own that

5 turbine, even though it's an SBO turbine. So the

6 question was, okay, that's great, you say you're going

7 to put these amps in place but exactly how are you

8 going to do that if your competitors standing out

9 there with the --

10 SUBCOMMITTEE CHAIR SIEBER: Sell them the

11 turbine, they're cheap.

12 MR. MODES: Well, they said they tried to

13 buy it. They tried to get around it by buying it.

14 Next. Well, that was especially worrisome for me with

15 trying to understand how you apply the --

16 SUBCOMMITTEE CHAIR SIEBER: That's right.

17 MR. MODES: Here the contention is, is the

18 State Attorney General Petition has intervened. Here

19 it's in a point of back-fits spent fuel pool and

20 Pilgrim Watch hopped on it by adopting the contention.

21 So you can see it was the pre-starter load Pilgrims

22 and the next one is VY, Vermont. Here the Department

23 of Public Service has a state action for the

24 certificate of public good. There is legislation

25 moving through the state currently to codify that.

1 It turned out it's been reported to me,
2 it's not been verified, when Enertgy took over the
3 plant they agreed to going to the state in order to
4 require that approval for the license renewal and you
5 get a sense that Energy is okay will all of that,
6 except that they also have contended the containment
7 concrete aging and failure to consider the fuel
8 storage and the environmental impact, that would be a
9 late arriving issue as a consequence of Diablo Canyon,
10 et cetera and the failure to scope the security, so
11 you can see that VY has got a couple. Next one.
12 The Mass. Attorney General petition to
13 intervene, failure to state a contention and the next
14 one, New England Coalition has intervened, petition to
15 intervene on those issues. It's early in the process.
16 I haven't looked at the technical veracity of the
17 issues but there obviously quite a few. And that's
18 all the kind of stuff that you have to roll into the
19 inspection. You have to be sensitive to the
20 stakeholder involvement. And the last one is the Town
21 of Marlboro. The EP planning is inadequate and there
22 I would offer that the ASOB strongly encouraged the
23 agency to discuss these kinds of planning issues when
24 it was Millstone's turn.
25 As you recall there was the County of

1 Suffolk petitioned at Millstone for the same thing and
2 the EPA at least surprised everybody when they said,
3 "Well, you really need to listen to these folks and
4 talk about it". So it's not one of those, it could be
5 a minor issue. So the reason I mention that as you
6 see, the Department of Public Health, the
7 Massachusetts Attorney General, the New England
8 Coalition and the Town of Marlboro all ready, all
9 involved so it's a highly contended application.
10 Which brings me to how do we integrate all
11 of that kind of stuff into an inspection and I briefly
12 talked about that earlier. What I tried to do is I
13 tried to take an inspector with a large degree of
14 operational background and dedicate that one inspector
15 for as long as that inspector feels is necessary but
16 certainly I don't think it can be done in under one
17 week on site and that's to just tackle the non-safety
18 oversight. That's to look for those anger points, to
19 look for those relationships.
20 For the aging management program, you have
21 to divide that up into the existing programs that
22 they're taking credit for. The existing programs,
23 which they've revised in order to take advantage of
24 and then the new programs. Of course, you certainly
25 want to focus your limited resources on new programs

1 to see if they're going to work and you try to
2 structure the team in a way that the mechanical,
3 metallurgical, electrical, structural and operational,
4 so it tends to be a pretty large game.
5 At Nine-Mile Point for example, 16 systems
6 were walked down. At Oyster Creek we walked down 12
7 systems on the non-safety effect safety. At Oyster
8 Creek we looked at 29 of 36 programs reviewed and at
9 Nine-Mile Point, I think we looked at -- there were
10 some 65 programs. We looked at half of those, that
11 was two different units of older Unit 1. The process
12 also includes an optional one-week inspection and I
13 don't know if anybody recalls, we took advantage of
14 that one-week question when one of your sage gentlemen
15 asked somebody about Peachbottom and a charcoal filter
16 that we couldn't answer. I ended up crawling all over
17 the off-site ES system trying to get the answer. So
18 that one week is for late breaking issues, to get the
19 answers that any of you guys need, to find the kind of
20 things that we need.
21 And then the commitments inspection is
22 going to be implemented prior to the extended period
23 beginning, which leads me to the next one. Once
24 again, Region 1 is going to lead the way. Oyster
25 Creek's extended period for their original license

1 will end on April 9th of 2009. Nine-Mile Unit 1 is
2 August 22nd and Ginna is September 18th. Those are the
3 first ones in the fleet to do that. So we're the
4 first ones to do the commitment inspections. Next
5 one.
6 So let's talk about Oyster Creek. If they
7 are going to go into the extended period on April 9th,
8 they're going to start implementing some of their
9 liner commitments during the outage this year.
10 They've already started working through some of the
11 commitments that they're going to have to implement
12 before. They're going to have to implement the
13 remaining commitments during the outage of '08 and
14 currently there are, obviously, because we're in the
15 process of running through the license, an
16 indeterminate number. Next one.
17 Nine-Mile Unit 1, that application just
18 was presented to the committee so we're late in the
19 process but the finalized license says commission so
20 we don't know what the number of commitments is. You
21 can take a guess though. The SER contains 16
22 commitments for Unit 1 that have to be verified. So
23 you can guess that they'll show up as licensing
24 conditions. Next one.
25 And Ginna, what we've been doing is

1 attaching the commitments to the procedures. So
2 Attachment 15 to 71-003 includes the commitments that
3 will be required to be inspected; in that case, there
4 are 40 of them, 40 commitments that have to be listed
5 and we've already received notification from Ginna
6 that there might be one of them delayed into the
7 extended period. And that delay is due to the
8 industry continuing to develop new guidance, for
9 example. So it's not something that they're doing
10 callously. It's just it's not available, they're
11 still working toward it into the extended period.
12 SUBCOMMITTEE CHAIR SIEBER: Will other
13 plants be effected by that?
14 MR. MODES: Yes.
15 SUBCOMMITTEE CHAIR SIEBER: Because the
16 NIP program is applied.
17 MR. MODES: It's pervasive, so yes, other
18 plants will be affected.
19 SUBCOMMITTEE CHAIR SIEBER: Okay.
20 MR. MODES: As far as additional
21 applications, we have Fitzpatrick just about due.
22 We're already starting to work on the schedule for
23 that. Susquehanna, September, Beaver Valley is going
24 to be the second quarter of '07 and Three-Mile is
25 going to be the second quarter of '08. So we have

1 quite a few in this region to go through.

2 SUBCOMMITTEE CHAIR SIEBER: Do you have

3 the amended Beaver Valley application yet?

4 MR. MODES: Not yet, no.

5 SUBCOMMITTEE CHAIR SIEBER: When do you

6 expect that?

7 MR. MODES: I expect it to be September of

8 '06. That's when they committed.

9 SUBCOMMITTEE CHAIR SIEBER: Okay.

10 MR. MODES: So the last slide here says

11 pretty much we have 20 weeks of license renewal

12 inspection in the next 20 months and somebody,

13 probably me, is going to be standing before the ASCR

14 seven more times to present our findings. Any

15 questions?

16 MEMBER MAYNARD: Not so much a question

17 but a comment, it's probably more for NRR than it is

18 for you, but it sounded like a number of things in

19 some of these plants, Oyster Creek, for example, are

20 going to be coming together just before the

21 subcommittee meeting. And it's really not appropriate

22 to be coming to the subcommittee when things aren't

23 quite ready and answering all the questions by "We're

24 still reviewing that", or, "We just got it and it's

25 under evaluation", or whatever. So I think that's

1 something we'll be having to take a look at for the
2 ACRS subcommittee review of some of these plants and
3 stuff. It's more of a comment probably for NRR but
4 it's kind of a heads up for everybody.
5 MR. MODES: I most gratefully will leave
6 it as a comment for NRR. Anything else? It's been my
7 pleasure, gentlemen, see you the next time around.
8 SUBCOMMITTEE CHAIR SIEBER: Thank you.
9 MR. MODES: Thank you.
10 SUBCOMMITTEE CHAIR SIEBER: I think the
11 next time around will be soon.
12 (Laughter)
13 MR. BARKLEY: Another one of our Branch
14 Chiefs, who you've met before as well is Larry
15 Doerflein. He's going to discuss power uprate
16 activities in the Region 1.
17 MR. DOERFLEIN: As Rich said, my name is
18 Larry Doerflein. I'm an Engineering Branch Chief in
19 the Division of Reactor Safety and I'm here today to
20 discuss power uprate activities in Region 1
21 specifically, expended power uprate activities. With
22 me, I have Steve Pindale, who is one of my Team
23 Leaders for CDBI, I brought him in case any questions
24 come up on CDBIs. Next slide.
25 I plan on discussing two things in this

1 presentation. One is the inspections performed under
2 the reactor oversight process that are associated with
3 EPUs and then the second will be the actual EPU status
4 for the Region 1 plants. Next slide. Under the
5 reactor oversight process, there are basically two
6 procedures that address EPU activities, two inspection
7 procedures. The first is IP 71-004 which is entitled
8 Power Uprate, and the other one is inspection
9 procedure for the component design basis inspection
10 for CDBI.
11 The power uprate procedure is a procedure
12 that coordinates EPU inspection activities. It only
13 applies to power uprates greater than seven and a half
14 percent. It was issued in July of '02 and recently
15 updated to improve inspector guidance and referenced
16 the effort done by the CDBIs. It is not a baseline
17 procedure but rather a special or infrequently
18 performed procedure which we all Appendix C procedure
19 and I mention that because even though some time is
20 dedicated, some inspection resource time is dedicated
21 to the 71-004 procedure, most of the inspection effort
22 and samples will be charged to other baseline
23 inspections.
24 The power uprate procedure also involves
25 both resident inspectors and specialists from Region

1 1 and about the only other thing I need to say about
2 that is a sample size dictates that there be at least
3 one sample in seven areas, which I'll cover in the
4 next slide, as a minimum. The component design basis
5 inspection or the CDBI, the purpose of that inspection
6 is verified at the design basis had been properly
7 implemented for a selected sample of risk significant,
8 low margin components. That procedure was issued in
9 December of '05, recently updated to improve the kinds
10 and define margin and doing the margin reviews and the
11 thing about that procedure is it specifically refers
12 to when doing the margin screening, to look at
13 licensing basis changes such as EPUs which would
14 effect the available margins when you're selecting
15 components for detailed design release. Next slide.
16 I mentioned the power uprate procedure
17 looks at seven areas, a minimum sample in each of thse
18 seven if applicable. For instance, one of those areas
19 is major plant tests and I know Beaver Valley is not
20 going to be doing major plant tests so that would not
21 be looked at, but basically, the areas that are looked
22 at are 5059 evaluations, plant modifications, post-
23 modification and surveillance testing, power ascension
24 testing, major plant test, erosion and full
25 accelerated erosion programs, and licensee actions

1 based on commitments to address the impact of EPU on
2 initiating event likelihood.
3 An example of that would be VY committed
4 to putting in a capacitor bank in their switch yard to
5 help grid stability. That was just a licensing
6 commitment and we did look at that. The parenthesis,
7 the inspection procedure numbers in the parenthesis
8 is, as I said, is just where we actually end up
9 charging the inspection efforts in samples under the
10 baseline procedures. Any questions so far?
11 Okay, the CDBI as I mentioned, it reviews
12 changes in margins calls by the EPU and that comes
13 into play when the inspectors are identifying their
14 components or a detailed engineering review. We start
15 out with a large number of risk significant
16 components, do the margin review to come up with what
17 we're going to do detailed design reviews on and the
18 margin reduction by EPU is one of the screening
19 criteria.
20 CHAIR WALLIS: How do you define margin
21 reduction?
22 MR. DOERFLEIN: Well, the procedure -- if
23 you're talking about quantity, I'm not going to go
24 there. And what we found is useful is you look at
25 analytical or design margin, operations margin which

1 just could be complexity or time available to do
2 certain things, maintenance margin. If you're looking
3 at a component and every time you calibrate it, it's
4 always lower in the band. Some of it's judgment but
5 it's just a reduction in -- something decreased, the
6 margin decreased. A design margin, for instance, if
7 you to have a pump that the design says, have
8 something putting 10,000 gallons per minute into the
9 vessel, and it can put in 11,000 gallons, and you put
10 in an EPU that knocks it down to 10.5, that's
11 significant. Some of that's --
12 CHAIR WALLIS: So you've decreased some
13 kind of performance.
14 MR. DOERFLEIN: Yes.
15 CHAIR WALLIS: It's not clear that this
16 changes any margin. This is a question that we
17 wrestle with, too. I mean, the NRC headquarters
18 doesn't really give us very good answers about what
19 they mean by margin either.
20 SUBCOMMITTEE CHAIR SIEBER: Well, the
21 margin is built into the 10,000.
22 CHAIR WALLIS: So if you get below some
23 limit, like 10,000, have you lost the margin or just
24 changed it or what?
25 MR. DOERFLEIN: It reduces -- what we're

1 saying at that point you might reduce the margin but
2 some of the things that Larry refers to is we'll look
3 at modifications, for example, that would also likely
4 dig into the margin. We look at test data. For
5 example, if a pump degrades to some degree, that
6 reduces the margin from its design value in terms of
7 flow. Those --
8 CHAIR WALLIS: So design value has a
9 specified margin?
10 MR. DOERFLEIN: The margin, as we would
11 define it would be design value versus its operating
12 value. And if there's a reduction in that difference
13 then --
14 CHAIR WALLIS: So margin is when it works
15 better than design?
16 MR. PINDALE: Well, most pumps, for
17 instance, are going to have --
18 CHAIR WALLIS: It looks as if what you
19 mean by margin depends on the particular thing that
20 you're looking at, if a pump has a certain kind of a
21 margin. Other things might have other sorts of
22 margins.
23 MR. PINDALE: Absolutely. Well, pumps are
24 easy because there's going to be some design value or
25 there's going to be some design value.

1 SUBCOMMITTEE CHAIR SIEBER: The problem
2 with the easy ones is that you can really be wrong.
3 For example, a designer, a hydraulic designer, when he
4 designs a flow loop, he will build into the
5 specification for the pump margins so that when the
6 pump reaches it's safety, okay, its surveillance when
7 it -- the system will still work with margin. On the
8 other hand, when you buy the pump, it will do better
9 than the manufacturer says and that's margin, too, but
10 it's a different kind of margin. And it seems to me
11 that the owner of the margin is whoever the regulating
12 authority is between the safety limit and the minimum
13 that's allowed for a system to work.
14 The owner of the margin between what the
15 pump is able to do on a surveillance test and the
16 surveillance limit that owner is the licensee and he
17 can allow the pump to degrade to the survey or the
18 safety limit.
19 VICE CHAIR SHACK: What I want to know is
20 what the inspector thinks margin is. All of us can
21 have a definition of margin, the one I want to know
22 about is what the inspector says a margin is.
23 SUBCOMMITTEE CHAIR SIEBER: All right,
24 let's -- now that I've tried to prompt you --
25 CHAIR WALLIS: I'm also trying to find out

1 if each inspector has the same definition of margin.

2 SUBCOMMITTEE CHAIR SIEBER: Or an even

3 better question is, do we need to know what it means

4 from the standpoint of inspectors, designers,

5 regulators? You can tell us that because it will tell

6 us how hard we have to work on it.

7 CHAIR WALLIS: If you're going to go to a

8 licensee and say, "You have changed this margin and

9 now it no longer is acceptable," then you have to have

10 some idea of what you mean by it. You have to have

11 some way --

12 (All speaking at once)

13 VICE CHAIR SHACK: No, we haven't gotten

14 to the acceptable margin yet. We're just decreasing

15 it. I want to know what -- give me an example of what

16 you mean by a decreased margin.

17 MR. PINDALE: Let me take a shot. I'll

18 tell you what we do in terms of the things I've been

19 on and led. And we view the starting point from the

20 licensee's margin standpoint where we have an

21 operating parameter or an operating limit and as that

22 becomes reduced, it might be that we're looking at the

23 tech spec or licensing value, but nonetheless, that's

24 a margin that might get reduced for whatever reason,

25 whether it's a modification that changed it or reduced

1 it or degradation due to some hardware issue. So we
2 have an operating parameter that we're monitoring or
3 researching to see if that's reduced in terms of
4 capacity.
5 MEMBER ARMIJO: Specifically, how would
6 you address steam dryers in a PWR with extended power
7 uprate? What margin would you measure against --
8 (Laughter)
9 SUBCOMMITTEE CHAIR SIEBER: An easy one.
10 MEMBER ARMIJO: No, let's stick with that
11 one.
12 CHAIR WALLIS: Let's have this one.
13 MR. COOK: My name is Bill Cook. I'm a
14 Senior Reactor Analyst and I helped out with these
15 inspections to try to focus on what components or
16 systems we're going to look at and in the case of the
17 dryer, we wouldn't look at that because it's not
18 modeled in TRA. We're focusing on safety systems or
19 mitigating systems that are modeled that are high
20 risk, that is they have a high raw value or a risk
21 reduction group and as we're all struggling trying to
22 define low margin, it can mean a pump, it can mean a
23 torque value, it can mean a variety of physical
24 parameters but it can also mean reliability aspects.
25 This pump failed 10 times in the last year. That's in

1 our view low margin because it's not as reliable as it
2 once was. So I don't know if that helps you.
3 VICE CHAIR SHACK: Let me just sort of --
4 let's go back to the pump example. Suppose I have a
5 pump that under the pre-EPU condition could pump
6 10,000 gallons per minute after EPU because the
7 temperature has gone up, it can only pump 9,000 per
8 minute but it only needs to pump 7500 to meet my PRA
9 success criteria.
10 MR. COOK: It's a candidate.
11 VICE CHAIR SHACK: It's a candidate, okay.
12 So it is reduced margins even though it still meets
13 all the requirements.
14 MR. COOK: That is correct.
15 VICE CHAIR SHACK: So you're really just
16 looking at a reduction in capability.
17 MR. COOK: That's right.
18 SUBCOMMITTEE CHAIR SIEBER: In the PRA
19 space that wouldn't show up because --
20 VICE CHAIR SHACK: No, it doesn't show up
21 in the change in risk. It shows -- it's a new
22 definition of what you want to preserve. If you're
23 looking at changes in risk, it's a no, never mind. If
24 you're looking at changes in margin, the margin is --
25 CHAIR WALLIS: Well, why would you want to

1 preserve over-capacity if you don't need it?

2 SUBCOMMITTEE CHAIR SIEBER: It's to get

3 margin.

4 MR. COOK: Margin is a good thing.

5 VICE CHAIR SHACK: I mean, it's defense in

6 depth in case you're wrong, that you really -- it

7 isn't that you just need 7500, in fact, you do need

8 8500 but you just don't know that.

9 CHAIR WALLIS: Well, now you're giving

10 your definition.

11 VICE CHAIR SHACK: You asked me why you'd

12 want to preserve something that was not risk

13 significant and I just gave you the answer.

14 CHAIR WALLIS: Well, I'm not sure I was

15 asking you. I think -- we're the ones who ask the

16 Region the question.

17 MR. BLOUGH: But he's right, in terms of

18 that, that is part of what the team would be looking

19 at if they've reduced the amount of margin they

20 believe they have to see if everything that goes into

21 deciding what they really need is 7500 is right, or

22 whether they're darers or what is relevant

23 consideration for --

24 VICE CHAIR SHACK: So you would look at

25 the decrease and then you'd go back and sort of

1 double-check whether 7500 was really good enough. Is
2 that --
3 MR. PINDALE: That's part of it but
4 recall, we're picking high risk low margin components
5 to take a deep look to see if there's vulnerabilities
6 or deficiencies in that component, which the reason
7 for picking those is to have some impact on safety.
8 If we find a deficiency, then there would be some risk
9 associated with it. We're not just trying to preserve
10 the margin. We're looking for vulnerabilities or
11 deficiencies in those components, or operator actions.
12 MR. COOK: In recognizing one of the basis
13 for changing this inspection approach was that under
14 the previous program, safety system design inspections
15 and functional inspections, we looked at basically
16 ECCS systems and we've done this -- those inspections
17 for so many years, we've started recycling over the
18 same systems that we looked at so the CBBI inspections
19 allows us to broaden our view of systems, mitigating
20 systems that are modeled in the PRA, not the same ECCS
21 that we've been looking at.
22 CHAIR WALLIS: Can we go back to the steam
23 dryers? They are one of the issues with our operator,
24 they're a major issue. You can't just say they don't
25 effect the PRA; therefore, we're not going to even

1 look at their margin or some other way of evaluating
2 this. It has to be evaluated somehow.
3 MR. DOERFLEIN: But that's not some
4 inspectors actually evaluate -- you know, we look at
5 the ISI on the steam dryers, MOS to the steam dryers
6 that kind of stuff for inspection --
7 CHAIR WALLIS: Don't you look at --
8 MR. DOERFLEIN: But the --
9 CHAIR WALLIS: Don't you look at the
10 cracks and that kind of thing?
11 MR. DOERFLEIN: Oh, yeah, we look at that
12 but all that stuff is really evaluated by NRR. I
13 mean, in the case of --
14 CHAIR WALLIS: You report to them.
15 MR. DOERFLEIN: Yes, in the case of VY,
16 they did, you know, a couple years worth of review on
17 the models and everything of the steam dryers. We can
18 only report the testing, the mods that were -- or not
19 testing, but the inspection and the mods done to the
20 dryers, which we did at VY. NRR in their review,
21 looked at all the licensee's analysis.
22 CHAIR WALLIS: There's no measure of
23 performance so there's no measure of margin for steam
24 dryers?
25 MR. DOERFLEIN: Well, I guess --

1 CHAIR WALLIS: They measure steam, it
2 would be attached to some sort of margin.
3 MR. DOERFLEIN: Yeah.
4 SUBCOMMITTEE CHAIR SIEBER: Yeah, but it's
5 not a safety issue.
6 VICE CHAIR SHACK: Would you be performing
7 that inspection under the margins inspection
8 procedure? When you look at the steam dryer, is that
9 what you're -- is that the reason you're looking at it
10 is the margins or it's looked under another --
11 MR. DOERFLEIN: That's part of the ISI
12 program, somewhere under --
13 SUBCOMMITTEE CHAIR SIEBER: Well, you've
14 got your own --
15 VICE CHAIR SHACK: That doesn't even enter
16 into the margins.
17 SUBCOMMITTEE CHAIR SIEBER: No. It's just
18 structural integrity is what it is.
19 VICE CHAIR SHACK: I was trying to look at
20 the things that you're looking at in terms of margin.
21 CHAIR WALLIS: Things you're looking at in
22 terms of margin appear to be the things that you know
23 how to calculate a number from, like pump flow, but
24 steam dryer, you can't calculate any numbers so you
25 can't prepare anything; is that the problem on the

1 steam dryer? There isn't a measure of performance you
2 can compare with.
3 SUBCOMMITTEE CHAIR SIEBER: Well, we
4 haven't decided what that measure is. And the
5 measure, to be important from a regulatory standpoint,
6 the measure should somehow reflect its safety
7 consequences. And so the dryer's destruction
8 ultimately going down and blocking a stop valve or
9 something like that is a measure that the inspectors
10 would be looking for as opposed to does it make a lot
11 of noise, does it separate out the moisture that kind
12 of stuff, that's up to the licensee. If he's got
13 money to buy turbine generators forever, he can run
14 wet --
15 MR. DOERFLEIN: As far as just the
16 licensee, the NRC took VY dryer analysis very
17 seriously. That was really scrutinized for years.
18 SUBCOMMITTEE CHAIR SIEBER: Well, let me
19 say that the idea of margins, I'd just make a comment
20 to let everybody think we don't think of this as
21 simple, but margins and risk space are different than
22 margins in deterministic space and I think applying
23 1.174 is easier than applying 50.59 where it says you
24 ought to reduce your margins. Okay, and so how do you
25 do that because every change you make is a changing

1 the margin somehow. And so is there a margin you're
2 allowed to change and other margins that you aren't
3 allowed to change? That's a big question.
4 This is sort of a philosophical thing that
5 we and NRR research, all are going to have to try and
6 figure out. I think it's important for the
7 practitioners, the regions to eventually get a better
8 idea about what margins are but we're not prepared to
9 tell you right now, until we understand --
10 VICE CHAIR SHACK: They clearly know what
11 they're doing, we just haven't understood it.
12 (Laughter)
13 MR. DOERFLEIN: We take a shot at it
14 anyway.
15 SUBCOMMITTEE CHAIR SIEBER: I couldn't
16 have said that better myself, Bill. So why don't we -
17 - now that we've scared ourselves, why don't we move
18 on.
19 MR. DOERFLEIN: We agree it's a difficult
20 area and that's I think, the agency agrees and that's
21 why the procedure was tried --
22 CHAIR WALLIS: So next time you guys come
23 to Washington --
24 VICE CHAIR SHACK: Is the procedure
25 available on the web? Can I --

1 MR. DOERFLEIN: Absolutely.

2 CHAIR WALLIS: -- testify about some power

3 of --

4 MR. DOERFLEIN: I can get you a copy real

5 quick.

6 CHAIR WALLIS: We'll ask the margin

7 question again.

8 MR. DOERFLEIN: And I'll be --

9 AUDIENCE MEMBER: That sounds like a

10 threat.

11 MR. DOERFLEIN: One thing I wanted to

12 mention for that last slide, Steve kind of eluded to

13 it, once we do pick the -- once we get through the

14 risk significant margin screen, we do do detailed

15 design review and part of that detailed design review

16 also will dig into the mods.

17 CHAIR WALLIS: Risk significant margin

18 screen?

19 MR. DOERFLEIN: Pardon me?

20 CHAIR WALLIS: You said there's a risk

21 significant margin screen?

22 VICE CHAIR SHACK: You look at a component

23 that's risk significant.

24 MR. DOERFLEIN: Yeah.

25 CHAIR WALLIS: What's the margin screen?

1 MR. DOERFLEIN: When we go in there, we'll
2 identify about up to 100 components that are risk
3 significant based on numbers and other things. Then
4 we use margins --
5 SUBCOMMITTEE CHAIR SIEBER: You screen
6 them with margins --
7 MR. DOERFLEIN: -- to try to narrow that
8 down, so that --
9 CHAIR WALLIS: Well, I don't understand
10 how you do that because I mean, you've got a pump
11 which is -- closer to a marginal, you have other
12 things closer to some value. How do you decide which
13 one of those is significant unless you have some way
14 of evaluating the effect of this change in what you
15 call margin? It's all sort of a feel thing, that you
16 look through, "Oh, this one is getting close, I think
17 we ought to do something about it"?
18 MR. DOERFLEIN: No, no, it's the --
19 MR. COOK: He looks at the raw. He looks
20 at the risk significance of it without --
21 CHAIR WALLIS: But sometimes it doesn't
22 show up in there at all.
23 SUBCOMMITTEE CHAIR SIEBER: Well, the
24 margin won't but the raw --
25 CHAIR WALLIS: It doesn't effect CDF? You

1 don't worry about it at all?

2 MR. COOK: That's basically it, yes.

3 CHAIR WALLIS: Oh.

4 MR. COOK: Your starting point is the PRA

5 model and the most risk significant components for

6 operator actions.

7 CHAIR WALLIS: So all the other components

8 can do anything they like and it doesn't matter.

9 SUBCOMMITTEE CHAIR SIEBER: Plants can

10 shut down as long as it does it safely.

11 MR. DOERFLEIN: I still think some of it

12 is more obvious than you're giving us credit for. At

13 VY -- at VY they had, prior to the EPU they only

14 needed two out of their three heat pumps. After the

15 EPU they needed all three, so you knew --

16 CHAIR WALLIS: They had a run-back of some

17 kind.

18 MR. DOERFLEIN: Yes.

19 VICE CHAIR SHACK: But that would show up

20 as a delta CDF because I now need three pumps.

21 Whatever the reliabilities are, my delta CDF is

22 changed.

23 MR. CAHILL: My real value would increase

24 for each pump so therefore, it would be more likely to

25 screen into sample.

1 MR. COOK: You're right, it would result
2 in a change to the model. Now, the logic for success
3 is three out of three versus two out of three.
4 VICE CHAIR SHACK: Right, but that would
5 also give me a higher CDF because now I have to have
6 more things work. You can see that already in the
7 1174. I'm interesting in things that I don't see
8 changes in delta CDF but I see changes in margins. So
9 if the success criteria remain, you know, to me your
10 first example was clearer, where the success criteria
11 was met in either case.
12 CHAIR WALLIS: The problem is that in 1174
13 you have to look at the risk. But then in addition to
14 that, you've got to evaluate the knowledge. It's a
15 separate thing. That's what 1174 tells you to do.
16 MR. LEW: David Lew again, just I want to
17 let you know some time later we will also have an ROP
18 session where we can have a number of inspectors that
19 we can also post them on watch, but part of the
20 discussion here I think, is, you know, I think is how
21 you're defining margin and -- the PRA is a go, no-go.
22 The equipment either works or it don't work. Okay, so
23 where you have equipment, the margins are decreased.
24 They may be larger. The reason inspectors go after
25 those parts because it is -- if they're looking for

1 problems, okay, the problem may reveal itself more or
2 impact itself on margins and if you get close to the
3 margins, you may -- they may impact risk. So that's
4 one of the strategies that we're looking for to have
5 smaller margins.
6 MEMBER MAYNARD: I don't think it's quite
7 as difficult as we're all trying to make it here. It
8 does require some judgment and I don't think it all
9 just boils down to CDF or there are changes or not.
10 Whenever you do a power uprate, you're taking a look
11 to see are you operating something closer to its
12 design capability than what you were before and if so,
13 how much? I mean, if something had a design
14 capability of 10, you used to need two, now you only
15 need three -- now you need three, that's probably not
16 a real significant change but if you used to need nine
17 and now you're at 9.8, the capability is 10, there's
18 a pretty good judgment that's something you may want
19 to take look at harder and just see really.
20 I really think if you take a look at those
21 things that are now being asked to operate closer to
22 their design capability.
23 SUBCOMMITTEE CHAIR SIEBER: In PRA space,
24 it either works or it doesn't.
25 MEMBER MAYNARD: That's right.

1 CHAIR WALLIS: I think the problem we have
2 is take a look at. It doesn't really tell you how to
3 evaluate it.
4 SUBCOMMITTEE CHAIR SIEBER: Well, that's
5 a future --
6 CHAIR WALLIS: Anyway we should probably
7 move on. This could be an endless discussion.
8 MEMBER MAYNARD: I think it's our level of
9 understanding of what to do versus their level of
10 understanding. I think that's why we're not doing
11 inspections.
12 SUBCOMMITTEE CHAIR SIEBER: We would never
13 get past the first item, but go ahead.
14 MR. BLOUGH: We're not claiming we're
15 experts in any -- to any extent really on margin, but
16 for our context, what we do is we take when we're to
17 look at risk significant items in the inspection, so
18 if you come up with a list of components and
19 procedures that maybe this long and then some
20 assessment of margin will help you to narrow down that
21 list to something more in line with the design basis,
22 inspection procedure that we do. So we're trying to
23 whittle down the things we look at. Then once we've
24 done that to decide what we look at, you have your
25 whole suite of attributes that you look at for the

1 system.

2 MEMBER ARMIJO: In your evaluation, do you

3 look at core components as well, fuel channels,

4 control blades? You don't?

5 MR. DOERFLEIN: No.

6 SUBCOMMITTEE CHAIR SIEBER: Okay.

7 MR. DOERFLEIN: I just wanted to make one

8 more point.

9 SUBCOMMITTEE CHAIR SIEBER: See if you can

10 move into some area that --

11 MR. DOERFLEIN: It's unlikely but I have

12 one more point to make on the CDBI procedure. Once we

13 do select those components for a detailed design

14 review using our judgment and what have you, we do

15 look at modifications, 50.59, testing done on that

16 component that was effected by the EPU. I mention

17 that because we don't always do 71.004 for every power

18 uprate, before the power uprate. So they're kind of

19 interchangeable.

20 Okay, that's the two procedures that we

21 use and I just -- I just want to mention some of the

22 advantages and challenges with the EPU inspections.

23 The advantages, you can probably see it, the ROP

24 inspection process is pretty flexible in this area.

25 The sample selection itself is flexible. I don't need

1 a minimum of one in each area. The timing is not real
2 prescriptive. Obviously, they're going to do power
3 ascension testing. You're going to have to do that
4 after power uprate, but everything else can be pretty
5 much where it fits, where you've got time.
6 Also it's flexible in the fact that it
7 doesn't even require to actually witness a test. You
8 can actually look at the results. Those are some
9 issues with the ROP advantages, I call them.
10 Specialists are involved, that's the good part. The
11 Region does supply a specialist. They have to get
12 involved in things like erosion, corrosion programs,
13 50.59. We have to send electrical specialists up
14 there, mechanical, HP operators, operator examiners.
15 So that's a good thing.
16 There are probably more challenges. Being
17 flexible is kind of like a double-edge sword. It
18 requires a great deal of coordination between the
19 Division of Reactor Projects and the Division of
20 Reactor Safety and NRR to come up with a good
21 inspection plan. Obviously, the resident inspectors
22 know what's going on at the site. They know the
23 schedules. They know the problems. NRR has insights
24 from their power -- their amendment reviews that they
25 can share with us and we have to provide the necessary

1 resources when needed, so that is an issue.

2 Good coordination is a must. Timing, I

3 mentioned some of these procedures could be

4 interchanged. Timing is always an issue, do we have

5 the specialist when we need him? Do I have to look at

6 the mods before the power uprate actually takes place,

7 things like that.

8 VICE CHAIR SHACK: What is the answer to

9 that question?

10 MR. DOERFLEIN: No. And I'll explain that

11 in my last slide a little bit. It will become obvious

12 in the last slide.

13 Another timing issue that kind of bothered

14 me on VY was license -- what I call licensing issue

15 resolution up there and the example was containment

16 over pressure. I've got guys out in the field looking

17 at RHR net positive suction head which takes credit

18 for containment over pressure. At the same time ACRS

19 is debating Reg Guide 182 and I kind of knew where it

20 was going to come out but I wasn't sure, but there was

21 also an ASOB contention on that very issue. So I'm

22 out there a little bit. So, licensing, you know, that

23 effects my timing of the inspection.

24 Sample sizes selection, that's a

25 challenge. How much is enough? Do you have the most

1 important things selected because even though there
2 may be a minimum, the baselines also have a maximum,
3 so I just can't inspect to my heart's content, there
4 are limits on the upward side, too.
5 Accounting, this is probably a personal
6 challenge for me. That's the bookkeeping. The way
7 this process is set up, there's no easy way for me to
8 go back and say how much time did I spent on VY
9 regarding power uprating activities? If I punch in
10 the power uprate procedures, excluding the engineering
11 team, it would -- which didn't all acknowledge power
12 uprating activities by the way, the process would say
13 I spent 64 hours regular time looking at power uprates
14 over three years. I know I spent a lot more doing
15 that, so the accounting system is not quite there
16 because a lot of this stuff is charged to baseline
17 procedures.
18 To me that's an issue because what did I
19 do, how do I plan the future, what if I get audited,
20 you know, things like that. The last thing is
21 stakeholder involvement is a challenge. You know,
22 that the stakeholders in Region 1 are pretty active.
23 I'm convinced they really influenced what we did at VY
24 to a large degree. And they haven't let up. I mean,
25 the planned trip a couple weeks ago, I lost a pump and

1 they called up and the first question was, "Was it
2 power uprate related". So it's a challenge.
3 That's the quick and dirty of the reactor
4 oversight and inspection procedures that we use.
5 Next slide. Now, I want to just quickly go over the
6 DPU status. This is what's been done or are on the
7 books so far. Vermont Yankee requested a 20 percent
8 increase in power. That request was in September of
9 2003. The ACRS made its recommendation to the
10 Commission in January '06. The amendment was issued
11 in March of '06. They are currently operating at 120
12 percent of pre-EPU power levels.
13 Regarding the inspections that were
14 performed, we did do Temporary Instruction 158 which
15 was the engineering pilot inspection and the
16 predecessor to the current CDBI.
17 CHAIR WALLIS: Have you been there since
18 they've been operating at 120 percent?
19 MR. DOERFLEIN: I've got a team up there
20 right now.
21 CHAIR WALLIS: And there's nothing that's
22 been detected that's reportable or --
23 MR. DOERFLEIN: They're only in their
24 second week. I'll let you know after the week four.
25 SUBCOMMITTEE CHAIR SIEBER: Reportable.

1 MR. DOERFLEIN: The team is in their
2 second week.
3 MR. DOERFLEIN: I haven't heard, the
4 projects may be better to answer that but I haven't
5 heard of any big problems.
6 MR. BLOUGH: You know, as they were coming
7 up, there were numerous times --
8 CHAIR WALLIS: There were various holes
9 because they got some vibration of some kind.
10 MR. BLOUGH: Yes.
11 CHAIR WALLIS: But then they somehow got
12 around that?
13 MR. BLOUGH: Right.
14 CHAIR WALLIS: We heard about the problem,
15 we didn't hear about the solution, which somehow
16 presumably, they made the problem go away or they
17 decided they could live with it, or what was it?
18 MR. BLOUGH: They had trigger values for
19 additional engineering evaluation and when they did
20 the additional engineering evaluation, they concluded
21 it was normal and we agreed.
22 MR. DAPAS: We agreed. We reviewed their
23 evaluation, concluded that it was acceptable. In
24 fact, the whole point the 91, 96 hour period of time
25 they were on hold to allow us time to look at the

1 engineering disposition and assure that we were -- had
2 no issues. That was a license condition and it was
3 built into the --
4 CHAIR WALLIS: So they got higher signals
5 from the steam lines or something? Was that what it
6 was? What was it that made them --
7 MR. DOERFLEIN: I think there was a couple
8 of things, and again, I'm not first-hand knowledge but
9 one of them was just a strange acoustic signal they
10 got.
11 CHAIR WALLIS: It's still there
12 presumably.
13 MR. DOERFLEIN: Again, I just --
14 CHAIR WALLIS: It's just -- it's not
15 significant. It's still here.
16 MR. DOERFLEIN: And another one they had
17 mismatch in steam flow, feed flow and that was, I
18 think, they didn't calibrate their instruments right
19 or something. They didn't account for steam density.
20 SUBCOMMITTEE CHAIR SIEBER: They sustained
21 that over a long period of time.
22 MR. DOERFLEIN: Yeah, but that's as much
23 as I know because I wasn't involved in the resolution
24 of it. Back with VY, the power uprate procedure, to
25 71.004 was completed and I would -- to answer a

1 previous question, most of that except for the power
2 ascension and the major plant test was done prior to
3 the upgrade being approved. That's only because we
4 had the luxury of three years to do it and I should
5 mention, I said there was a minimum of seven samples
6 required. Because the SRA kept a pretty good matrix,
7 we did it -- we actually chalked up 47 samples over
8 that three-year period of mods and testing and
9 everything else, so VY, I think, got a pretty good
10 scrub.
11 Ginna, they requested a 16.8 percent
12 amendment in July of '05. The ACRS made it's
13 recommendation to the Commission in May of this year
14 and their amendment was issued July 11th. Ginna
15 cannot go up in power until after its October outages
16 because they've got a lot more mods to put in. We
17 have developed an inspection plan based on the SER.
18 The SER had specifically 12 areas that they wanted us
19 to look at, 12 items for inspection. We considered
20 that. We'll probably add more but we have a mod,
21 modifications in 50.59 bi-annual inspection was
22 conveniently scheduled in August. That will go up and
23 look at, at least five mods that have been completed.
24 We have the flow accelerator corrosion program review
25 scheduled in November. There are other -- these are

1 just examples. The point is, the plan's been
2 developed, we've got HP's going up there. We're going
3 to look at porous stem valve issues. That was an
4 issue from ACRS, in August, so that's all developed
5 and we're working the plan. There will be no CDDI
6 until September of '07, that will be kind of an after
7 the fact thing.
8 Beaver Valley 1 and 2, they requested the
9 eight percent power increase in October of '04. The
10 ACRS made its recommendation in May of this year and
11 the amendment request was just issued last week.
12 Beaver Valley is a little different here. Unit 1 is
13 likely to go up -- Unit 1 had all its mods done. It
14 is likely to go up three percent next month, in
15 August. It won't go up the other five percent. They
16 said there's more engineering work to do. They have
17 some scaling changes to make based on TAV changes,
18 things like that. That engineering work isn't even
19 done, so I don't expect the other five percent for
20 awhile.
21 Unit 2 won't be able to up even three
22 percent until after the fall outage. They do most of
23 their mods during the fall outage. They won't get
24 them all done, do they'll only be able to go three
25 percent after that till they shut down some time

1 during the cycle and replace the AP turbine. So
2 they're going up in steps. The only thing, we are
3 working on an inspection plan per 71.004, the power
4 uprate procedure. It isn't very far along right now.
5 The only thing we really got scheduled is the floats
6 corrosion inspection in December. However, we did do
7 the CDBI that was just completed last week. That's
8 the engineering team. We did -- out of the 20
9 components that were actually picked for detail design
10 review, nine of them were EPU related, so they got the
11 good scrub on mods 50.59 as was one of the six
12 operator actions that was an operator action that was
13 effected by the EPU.
14 So they got that scrub prior to going to
15 power. There were two other requests submitted.
16 Susquehanna submitted a, I think 13 percent Unit 1 and
17 2 and Hope Creek had submitted a 15 percent but those
18 submittals weren't suitable for docketing, so those
19 amendments were withdrawn. I had no inside
20 information when or if those will be resubmitted.
21 CHAIR WALLIS: And Limerick is not on
22 there?
23 MR. DOERFLEIN: Limerick I have heard
24 nothing from them.
25 CHAIR WALLIS: I think VY wanted to do

1 that power up for all their licensed -- that was our
2 intention to do it at that point.
3 MR. DOERFLEIN: That's it for what I was
4 going to say. I'll try to answer any other questions.
5 VICE CHAIR SHACK: Just when you do the
6 fact thing, I mean, obviously, they haven't gone
7 through the uprate, so you're not looking at -- you're
8 just looking at the program, but it really wouldn't be
9 any different from any inspection you do in a FASH
10 program.
11 MR. DOERFLEIN: Yes, it would because --
12 VICE CHAIR SHACK: It would?
13 MR. DOERFLEIN: Because we don't do FASH
14 inspections now.
15 VICE CHAIR SHACK: That's right, that's an
16 industry --
17 MR. DOERFLEIN: Yeah, that was dropped
18 from our ISI inspection program awhile ago, under a
19 new reg oversight process as I understand. So it is
20 kind of like a new look. It's something we haven't
21 looked at in years.
22 VICE CHAIR SHACK: So you really get to
23 look at something quite differently at this point.
24 MR. DOERFLEIN: Yes, yes. We spend a full
25 week looking at it.

1 SUBCOMMITTEE CHAIR SIEBER: Any other
2 questions? If not, thank you very much. And I guess
3 we'll go next to safety culture.
4 MR. BARKLEY: Yes, Art Burritt will be
5 making this presentation. I'll give you a little
6 background on him.
7 SUBCOMMITTEE CHAIR SIEBER: Good
8 afternoon.
9 MR. BURRITT: Good afternoon, Art Burritt.
10 My name is Art Burritt and I'm one of the Region's
11 Senior Inspectors. I've been asked to talk on safety
12 culture today. The primary reason for that, I was a
13 team lead of the most recent Salem/Hope Creek Safety
14 Conscious Work Environment Inspection which wrapped up
15 at the end of June. I'm still in the process of
16 documenting the inspection results and hope to have
17 that out in the next few days.
18 SUBCOMMITTEE CHAIR SIEBER: Okay.
19 MR. BURRITT: Next slide. What I plan to
20 do today is give a brief presentation. I want to talk
21 about the background at Salem/Hope Creek, provide some
22 context for any questions I think you might have. I'm
23 also going to focus in on some of the lessons learned
24 and how they translated into changes in the ROP
25 relative to safety culture. Be happy to take

1 questions at any point as we go through. Next slide,
2 please.
3 In 2002 during our end of cycle process,
4 we identified a substantive problem identification
5 resolution cross-cutting issue. This PINR cross-
6 cutting issue remained open through the end of 2005.
7 In late 2003, the NRC initiated a special review at
8 PSE&G Salem/Hope Creek work environment. This was
9 primarily based on allegation information but as well
10 as some inspection insights and the continuation of a
11 substantive cross-cutting issue. This point is also
12 noteworthy from the perspective -- well, no, not
13 actually.
14 January 2004 we issued a interim results
15 letter and it identified that while there were no
16 serious violations identified by the NRC, we had
17 concerns in the way that PSE&G handled emerging
18 equipment issues, their operational decision making,
19 management openness to alternative views, as well as
20 the effectiveness of the corrective action process and
21 work management process as well as feedback associated
22 with both of those processes.
23 In May, next slide please, in May 2004 --
24 CHAIR WALLIS: So when you identified
25 these concerns, what happened? What's the follow-up?

1 Management hasn't been listening to alternative views,
2 apparently. And is there some follow-up or do you
3 just note that and go on?
4 MR. BURRITT: No, what it -- I missed a
5 point here I want to bring out, too. Based on our
6 interest, our questions and our special review, the
7 licensee also initiated a safety culture survey.
8 CHAIR WALLIS: So they agreed to do
9 something in response to your concerns.
10 MR. BURRITT: Correct.
11 CHAIR WALLIS: And then you're going to
12 look back at them and see if things can resolve
13 satisfactorily?
14 MR. BURRITT: Again, this is the beginning
15 of our development of a concern at the site. They
16 began to do things to assess their safety culture and
17 as you see, as we go on, they began to do assessments
18 to validate the results they got as well as we began
19 to put process in place --
20 CHAIR WALLIS: Well, I guess that's what
21 you're going to go onto the next slide.
22 SUBCOMMITTEE CHAIR SIEBER: Well, this all
23 comes out of --
24 MR. DAPAS: Well, it's how we got there,
25 right? My understanding of how we got there and how

1 the licensee responded.

2 SUBCOMMITTEE CHAIR SIEBER: But the

3 trigger is the ROP. The regulatory response column

4 cross-cutting issues which means a special visit and

5 public meeting and --

6 MR. BURRITT: Right, what --

7 SUBCOMMITTEE CHAIR SIEBER: -- and

8 commitments.

9 MR. BURRITT: What I'm going to try to do

10 is going to lay out the experience we had at Salem and

11 Hope Creek and then be able to correlate that to the

12 recent change in the reg and oversight process.

13 SUBCOMMITTEE CHAIR SIEBER: Okay.

14 MR. HOLIAN: And then just as a reminder,

15 Brian Holian, DRP, at this time, you know, a very

16 complicated time really for Salem/Hope Creek. At this

17 time you not only have the ROP cross-cutting issue

18 that you had as a prelude that Art will talk about and

19 at the same time you had a very vocal public lecturer

20 come in that had been a management consultant down

21 there and that OI eventually opened on for over a year

22 of interviews on site. So that was a separate kind of

23 trigger both at the same time and I'll let Art

24 continue from there.

25 MR. BURRITT: So as of the beginning of

1 2004, the licensees digesting their survey results,
2 NRC is beginning a special assessment really, not
3 something within the ROP by -- at least by the process
4 at that point. In May of 2004, PSE&G did two
5 additional independent assessments and got similar
6 results, again, concerns around problem
7 identification, resolution, work management, openness
8 to alternative views.
9 In July of 2004 the NRC issued the special
10 review final results, confirmed the interim results
11 and identified the oversight process going forward.
12 So again, we don't have necessarily the framework at
13 that time but this -- in this letter, we established
14 that framework. We established that an exit criteria,
15 PSE&G needs to make improvements and at the point that
16 they conclude they've made substantial sustainable
17 progress in improving the work environment. They need
18 to have a peer assessment come in and confirm those
19 results and then inform the NRC.
20 MR. DAPAS: Just to clarify, you made the
21 comment that we initiated a review that was outside of
22 the reactor oversight process. Maybe, Brian, you can
23 provide some context. I don't know if that was a
24 follow-up addressing the allegation we had received
25 but which process were we in exactly?

1 MR. HOLIAN: It was both combined at the
2 time. The ROP was obviously, you know, covering it
3 from the PI&R viewpoint and what will eventually be
4 the first safety conscious work environment inspection
5 finding in the ROP in any region. So those came in at
6 about the same time and the utility was well-aware of
7 the -- what may have been hundreds, you know, close to
8 100 interviews by OI of onsite folks because at the
9 management level there had been high management
10 turnover and it was the high profile alleger who's
11 still active with a suit against the company in the
12 State of New Jersey, so that is still to come and is
13 still open.
14 But we have closed out all our OI issues
15 but at this time, as Art was going through the
16 chronology, that's very active and that's going on, on
17 site, so did the ROP get their attention, yes. Did OI
18 also being down there interviewing quite a few
19 including senior managers, all the way up to the top
20 also get their attention, yes. So both of those --
21 SUBCOMMITTEE CHAIR SIEBER: And the
22 lawsuit caught their attention.
23 MR. HOLIAN: That's right and the lawsuit,
24 that's right, so all three things helped to get their
25 attention and commit them towards a program here of

1 improvement that is just really -- will be, we think,
2 culminating at this mid-cycle time here as we go into
3 it this year.
4 MR. DAPAS: Thanks for that, Brian. I
5 just wanted to clarify, so it wasn't the impression
6 that we're operating outside the confines of the Act
7 oversight process, because that would dictate a
8 deviation and as you know, there's a process you go
9 through with that.
10 MR. HOLIAN: Which is on the next slide,
11 which is on the next slide.
12 SUBCOMMITTEE CHAIR SIEBER: You have
13 policies in place that point you in the direction that
14 you took and that's the way the system is supposed to
15 work. Okay.
16 MR. BURRITT: Next slide. In the August
17 2004 mid-cycle assessment we identified safety
18 conscious work environment, substantive cross-cutting
19 issue based on the special review results and the
20 continuation of the PIR cross-cutting issue.
21 This would also be the point under the new
22 process where we would have considered a substantive
23 cross-cutting issue, so the -- one of the points I'll
24 make later on is the new process was informed by this
25 experience. Also in August 2004, the EDO approved a

1 deviation memo to the ROP to monitor the safety
2 conscious work environment at Salem/Hope Creek. This
3 was subsequently renewed a year later. In effect, the
4 memo provided for periodic meetings with senior NRC
5 management and site management which were done on
6 about a six-month periodicity.
7 We established an internal NRC
8 coordination team. This included or agency
9 allegations advisor, key people from research at NRR
10 with good human factors and safety culture background
11 as well as the resident office, the regional office,.
12 We provided increased ROP inspections primarily in
13 PI&R. We did that in a number of ways. We included
14 additional baseline hours primarily focused on the
15 PI&R aspects of the baseline procedures. We provided
16 additional annual PI&R samples. And we actually
17 doubled our PI&R biannual reviews. What we did is we
18 did biannual reviews but we included both sites as we
19 did them. So in effect, we did each site once a year.
20 Some of the other things that we did, the
21 licensee committed to provide us metrics related to
22 the safety conscious work environment.
23 CHAIR WALLIS: Are there recognized
24 metrics for safety conscious work environment?
25 MR. BURRITT: You know, I wasn't involved

1 in at the beginning when the metrics were established
2 and I know they evolved over time.
3 CHAIR WALLIS: Were they established by
4 the licensee?
5 MR. BURRITT: They were established by the
6 licensee.
7 CHAIR WALLIS: I take it the agency
8 doesn't have such metrics.
9 MR. BLOUGH: That's correct.
10 MR. BURRITT: Right, no, the metrics were
11 generally around availability of key systems and
12 again, their problems at the site were predominantly
13 longstanding equipment issues and inability to resolve
14 problems in a timely fashion, so they were effective
15 at monitoring problems at that site.
16 MR. HOLIAN: Brian Holian again, DRP.
17 Their metrics, as Art mentioned, corrective action
18 backlogs, issues like that, if you'd have talked to
19 Exelon management as they came in and took over from
20 PSE&G management, their view is that yes, the
21 workforce is reluctant at times to bring forward
22 certain issues based on management over the years,
23 maybe not listening as well. As the new management
24 came in, their view is that if we fix the corrective
25 action system and get that working well, you know, we

1 install that confidence in the plant workforce and
2 that was the tact they've taken and at the same time
3 increase their kind of honest communications about
4 management changes and what's going on, on the site.
5 So those two areas are two areas that they stressed
6 and a lot of the metrics don't report those.
7 SUBCOMMITTEE CHAIR SIEBER: If you --
8 according to your slides, if you go back to where you
9 began to take action on this problem it's in 2004, on
10 the other hand, the problem existed prior to that to
11 some extent. When would you say that it was
12 recognizable to inspectors that these kinds of issues
13 were there prior to May 2004?
14 MR. HOLIAN: I see Randy's come back in
15 the room. Randy lived through it a little bit more
16 than I did, so maybe I'll ask Randy to --
17 MR. BLOUGH: Yeah, I think inspectors were
18 scratching their heads and talking about things they
19 saw late '02 and early '03 in terms of what do the
20 findings mean. And there were some events on site
21 where management, you know, had extensive discussions
22 with the crew about operating decisions and there was
23 some unresolved conflict in that. So I mean, and some
24 of these issues were similar issues that went into our
25 designation of cross-cutting issue and PI&R. Other

1 things were things we knew about but didn't result in
2 inspection findings. They were just curious things,
3 things we talked to management about.
4 And you know, so that's when we start
5 seeing things and there were probably roots in it
6 before that and you could say it went on quite a long
7 time before there was NRC intervention. On the other
8 hand, you could say, well, the NRC had some kind of --
9 had some beneficial, I believe, intervention before
10 the problem like any serious safety consequence. To
11 one extent, you know, it takes us a long time to get
12 there. To the second extent, it's, you know,
13 somewhat strange territory for us, novel territory to
14 us and we got there.
15 SUBCOMMITTEE CHAIR SIEBER: Yeah, I
16 wouldn't want you to take I question as a criticism,
17 because you know, it's like anything that floats just
18 below the surface for a long time --
19 MR. BLOUGH: Right.
20 SUBCOMMITTEE CHAIR SIEBER: -- till the
21 signs become obvious that somebody's got to do
22 something. I'm just trying to put in my mind could
23 you have detected it earlier and the answer so far in
24 my mind is probably not to the extent that you would
25 have needed to and do something about it.

1 MR. HOLIAN: I think that's a good
2 summary.
3 MR. DAPAS: Just to offer a perspective on
4 that, this is Marc Dapas, I'd offer that we were
5 wrestling with a threshold for determining when are
6 you in substantive cross-cutting issues phase and
7 there was guidance at the time and it talks about if
8 you'd issued a chilling effect letter to the licensee
9 and you know, as Randy identified, you've got some
10 indicators there and the problem identification,
11 resolution. You know, you have the inspector piece,
12 where you go out and do a sampling and SCWE. You
13 know, we had the special review results. So when you
14 looked at those collectively, and you go through the
15 assessment process, which is the mid-cycle review and
16 you have the end of cycle, the conclusion was, yes,
17 there is a substantive cross-cutting issue and we put
18 the licensee on notice.
19 When you go back and you look at were
20 there SCWE indicators there before that? Yes, but
21 how many of those do you have and how many does it
22 take till you reach that threshold and if I recall,
23 this was the first agency substantive cross-cutting
24 issue in SCWE. And as you know, the program has
25 evolved, lessons learned. Back during that time frame

1 you had the discrimination task force review where
2 they made a recommendation that there should be
3 rulemaking in the SCWE area. The Commission weighed
4 in. You had the industry lobbying because they felt
5 that they could police their own SCWE if you will, and
6 didn't need prescriptive NRC engagement.
7 And I'll offer that that all is
8 transpiring and as we move that forward, and so now
9 with the safety culture initiatives, I do think we
10 have clearer guidance and if there is an event or an
11 issue where you're in 95.002 or 95.003 space, you have
12 the flexibility of going in and requiring a safety
13 culture review, again, lesson learned from Davis-
14 Besse. So I would just offer that when you step back
15 and you look in hindsight, were there indicators, yes,
16 but the threshold that we exercise there, given the
17 evolving nature of the issues, we tried to use the
18 tools we had in place at the time.
19 SUBCOMMITTEE CHAIR SIEBER: I appreciate
20 the comments. It really helps me understand how these
21 kinds of things evolve, when you act and when you're
22 still evaluating.
23 MR. HOLIAN: And your question, Brian
24 Holian, DRP again. Just to get back to the
25 presentation but looking forward to the next few

1 slides here, Art Burritt, one of our Senior Project
2 Engineers here and has led the second team, he -- the
3 first team was led by the Senior Project Engineer in
4 Branch 3. The Branch Chief is just on annual leave
5 today. His name is Gene Coby, who's lived through
6 this time frame, and Gene also went down for an
7 extended three-month rotation to headquarters as they
8 worked on the policy now that has just been put in
9 place. So Gene was there to work with the Office of
10 Enforcement personnel and knowing his in -- what he's
11 learned and seen at Salem/Hope Creek and also to
12 benchmark kind of the agency actions and would it
13 catch something like Salem/Hope Creek with the
14 procedure changes we're putting in.
15 So I know that's coming up on the slides
16 and I just wanted to mention Gene's name who's not
17 here today.
18 MR. BURRITT: Well, thanks. You took the
19 better half of my presentation. Another thing that we
20 provided for mentioned in the previous slide was the
21 two SCWE inspections, so 2005 we did, we performed the
22 first Safety Conscious Work Environment team
23 inspection. We found that the utility had made
24 progress in addressing the work environment. However,
25 focused attention was still required in certain work

1 groups, and some of the more important work groups,
2 like operations work groups at both of the plants as
3 well as security.
4 The licensee had performed a second safety
5 culture survey in the beginning of 2005. That was a
6 lot of the framework and input we used to really focus
7 our first safety conscious work environment inspection
8 in September. During our end of cycle process, we
9 closed the PI&R cross-cutting issues. So again, you
10 can see the evolution and now things are starting to
11 get better at the site as indicated by safety culture
12 surveys, independent assessments, in that case it was
13 a self-assessment of the ability and then by
14 independent NRC inspection. Next slide.
15 In April, also in January of 2006, the
16 licensee performed the third safety culture survey so
17 they're doing them about once every year. They had
18 peer assessment performed in April of 2006. The
19 licensee had concluded that they had made substantial
20 sustainable progress in the work environment. This
21 was evidenced by the Safety Culture Survey. It was
22 confirmed by the peer assessment. Then in June of
23 2006, the NRC went ahead with its second safety
24 conscious work environment inspection.
25 The results --

1 SUBCOMMITTEE CHAIR SIEBER: Do you have
2 the results of that?
3 MR. BURRITT: We do. It's still pre-
4 decisional. We expect to get that out in the next
5 couple of days.
6 SUBCOMMITTEE CHAIR SIEBER: Okay. I'll
7 look forward to it.
8 MR. BURRITT: Okay, in July we plan to use
9 the results of that inspection in our mid-cycle
10 process and then determine what the next action is
11 relative to the safety conscious work environment
12 cross-cutting issue. Next slide.
13 Some of the lessons learned, the key
14 things coming out as Brian already mentioned, is the
15 key coordination team members. So if you remember
16 back, we established a coordination team that has been
17 monitoring the -- providing oversight for the site,
18 monitoring the metrics and such. Those individuals
19 were actually used as part of our group to develop
20 safety culture changes to the ROP. Gene Coby, the
21 Branch Chief, who had project responsibility for
22 Salem/Hope Creek, was one of the key technical leads
23 for safety culture initiative changes. Next slide.
24 Okay, one of the key changes or one of the
25 key lessons learned that was incorporated into the ROP

1 changes involved the criteria for substantive cross-
2 cutting issue. The criteria now is again one green
3 finding with a safety conscious work environment
4 aspect or chilling effect letter, or significant
5 enforcement action involving discrimination and
6 there's an impact -- the impact on the safety
7 conscious work environment is not an isolated instance
8 and the agency has concerns with the scope or level of
9 effort by the licensee to address the issue.
10 Now the first criteria, one green finding,
11 we did have that at Salem/Hope Creek. After -- the
12 first thing we had was a chilling effects letter.
13 This is around January 2004 time frame. This is when
14 we initiated our special inspection. The preliminary
15 results coming out of that was in effect the chilling
16 effects letter. Subsequent to that, there was an
17 actual finding related to an executive review board
18 that was not performed and this was a measure to
19 mitigate the perception of retaliation. So we've met
20 both of those two criteria over the course of time.
21 And another reasonable criteria would be
22 enforcement action related to discrimination. This is
23 a severity level 1, 2 or 3 type discrimination issue.
24 So that has been incorporated into the ROP and that is
25 the measure for substantive in the safety conscious

1 work environment area. Next slide.

2 One of the things we've found at

3 Salem/Hope Creek is that weaknesses in the work

4 management and corrective processes are the precursors

5 to a substantive cross-cutting issue. Essentially

6 when employees are -- become hesitant to raise

7 concerns when they become apathetic. When they put it

8 into the process, the issues don't get solved, there's

9 longstanding equipment problems. They stop putting

10 them in. So that is a precursor and that's why we

11 have safety culture not -- doesn't only reside in the

12 safety conscious work environment cross-cutting aspect

13 but it also has been infused into the human

14 performance in our aspects.

15 We revised Manual Chapter 305 to provide

16 the option to request licensees perform safety culture

17 assessment in cases where we have the three

18 consecutive substantive cross-cutting issues. So over

19 a year and a half time frame for three consecutive

20 assessment periods, if we have a PI&R cross-cutting

21 aspect, substantive, or even performance and that

22 gives us the capability of the cross-cutting status of

23 a nature that it relates to safety cultures and we can

24 request the assessment. And again, going back to

25 2002, that's the first time we established the PI&R

1 cross-cutting issue for Salem/Hope Creek so by mid-
2 2004, we're at the point where by the new -- by our
3 new process we would be able to request the survey be
4 performed and that's where we got to using the process
5 that we did with out special review. Questions.
6 SUBCOMMITTEE CHAIR SIEBER: I'll wait just
7 a little bit more. Like the evolution of the Salem
8 problem, my question is --
9 MR. BURRITT: Okay, one of the things,
10 another lesson learned coming out of this is the
11 importance to develop the regional expertise regarding
12 these inspections. We used to do the safety conscious
13 work environment inspections and we used resources out
14 of headquarters, again, out of the enforcement, our of
15 NRR, people with specialized expertise that lends
16 itself to evaluating safety culture. We also used
17 regional inspectors, people like myself and others,
18 and it created a good blend of call it synergy to be
19 able to understand and evaluate safety culture
20 aspects.
21 I would promote continuing to do that in
22 the future rather than -- one of the things that the
23 agency could consider is to run all of these with a
24 specialized group out of headquarters, but what we've
25 found during our 2005/2006 inspections is the synergy

1 that was developed by the team was very useful. The
2 regional inspectors had a lot of credibility with the
3 licensee; however the specialized techniques and
4 capabilities of the people from headquarters
5 complimented the team well. Next slide.
6 That's it.
7 MR. HOLIAN: Just to comment, Brian Holian
8 again, on one aspect that I would mention, pre-
9 decisionally inspection report, you can expect an
10 inspection report that looked at the second -- our
11 second SCWE inspecting per another deviation
12 memorandum. You can look for that to go out next
13 week, although that result is pre-decisional, the
14 utility had to, before we initiated that inspection,
15 come in with an assessment of their own that claimed
16 we would not initiate our inspection until they
17 determined that they had significant and sustainable
18 progress. They did initiate a peer group, eight to 10
19 individuals led by Bill Kottel, the former South Texas
20 CEO and they did put that on the docket, that their
21 review and what they looked at for several weeks on
22 the site id conclude that.
23 So that's out there on the docket. Our
24 inspection report will be out there. Our inspection
25 report would point also, it will give a good status of

1 the inspection and then it points towards our mid-
2 cycle assessment process which is our process where we
3 will address the cross-cutting issue itself, and you
4 can expect a letter out on that, by the end of August.
5 MR. BURRITT: I did have a couple of other
6 points I wanted to make. So if you ask where are we
7 at today with the ROP and the safety culture
8 initiative? Our inspectors have been trained. They
9 have been trained through two mechanisms; one,
10 computer based training in the March/April time frame
11 and then that was followed up with more detailed
12 presentation as well as discussions during the
13 regional counterpart meetings for the inspectors and
14 this was a substantial, about a four-hour session that
15 included examples. The procedures have been rolled
16 out as of July 1st. They're just beginning to
17 implement them now. We really haven't gotten much
18 feedback yet. We expect that will change probably
19 around the September or October time frame.
20 We feel that the process enhancements
21 coming out of the safety culture initiative provide us
22 a better opportunity to identify safety culture
23 weaknesses and allow actions before performance
24 degrades to any level of significance. And yet we
25 have the ability to engage the licensee and request

1 surveys when we're still in the green findings range.
2 And obviously, we have a graded approach that if
3 performance does degrade beyond that, we can engage
4 them quicker and more.
5 SUBCOMMITTEE CHAIR SIEBER: Does anyone
6 have any questions?
7 CHAIR WALLIS: I was interested in this
8 bullet about licensee confidence in the SCWE team
9 inspections. That's a little bit tricky, isn't it?
10 You're questioning how the licensee runs the plant.
11 MR. BURRITT: Yes.
12 CHAIR WALLIS: Do this kind of thing.
13 Giving confidence to the licensee isn't going to be
14 that easy.
15 MR. BURRITT: Well, where we were going
16 with that bullet or that thought was credibility in
17 the team we bring in on site. And with the inspection
18 team that I led, we saw issues with the operations
19 group at one of the plants. What we did to
20 accommodate that to maintain that credibility is we
21 actually brought operations examiners in on the team.
22 This was an add-on as we began to do the inspections.
23 All right, so who are the best individuals we had to
24 get at the issues in that department? So that's
25 really what I'm talking about and that's why I'm --

1 CHAIR WALLIS: It makes a difference if
2 the utility is part of a bigger company, so that
3 you're not just dealing with them, in a way, you're
4 dealing with the whole like Exelon or somebody else,
5 with a bigger entity than just management at the --
6 MR. DAPAS: I'm not sure I'm following the
7 context of the question.
8 CHAIR WALLIS: Well, this whole business
9 of you say licensee confidence, does the licensee,
10 those are the folks who run that plant. And now
11 they're getting to be part of a bigger corporation who
12 runs six plants or something like that. So that must
13 make a difference.
14 MR. HOLIAN: You know, maybe in -- this is
15 Brian Holian, DRP, just to comment on that in general.
16 I have seen Entergy, you know, taking a look at other
17 fleets. They've taken a look at Salem/Hope Creek and
18 on Entergy at the Indian Point plant they put out a
19 newsletter to their entire Indian Point staff and on
20 it, it listed every Entergy plant and it listed
21 arrows, how they all have done on safety conscious
22 work environment surveys by their utility and it had
23 arrows up and down, average, above average, below
24 average.
25 CHAIR WALLIS: It must make a difference.

1 MR. HOLIAN: And it helps.

2 CHAIR WALLIS: Sort of bringing up the low

3 guy.

4 MR. HOLIAN: It does, it does and Impo is

5 going into this a little bit more with their

6 inspections. So you know, that does help. But the

7 confidence here that I think Art's talking about also

8 is the utility did complain a little bit about our

9 inspections, but to that --

10 CHAIR WALLIS: Who are --

11 MR. HOLIAN: That's right, who are you,

12 how can you do it in a snapshot time frame? And they

13 wanted to make sure we had a mix of regional

14 inspectors on there that see it day-to-day and

15 improvements besides headquarter specialists. So

16 that's a little bit what the confidence --

17 SUBCOMMITTEE CHAIR SIEBER: I'm sure that

18 there can be a lot of things that a licensee could do

19 to try to pick apart your process. On the other hand,

20 you hold the ultimate decider which is revoke the

21 license.

22 MR. HOLIAN: That's right.

23 SUBCOMMITTEE CHAIR SIEBER: And that sort

24 of deals with a series of questions that travel

25 through my mind. For example, what do you do if the

1 corporate CEO is the influence, is creating the bad
2 culture? And the answer is use your ultimate weapon.
3 MR. HOLIAN: If you have to, that's right.
4 SUBCOMMITTEE CHAIR SIEBER: That's why I
5 didn't ask that question. And that answer applies to
6 situations that arise from problems at the very
7 highest levels or issues of size or what have you.
8 That's the ultimate weapon and it's not clear to me
9 that it's ever been used exactly that way but there
10 are some people how have given up fighting it because
11 they knew the weapon is out there.
12 MR. DAPAS: Just off the issue, I'm glad
13 there was a question regarding the last bullet in the
14 slide here because if you read that, you could be left
15 with the impression that if it isn't done by the
16 regions it could be problematic here and I think the
17 intent or what Art intended to communicate and correct
18 me if I'm wrong, is that we need to insure that we
19 staff these inspections with the folks that have the
20 right competencies here because the industry has
21 pushed back and challenged the NRC's ability to assess
22 safety conscious work environment and as we've
23 attempted to be more prescriptive in our inspection in
24 that area, they have claimed, "You don't have the
25 expertise, it's a soft area" et cetera, that our

1 experience is that you need the right discipline, the
2 right mixture of folks, having someone that has
3 operations experience when they're engaged in a focus
4 group and talking to operators, lends credibility
5 because you understand what operating a plant entails
6 and you have that, if you will, SRO background,
7 pedigree, et cetera. That's what I think is the
8 overall context here, not this can only be done by the
9 regions. It's the mix of the team.
10 SUBCOMMITTEE CHAIR SIEBER: Well, I agree
11 with you 100 percent and there are some situations
12 that would be extremely difficult.
13 MR. BURRITT: Right. The compliment of
14 the team we brought to bear in the last inspection was
15 everything from PhD in psychology through there were
16 several SROs, inspectors with a lot of experience.
17 MR. HOLIAN: Allegation specialists.
18 MR. BURRITT: Allegation specialists. No
19 one person had all the right attributes to be able to
20 assess safety culture but the team, I think, did. And
21 we actually gained a lot of credibility with the
22 licensee by using that approach. And that's really
23 what we're driving at like Marc said.
24 SUBCOMMITTEE CHAIR SIEBER: Well, if
25 there's a word of caution out there, there is in some

1 plants and it's growing lesser and less, that there is
2 a management workforce issue. You don't want to get
3 yourself in the divide between them. Okay.
4 MR. BARKLEY: All right, at this time --
5 SUBCOMMITTEE CHAIR SIEBER: It's time for
6 a break and we're about to enter the best part.
7 MR. BARKLEY: Yeah, can we reconvene at
8 3:20?
9 SUBCOMMITTEE CHAIR SIEBER: Yes, we can.
10 (A brief recess was taken.)
11 MR. LEW: My name is Dave Lew. I am the
12 Deputy Director for the Division of Reactor Products.
13 This session here is a little bit different than the
14 previous session, as opposed to a presentation, we'll
15 have a round table. Actually, in this case, it's a J
16 table. The intent of this is really to have a forum
17 to interface directly with the inspectors who are
18 daily in the field. This is an opportunity for you to
19 get their views on how the ROP, Reactor Oversight
20 Program, is working and how they implement the ROP in
21 the field.
22 We've prepared about five simple slides.
23 The intent of the slides is really just to stimulate
24 the conversation. I think the over-arching goal of
25 this session is really to try and address any

1 questions you may have. I know you have some
2 questions on how we select samples, have questions on
3 whether or not there's an adequate level of effort
4 associated with some of the procedures. And I think
5 we'll give you --
6 CHAIR WALLIS: Wait a minute, are you
7 going back or forwards?
8 (Laughter)
9 CHAIR WALLIS: Are you going backwards
10 here now?
11 (All speaking together)
12 MR. LEW: Now, with that background and
13 with that format and goal in mind --
14 CHAIR WALLIS: Are you going forward again
15 now? What you're saying has nothing to do with what
16 we see up there.
17 MR. LEW: Yes.
18 CHAIR WALLIS: I can ask you questions
19 about the slides?
20 MR. LEW: Yes, you can ask questions about
21 the slides. I was just setting the stage relative to
22 what the session -- the purpose of the session is
23 intended to be a roundtable for you to interface
24 directly with the inspectors. And we just have the
25 slides there just to stimulate the discussion. You

1 know, we know you have questions that you had shared
2 with us ahead of this meeting and you're to ask those
3 questions, but, you know, the way we're set up, I
4 thought it would be worthwhile to at least have each
5 of the staff here at the table introduce themselves
6 and provide a little bit of their background.
7 Before I have them introduce themselves,
8 I just want to give you a brief overview. They do
9 represent a good cross-section of the inspectors in
10 the region. Half are with Division of Reactor
11 Projects. The other half are in the Division of
12 Reactor Safety. All the staff here at the table at
13 one time in their career were resident inspector. All
14 of them have been DRS inspectors, have led inspection
15 teams, engineering teams, problem identification
16 teams. They've conducted licensing exams.
17 Collectively, there's about 90 years of
18 NRC inspection experience. There's another 50 years
19 experience in the industry, Navy, other NRC. So with
20 that let me just start at the other end with Art
21 Burritt just to introduce himself.
22 MR. BURRITT: Okay, I'm a Senior Project
23 Engineer in Region 1, Division of Reactor Projects, 15
24 years with NRC, have been Operations License Examiner,
25 Resident Inspector at Millstone, Senior Resident at

1 Limerick, currently at SPE. I've also got 15
2 additional years of nuclear experience, both in the
3 commercial industry and Navy, including licensed SRO
4 and BWR.
5 MR. PINDALE: Steve Pindale, I've been
6 with the NRC about 22 years, the first 12 years in the
7 Resident Inspector Program. I was at Beaver Valley,
8 and then all the plants in New Jersey and then I came
9 to the Region and I'm a Senior Inspector in Division
10 of Reactor Safety.
11 MR. CAHILL: My name is Chris Cahill.
12 I've been with the NRC approximately nine years. I'm
13 a Senior Reactor Analyst. I've also been a Senior
14 Inspector in DRS, a Resident at Oak Creek and an
15 Inspector in DRS. I'm a licensed Fire Protection
16 Engineer and I also have about nine years of Navy
17 nuclear experience prior to joining the NRC.
18 MR. COOK: My name is Bill Cook. I'm
19 currently a Senior Reactor Analyst here in Region 1,
20 Division of Reactor Safety. Prior to that I was a
21 Senior Project Engineer in the Division of Reactor
22 Projects and prior to that a Senior Resident Inspector
23 and I hit most of the New York State sites. I've been
24 with the Agency since 1983.
25 MR. BLAMEY: Good afternoon, my name is

1 Alan Blamey. I've been in the commercial nuclear
2 power industry for 22 years. Nine of those years have
3 been spent with the NRC. I've been both a Resident
4 Inspector, Senior Resident Inspector in my current
5 position, as well as a Licensed Examiner. In the
6 industry I've had a BWR/SRO license and I work mainly
7 in the engineering and operations areas.
8 MR. LEW: And again, my name is Dave Lew.
9 About 24 years of nuclear experience, five in the
10 Navy. I'm a Resident Inspector at three different
11 sites, working in Region 2 as well as Region 1. I
12 worked in headquarters in Research for a couple of
13 years and currently my position, I returned to
14 headquarters a year ago.
15 So with that, let me turn it over to Chris
16 Cahill to do the next slide.
17 MR. CAHILL: As Dave already said, this is
18 sort of -- it's a roundtable, so we're here to answer
19 any questions that you have and we put together some
20 slides to introduce some topics and stimulate some
21 thoughts. So if you want to talk about something
22 else, this is your time, so feel free. But just
23 starting with the overview, the ROP provides a solid
24 framework for inspecting and assessing plant
25 performance and it's an improvement over the pre-2000

1 NRC inspection program.

2 We went through quite a revolutionary

3 change in that time frame, and the program is working

4 quite well and we can discuss that a little bit more

5 as we go along. The region does face unique

6 challenges. They've gone over some of that

7 previously, some of our stakeholder interests, the

8 ages of the plants, the -- being some of the first for

9 many of the events and conditions that have occurred,

10 whether it's license renewal or some of the other

11 things.

12 And that's going to be tough to read. So

13 as more experience is gained areas for potential

14 enhancement and refining continue to be identified.

15 So this really gets into the ROP is a living process

16 and as we continue to go through it, we continue to

17 identify areas where we can make an improvement, where

18 things are working well, where they're not working as

19 well and we can address, of course, as we move along

20 to make the program better and to be more safety

21 focused.

22 SUBCOMMITTEE CHAIR SIEBER: I think that

23 the NRC staff and perhaps, licensees, agree that the

24 ROP is an improvement over the self process. On the

25 other hand, there are other stakeholders out there,

1 like the financial communities, they love the self-
2 process because they can count the numbers and decide
3 whether a plant is doing good or bad and that would
4 include some analysts rating, financial rating of a
5 company. Have you heard from any place along the line
6 from these third party independent stakeholders about
7 whether ROP is better or worse than self, whether it
8 suits their needs or does it just suit the regulatory
9 needs that the NRC seeks?
10 MR. LEW: Well, I think there's a number
11 of different stakeholders out there and when you go
12 out to the financial community, I always find that the
13 financial community will find ways to count numbers.
14 SUBCOMMITTEE CHAIR SIEBER: Yeah, they do
15 as a matter of fact.
16 MR. LEW: And I think they still do that
17 now --
18 SUBCOMMITTEE CHAIR SIEBER: Yes, they do.
19 MR. LEW: -- whether it's the self-process
20 or it's the ROP process. I think relative to external
21 stakeholders, at least my experience, we engage them
22 out there during annual assessment in meetings and we
23 have these presentations, generally there was some
24 feedback. We will always have our critics. I think
25 for the most part, some of the folks that have engaged

1 us tend to have a better understanding of the process.
2 It's a lot clearer and I think that, if anything,
3 makes it a much better process for them to stay with
4 the plan.
5 SUBCOMMITTEE CHAIR SIEBER: When you have
6 a meeting close to the plant site, where the public
7 attends, do they contest your ability to determine
8 what the licensing is doing and how they're operating
9 their plant or do they just sit and listen?
10 MR. BLAMEY: I'll speak specifically for
11 the plant that I'm assigned to right now. It is
12 fairly quiet as far as other external stakeholders.
13 Typically, I think the only questions that we've seen
14 in the past that come to mind really are understanding
15 some of the new cross-cutting issues and how cross-
16 cutting issue plays into the inspection program.
17 SUBCOMMITTEE CHAIR SIEBER: Okay.
18 MR. BURRITT: You know, if I could add on,
19 I think there's a wide spectrum of what we see in our
20 annual assessment meetings. We've got some very vocal
21 plants, New York, Indian Point, a few others as well
22 as we have a lot of plants where there's very little
23 participation. It's primarily listening. But I think
24 typically we see at least a few critics at each of the
25 plants, although they generally will walk away with a

1 good understanding of why we did what we did which is
2 our intent.
3 SUBCOMMITTEE CHAIR SIEBER: Well, and
4 that's a good outcome and probably as good as you can
5 expect it to be. On the other hand, in my view, the
6 ROP has as primary stakeholders, the agency itself
7 because it allows them to allocate resources and
8 determine where they're going to go next with a given
9 set of behaviors by a licensee. And the other
10 stakeholder, of course, is the licensee, but the
11 public is an important stakeholder and they have to
12 understand that the agency is correctly enforcing its
13 roles and Atomic Energy Act and other rules that apply
14 on their behalf and I don't think that we should
15 pander to the public. On the other hand, I think we
16 need to keep in mind that that's where the
17 communication really is.
18 And from the reports that I've read, I
19 think you're doing a pretty good job of that but
20 somewhere in your list of reasons why you're doing
21 things, that should be an important one.
22 MR. BURRITT: That's one of the things we
23 do do during our annual assessment meeting, is we do
24 provide feedback forms. We do solicit feedback, so we
25 continue to try to improve the process, anything from

1 the times that the meetings are held to the forum that
2 the meeting is. And typically, the criticisms are
3 around the public would like a forum to talk with the
4 licensee directly. We conduct a meeting with the
5 licensee. We conclude that meeting and then we go
6 into address comments and questions from the public.
7 Typically, the licensee is either in the
8 back of the room or they've already left and sometimes
9 they ask specific questions that the -- while we'll
10 address the answers to the best of our ability,
11 they're really specifically to the licensee.
12 SUBCOMMITTEE CHAIR SIEBER: Well, I guess
13 in my view, I think that the way you're doing this is
14 the right way and if you facilitate a direct
15 confrontation that that's not going to work. And so
16 what you're doing in my opinion is the right way. Of
17 course, I'm just another stakeholder at this point.
18 But I think overall, it's been well handled in almost
19 every case.
20 MEMBER MAYNARD: Most of you have worked
21 under both processes, the old process and the ROP
22 process. Does the ROP process prohibit you or keep
23 you from looking at something that you think is a
24 safety issue or a safety concern?
25 MR. PINDALE: I think it's probably just

1 the opposite. I think previously with the structure
2 of the program, we were limited to looking at safety
3 related components and with the incorporation of risk,
4 we can get into various areas non-safety related,
5 secondary plant, so I think it gets us into more areas
6 that previously we would have liked to get there which
7 this allows us to go.
8 MR. BURRITT: If I could add onto that
9 point, it also puts more of our time on the most risk
10 significant components. We have -- in the old process
11 we did have the capability to go to a lot of different
12 areas but some of them were not risk significant.
13 Now, we are focused on the most critical aspects that
14 you can evaluate. So I think it is significant in
15 that regard.
16 MR. DAPAS: If I could offer my
17 perspective, you know, when you talk about risk, I
18 look at it, it cuts both ways. We have had licensees
19 that say, "Oh, this system would be available here",
20 and from a risk perspective they get to take credit
21 for that. By the same token, there may be a system
22 that we're looking at that is not identified as safety
23 related but is important in terms of risk that we are
24 now able to look at in the risk informed approach. So
25 I see it as cutting both ways and allowing the

1 inspectors to focus on some areas where in the past
2 they may not have had that safety related and while
3 you could use deterministic, that was subject to more
4 challenging versus if you're on board with a risk
5 informed approach, then you have a solid basis for why
6 I'm looking at this component, even though you may not
7 have a number of controls, pedigree QA requirements in
8 place, your own PRA identifies that it's risk
9 significant, so we're looking at it to understand what
10 you've done to insure you can address the equipment
11 and vulnerability, et cetera. So I think it's
12 valuable from that perspective.
13 MR. CAHILL: And we've been given some
14 more tools, too. The Revision 2 to the SDP notebooks
15 has just rolled out along with some pre-SAW sheets for
16 that and that provides a lot of guidance for picking
17 risk important systems or operator actions as a
18 starting point, plus a lot of explanatory notes to put
19 in the context of why it's important.
20 VICE CHAIR SHACK: Does the inspector get
21 essentially PRA results for his plant? I mean, does
22 he know what that SPAR model, you know, and what the
23 rankings for the various importance measures are? Is
24 that information provided to him?
25 MR. CAHILL: Well, the importance measures

1 or the role values are in the SDP notebook for
2 everything that we have in the notebook. Table 4 of
3 that has a comparison of what our results are,
4 benchmarked against what the licensee's results are
5 for that model. So that's not as detailed as the SPAR
6 model is going to be but for like HKSI and RKSI, it's
7 going to give you the big hitters. It's not going to
8 get down to the valve level.
9 VICE CHAIR SHACK: It gives you the big
10 picture, right. That's what I'm really looking for.
11 Okay, he really knows what the big picture of the
12 plant looks like in risk space.
13 MR. CAHILL: Exactly, and they can do a
14 quick screen on that, too, because they'll also use
15 that raw value and the licensee CDF value and say,
16 "Well, if this component is out for a year," based on
17 this raw value it would be green, white, yellow or
18 red", so they know if they come up to a C or D pump
19 that wasn't going to work for a year, they can look
20 and get a pretty quick sniff on hey, was this
21 significant or not.
22 VICE CHAIR SHACK: Or even know which
23 pumps to look at to find out what their maintenance
24 records look like.
25 MR. CAHILL: Right.

1 MR. BURRITT: For example, should you
2 select a core spray, do an equipment alignment or is
3 this an RHR versus another system, you can use the
4 notebooks to facilitate that besides.
5 MR. COOK: We try to advertise the plant
6 specific notebooks are really a simplified SPAR model
7 or PRA. They know what all the significant initiating
8 events are. They know that if it's in the notebook,
9 it's risk significance. If it's not, don't bother
10 with it. So that notebook, Phase 2 notebook, is
11 really a simplified tool for the inspector, not only
12 to take a finding and identify its risk significance,
13 but when he's planning his inspections for the next
14 month, he can look at that to say, "Well, I'll look at
15 the RHR pump versus the city water pump at Indian
16 Point".
17 MR. BLAMEY: And I think the other thing
18 that you have to realize as well, these SPAR models
19 aren't the only thing that we use. The licensee has
20 their own PRA analysis and typically, we'll end up
21 with their top 10 risk significant systems as well --
22 VICE CHAIR SHACK: Well, I'm hoping that
23 they look alike at some point.
24 MR. BLAMEY: Pretty close, yes. And the
25 other thing we like to take a look at as well as the

1 risk significant operator actions, so that we can
2 understand how the equipment as well as how the
3 operators and procedures have to interface.
4 MR. CAHILL: And many residents also have
5 access to the risk monitors, ES or whatever for their
6 particular site, so they can look at the day-to-day
7 configuration changes and see how that effects the --
8 how risk is effected that day.
9 VICE CHAIR SHACK: Do many of your plants
10 use risk monitors on the line?
11 MR. CAHILL: I know Oak Creek and Salem do
12 and --
13 MR. BURRITT: Most of them do now.
14 SUBCOMMITTEE CHAIR SIEBER: Are they real
15 time or are they -- do you have to type a bunch of
16 stuff in and wait 10 minutes?
17 MR. BURRITT: They usually have the daily
18 picture of risk on there and you can do what if, so if
19 you want to --
20 SUBCOMMITTEE CHAIR SIEBER: Well, this is
21 how you would plan it out --
22 CHAIR WALLIS: And they schedule
23 maintenance in some way?
24 SUBCOMMITTEE CHAIR SIEBER: Yes.
25 MR. CAHILL: But you'd also see the effect

1 of change in an unexpected failure in a piece of
2 equipment to see what the change would be.
3 CHAIR WALLIS: So everything is perfect.
4 I just wonder what the gaps are in this process. You
5 suggest here that there are areas for a refinement.
6 Where are they?
7 MR. CAHILL: One of the areas in risk that
8 we're working on refinements are in external event
9 development. NRR has an issue where we've developed
10 STP notebooks for five plants or six plants, I forget
11 the exact number, seven plants for external events so
12 we can basically take a finding all the way through in
13 a Phase 2 notebook. So we're fortunate in the region
14 then. We have Salem, Limerick, Nine-Mile and Indian
15 Point, Nine-Mile 2 and Indian Point 3, that external
16 event notebooks have been developed for and although
17 they're specific to those plants, we have a pretty
18 broad variety of plants there that we can apply some
19 of the lessons from that to some of the other plants
20 that we have to evaluate.
21 CHAIR WALLIS: What does the ROP say about
22 steam dryers? They're not risk significant and other
23 than the PRA, they just need to be ignored or what?
24 Can they rattle as much as they like? What does it
25 tell you about things like steam dryers in there or

1 does it not?

2 MR. CAHILL: It wouldn't necessarily be

3 modeled. If there was a performance deficiency that

4 we had to evaluate for a steam dryer, we'd be looking

5 more at an initiating event. We'd almost have --

6 there's no specific.

7 CHAIR WALLIS: There has been steam dryer

8 failures, pieces broke off and things like that which

9 we seem to be not insignificant event. I don't think

10 it appears in the PRA or the ROP, does it? So how

11 does -- so there must be some things like that, that

12 are not covered by --

13 MR. CAHILL: Well, for something like

14 that, for example, you have -- it's essentially a

15 transient initiator. So you have a transient model.

16 What causes the transient really for the risk

17 assessment part isn't that important compared to what

18 take --

19 CHAIR WALLIS: Well, I was thinking in

20 terms of retro-oversight. You still have to oversee

21 steam dryers.

22 MR. BURRITT: If I could offer something,

23 you know, we just built in through the safety culture

24 initiative use of operating experience. So now we do

25 have the ability to look at this from a transient

1 initiator. We do have event follow-up if an event
2 occurs, but operating experience may be a took to look
3 forward. If you're seeing events occurring in other
4 plants because of power uprates or whatever, to
5 reflect that back into inspection processes.
6 SUBCOMMITTEE CHAIR SIEBER: Yeah, but you
7 have to really look at that realistically. If the
8 dryer fails and it disintegrates, it's likely that
9 you're going to get a reactor trip which is an
10 initiating event but not a -- the low probability
11 event is if you have pieces of debris that somehow or
12 other get lodged in main steam isolation valves and
13 it's going to hit two valves in order for it to be a
14 bypass kind of a thing. And I don't -- I'm not aware
15 that that's in the PRA.
16 MR. LEW: I think for the most part, the
17 ROP does focus on the risk event issues. We also have
18 other tools to -- they have PI's that track trips and
19 plant transients.
20 CHAIR WALLIS: Some risks are not
21 significant, I mean, the plant has a lot whole other
22 unexpected scraps that may not be very risk
23 significant, but you'd still pay attention to it.
24 MEMBER MAYNARD: Right, and that's an ROP
25 process.

1 (All talking at once.)

2 CHAIR WALLIS: If you only risk inform

3 that you need 60 SCRAMs a year or something to make it

4 significant.

5 SUBCOMMITTEE CHAIR SIEBER: Well, they

6 have artificially set the threshold for that PI, so

7 that something -- a number of occurrences which isn't

8 particularly risk significant; however, it does

9 trigger the PI. It's a little artificial but it's

10 conservative.

11 MR. LEW: And we do have our inservices

12 inspection procedure which were expanded and it did

13 look at a large range of areas which may not be

14 significant but, you know, we have --

15 AUDIENCE MEMBER: As I understand your

16 question, how does the ISI program get us into looking

17 at something like the steam dryer. The ISI program

18 has a segment in there to take a look at repairs and

19 modifications that have been made and we've done all

20 that, so the cycle before last I got into the steam

21 dryer on that basis and the work in progress and what

22 I immediately hit on the resulting mechanics --

23 SUBCOMMITTEE CHAIR SIEBER: The current

24 requirements are small because the dryer is not a

25 pressure vessel.

1 AUDIENCE MEMBER: That's true, that's
2 true.
3 SUBCOMMITTEE CHAIR SIEBER: And --
4 AUDIENCE MEMBER: But there is still a
5 mechanism to get to that.
6 SUBCOMMITTEE CHAIR SIEBER: Yeah.
7 MR. COOK: We still have a tool within the
8 ROP to deal with that from the standpoint of the
9 significance determination process. It really falls
10 outside any specified appendices in the STP but we can
11 capture under management review. So if we identified
12 a finding, performance deficiency, which we wanted to
13 characterize and put out for public review and
14 scrutiny as well as exercise the licensee to take
15 corrective actions, we could do that under the
16 management review process which is a unique process
17 that takes advantage of or allows us to deal with
18 those unusual circumstances or issues. So there is a
19 method within the current ROP to deal with that.
20 SUBCOMMITTEE CHAIR SIEBER: But something
21 short of a collapse or a disintegration of a dryer,
22 even if you found a violation, I doubt that you could
23 make a greater than green.
24 MR. COOK: I wouldn't argue with that base
25 on the fact that it's --

1 CHAIR WALLIS: Yeah, but in terms of
2 public confidence, steam dryers breaking up, there's
3 a lot to undermine public confidence. If it happens
4 frequently and if they're rebuilt and it happens again
5 and then a new design is put in and it happens again,
6 the public extrapolates this to other parts of the
7 devices which are safety significant.
8 MR. DAPAS: If I could address that
9 aspect, let's look at Quad Cities. There was a case
10 where there were concerns about steam dryer integrity
11 right, and extended power uprate conditions and we
12 weighed in on that and as a result of looking at that,
13 the licensee went back to pre-EPU power levels and
14 they went in and they replaced the steam dryer, they
15 implemented enhanced monitoring. I would offer that
16 we have a concern in terms of the safety significance,
17 because obviously, integrity of the dryer is
18 important, but I would offer our operating experience
19 at -- you know, at 100 percent power levels have not
20 been such where we were having a number of dryer
21 cracking events and looking at a generic safety issue
22 but an extended power uprate as a result of the Quad
23 Cities experience, we wanted to insure at Vermont
24 Yankee that there was not a structural integrity
25 issue.

1 I'll offer that that is focusing on what
2 is potential safety significant. It doesn't have to
3 be a dryer when you go in and look at risk achievement
4 work and screen-out at some value. Here is a case
5 where operating experience tells you that at a higher
6 power level, you've got potential flow induced
7 vibration concerns with a dryer that can result in
8 cracking and pieces fall off. You can have problems
9 with moisture carry-over impacting the turbine, right?
10 And you can have an exulted turbine trip, a reactor
11 trip, or can some of those pieces get down into the
12 fuel and blow your reactor. So I would offer that the
13 program does allow for a look at that and it is
14 appropriately focused to give you the flexibility
15 independent of what does the PRA exactly say about the
16 importance of the steam dryer.
17 CHAIR WALLIS: So what we're doing is
18 looking at the ROP and saying are there some gaps
19 which need attention. You're saying there are other
20 ways to fix these things which may not show up in the
21 PRA.
22 MR. DAPAS: I would offer to answer that
23 question directly, using operating experience and
24 leveraging that, we can determine are there areas that
25 we need to enhance the ROP and identify an inspection

1 module, create one to go out and look at that, is
2 there information we need to obtain? We can send out
3 a request for information to provide us information
4 and we can assess what's the degree of a safety
5 concern that we have. That gets to generic safety
6 issues, et cetera. So the ROP has the flexibility to
7 be modified to include an inspection piece if we
8 determine that there's a certain component or activity
9 or operator action, whatever that needs to be
10 inspected. I would offer that.
11 MEMBER ARMIJO: As an example, could you
12 sort of summarize what you've done or are going to do
13 over the issue of BWR controlled delayed insertion
14 with the channel bow problem. You know, that's been an
15 issue over the last year or two --
16 MR. DAPAS: At Susquehanna.
17 MEMBER ARMIJO: And just how are you
18 dealing with that, what's going on and would you
19 expect the channel bow problem to get more severe with
20 extended power uprate? You know, it's a burn-up
21 related or exposure related --
22 MR. DAPAS: This is a perspective I would
23 offer. A licensee identifies there's a channel bowing
24 issue. Resident inspectors become aware of that.
25 They engage a specialist inspector with some

1 engineering expertise in the Division of Reactor
2 Safety. There's discussion with the program office
3 NRR and the particular systems branch where someone
4 has knowledge of you know, the fuels. And then there
5 will be a discussion is this a potential generic
6 safety issue? You know, we're engaging the licensee.
7 We're understanding what is the licensee doing to
8 determine the safety significance of this as-found
9 condition.
10 I think Susquehanna is an example. We are
11 following licensee actions very closely. They just
12 conducted an outage. They went in and did some
13 inspection. There were a certain number of rods that
14 were identified as having bowed. They did an
15 operability evaluation at the time they identified if,
16 saying if X number of rods are inoperable, can that --
17 in a SCRAM will the reactor be safely shut down, et
18 cetera. I would offer that's an example of the
19 process we would follow to insure that that issue is
20 addressed.
21 MEMBER ARMIJO: Extending from that now,
22 do a power uprate on that, a large power uprate on
23 that, you know, the predictability of what happens
24 with the next step, I don't know if we addressed that.
25 MR. DAPAS: The licensee would have

1 responsibility for evaluating that and then we would
2 have a responsibility to look at the licensee's
3 evaluation and insure it's sufficiently bounding. And
4 if there's contractor expertise that we need to invoke
5 in order to insure we have looked at it with
6 sufficient technical veracity, that's what we would
7 do.
8 SUBCOMMITTEE CHAIR SIEBER: Do you have
9 technical specifications that determine -- that tell
10 you the rods must operate and they have to do so fast
11 and there are surveillances conducted where the
12 licensee has to demonstrate that and if he fails to
13 demonstrate it, they're inoperable. And it's not the
14 ROP that's doing that, it's the tech specs that are
15 doing it. And once you get a limiting condition and
16 LCO of operation, you've -- in those cases, you shut
17 down and you don't run until you fix it.
18 MR. LEW: Unless the mechanism is
19 understood and the problem is fixed, why do you uprate
20 the power?
21 MR. BURRITT: You know, I think we should
22 let Alan talk to this because we have lived through
23 this. Okay, Alan.
24 MR. BLAMEY: I guess I'll start out,
25 there's really three competing mechanisms that are

1 actually seeing creating this interference. There's
2 a typical channel bow, which has been in the industry
3 for years, and when you look at that, you're going to
4 have, because of the fluids across the fuel assembly,
5 you're going to have the channel bow. The other one
6 that they're seeing, they're seeing shadow corrosion
7 as well. Now, shadow corrosion is a product of having
8 the control blade near the channel itself with the two
9 dissimilar metals, and as you do that, that's when you
10 reduce the gap between the control blade as well as
11 the fuel channel.
12 And then finally, the last one is the
13 bulge in the fuel assembly and that's really due to
14 the differential pressure between the inside of the
15 fuel assembly and the outside of the fuel assembly.
16 Now, in the particular case, I'm not sure how the
17 other plants in the Midwest work, but in the
18 particular case that I'm familiar with, one of the
19 issues that they had at this facility, number one,
20 when they went through and designed the core, the core
21 design there removed some of the gadolinium, so
22 typically for higher burn-up cores, if you don't put
23 the gadolinium in, that means you're going to have
24 more rod density through the life of that particular
25 cycle. The more rod you have the more shadow

1 corrosion that you're going to have to deal with. So
2 from that perspective, that's one of the issues that
3 they've reconstituted now and they're going back to
4 the normal GAD loading.
5 So for the two-year cycle their rod
6 density should be less. They should reduce part of
7 that component. The second thing that they've done,
8 they've gone back and they've looked at using and they
9 currently are using 100 mil channels versus 80 mil
10 channels. With the 100 mill channels there's more
11 rigidity there. So from the perspective of the
12 channel bulge, there's less channel bulge. From the
13 perspective of the shadow corrosion, they believe
14 right now with some of the data that they have that
15 they also include the shadow corrosion aspect. And
16 that deals with the hydrogen pick-up and the
17 deformation that you can get from hydrogen pick-up.
18 MEMBER ARMIJO: More dilution, less
19 hydrogen and less bulge.
20 MR. BLAMEY: Yes, so from that
21 perspective, they're working through those issues.
22 Regardless of the conclusion they come to, they have
23 to make sure that they continue to meet tech specs.
24 When this first occurred a couple years ago, I believe
25 the positive impact that the NRC had while we observed

1 this, we monitored this. We also pushed the licensee.
2 One of the issues we had was when they do a
3 surveillance they weren't always forward looking,
4 taking the data that they had an projecting to the net
5 time the surveillance was run, will those control rods
6 still be operable or will they not be operable at that
7 point?
8 And I think one of the items that the NRC
9 had, the positive influence that the inspectors
10 working with the headquarter specialist as well as the
11 DRS people, we were able to have them change their
12 philosophy and for the control rods were getting close
13 to the limits that they have, they would project out
14 whether they would actually be able to still be
15 operable by the time the next surveillance came
16 around. So from that perspective, I think we had a
17 very positive influence on the way that they monitored
18 them.
19 SUBCOMMITTEE CHAIR SIEBER: But it's the
20 surveillance testing for specific tech specs and the
21 running condition of operation which is the regulatory
22 instrument that controls this process, what the fuel
23 vendor and the licensees do to eliminate the problem
24 is up to them. Now, the only thing they have to do is
25 meet the tech specs and if you don't meet them,

1 there's a price to pay, you don't run the plant.

2 MR. COOK: And I'd add to that, that the

3 other piece of leverage we have is Appendix B, the

4 corrective action program.

5 SUBCOMMITTEE CHAIR SIEBER: Yeah.

6 MR. COOK: What are we doing to fix this

7 thing? Is it going to be effective?

8 SUBCOMMITTEE CHAIR SIEBER: Yeah, well,

9 that's a question you ask after they are inoperable.

10 MR. COOK: But do you feel they now have

11 a model that's adequate to predict how many blades

12 will stick in the next cycle under current power

13 limits as well as extended power operate conditions.

14 I just think that -- I'm just trying to understand how

15 you can reach the conclusion that --

16 SUBCOMMITTEE CHAIR SIEBER: I think they

17 use a --

18 MR. BLAMEY: I believe that the answer to

19 that currently is, yes, and the reason I say that is

20 not because of the uncertainty because there is a lot

21 of uncertainty that goes with this, not because they

22 shrunk the uncertainty but because they increased the

23 population of the susceptible control rods that

24 they've been testing on. And because they've

25 increased that population, when this first occurred,

1 probably a year or two ago, there were a lot of rods
2 that they found that were slow and when they found
3 that they were slow, they weren't predicting that they
4 were slow. Today with testing -- with the testing
5 they're doing, they aren't finding control rods that
6 are slow outside of the susceptible population but you
7 have to understand the way they address that problem
8 was increasing the susceptible population with the
9 best data they had rather than trying to reduce the
10 uncertainties that are associated with that.
11 CHAIR WALLIS: So they can predict when --
12 how long they can operate before they stop meeting
13 tech specs? Can they do that now?
14 MR. BLAMEY: Yes, yeah, that --
15 MEMBER ARMIJO: I think sort of, it's
16 closer than that.
17 MR. BLAMEY: You have to be careful,
18 because when you look at this, there's a lot of
19 uncertainty involved when you first start to see a
20 control rod exhibit the slow to settle condition and
21 that's why they've increased the population, the
22 susceptible population. But once a control rod
23 exhibits this, it's fairly predictable as to how long
24 it remain operable.
25 CHAIR WALLIS: Can you predict how slow it

1 is? I presume they get slower as it gets worse till
2 eventually, it doesn't move at all.
3 MR. BLAMEY: Well, yes, I can actually
4 tell -- the way you can predict that is through scram
5 timing, okay. They have some other methods that they
6 use to go through and take a look to see what the
7 frictional forces are. You're also concerned with
8 bundle lift as well, depending upon the uplift that
9 you would have with the fuel assembly. And there's
10 criteria they look at for that as well.
11 MR. DAPAS: But from a process standpoint
12 here, the kind of questions you're asking are
13 questions that our technical staff should be engaging
14 the licensee to insure the licensee is sufficiently
15 bounded the condition that's been identified to insure
16 that they can continue to operate the plant safely.
17 And he has to question regarding extended power
18 uprate. We would expect the licensee to address that
19 and then our technical staff at NRR would evaluate the
20 licensee's analysis of that in the context of extended
21 power uprate. It wouldn't be something that Region 1
22 staff would evaluate whether that is acceptable for
23 extended power operation. That would be the
24 responsibility of the program office, where they have
25 the technical expertise and can evaluate those

1 conditions in the context of the extended power uprate
2 criteria. I would offer that's the process that we
3 would follow.
4 Alan is providing you with an explanation
5 why we have confidence right now in terms of the
6 licensee's operability evaluation but when you start
7 to get into extended power uprate and those type of
8 extrapolation questions, then, you know, those are
9 appropriate technical questions to put on the
10 licensee's plate.
11 MR. BLOUGH: And I would think that part
12 of those questions would be to look at the tech specs
13 in terms of the population that has to be tested and
14 the frequency of the testing and such, you know,
15 verify whether that's okay as is and the extended
16 power --
17 SUBCOMMITTEE CHAIR SIEBER: Especially the
18 thought prediction, basically the same as a fact
19 prediction. You make measurements and you draw a line
20 and you say, can I make it till the next time I do the
21 measurement.
22 MR. DAPAS: There's different pools we
23 could use. Let's just assume for the sake of
24 discussion that we have a concern in this area and the
25 licensee does an evaluation and we don't think it's

1 sufficiently adequate. I mean, ultimately you could
2 issue a demand for information and provide us
3 information as to why there is not substantive safety
4 concerns. So there's different tools that we can
5 engage in to insure that we have confidence that there
6 is not a safety issue for continued operation.
7 MR. BURRITT: If I could offer one other
8 perspective, we're talking about ROP framework being
9 solid. I think this is a good example where our ROP
10 framework, particularly our operability procedure, our
11 testing procedure, status procedure, a lot of us, all
12 the tools that we needed to engage a licensee and
13 insure the plant was operating safety. So I think
14 it's a good example.
15 MEMBER ARMIJO: That's why I wanted to get
16 the discussion going to understand how it was treated.
17 SUBCOMMITTEE CHAIR SIEBER: It's not the
18 ROP that does that. It's tech specs. You know,
19 before the ROP, this forum, you approached these kinds
20 of issues the same way then as you are today.
21 MR. DAPAS: Absolutely, absolutely.
22 SUBCOMMITTEE CHAIR SIEBER: And so there's
23 nothing new. I think it's important to step into the
24 mind of a licensee and the licensee is out there to
25 destroy his turbine with pieces of moisture separator

1 trying to go through it or slugs of water. I mean,
2 the licensee wants to protect the plant and the
3 licensee will do a lot of things that aren't, you
4 know, risk based to make the plant run better, more
5 efficiently, safer from an industrial standpoint and
6 be efficient. And so the agency concentrates on those
7 things that are safety significant and I do have a few
8 questions to ask about that.
9 CHAIR WALLIS: And while you were saying
10 that, I was thinking this is fine. We're looking at
11 the ROP, though, you want to be sure the ROP with its
12 focus doesn't distract the licensee from doing these
13 things that you've been saying he does so well.
14 SUBCOMMITTEE CHAIR SIEBER: I don't say he
15 does them well, I'm saying --
16 MR. BURRITT: He eventually will do them.
17 VICE CHAIR SHACK: He has different
18 incentives.
19 CHAIR WALLIS: -- before the ROP and so
20 on.
21 SUBCOMMITTEE CHAIR SIEBER: Yeah.
22 CHAIR WALLIS: The ROP comes in and does
23 some good things. By focusing on these things, does
24 it take away some of the traditional focus on other
25 things which are also important.

1 SUBCOMMITTEE CHAIR SIEBER: Well, the way
2 I look at it, on a -- and you can say yes or no, but
3 if you're the manager of the plant and you have a
4 certain basket full of regulatory kinds of things to
5 do, and your vision of the work that's out there is a
6 lot bigger than the regulatory basket, you run out and
7 get the resources to do it all, to make the plant run
8 as reliably as you can without destroying itself and
9 without, you know, running afoul of the regulations or
10 jeopardizing the safety of your workers or the public.
11 And if you can't do that at a reasonable cost, you go
12 to your board and say, "I don't think we ought to run
13 this plant". I mean, that's basically the way it is.
14 MEMBER MAYNARD: I think the ROP program
15 brings a lot of things to -- a lot more consistent
16 priorities between the licensee and the regulator. I
17 think the things that the ROP get into are also the
18 things that the licensee needs to and would be getting
19 into. So I don't think it distracts from those
20 important things. And the licensee has different
21 motivations in some of those areas where you get
22 outside of the risk or safety significant, you know,
23 you get into the economics. If the plant's not
24 running properly, shut down to fix the dryers or if
25 they've got parts falling off, there's an economic

1 incentive to fix those things and make them work well,
2 too.
3 But I think the new ROP process probably
4 aligns the priorities better than what the old
5 mechanism did.
6 SUBCOMMITTEE CHAIR SIEBER: I agree with
7 that.
8 VICE CHAIR SHACK: I notice here you have
9 a blurb about safety culture. Have you actually had
10 a chance to run through the new safety culture
11 inspection procedures yet? Is that something that
12 you've done already or this is kind of something that
13 you think will happen now that you have new
14 procedures?
15 MR. BURRITT: We are using -- the
16 documentation for our second quarter occurs at the end
17 of the second quarter, so after the new process has
18 been rolled out. So it's a tool for the inspectors to
19 use. We've -- OA's when we identify cross-cutting
20 aspects, we've done that for a long time. We now have
21 revised cross-cutting aspects at a line with the
22 safety culture elements for lack of a better word.
23 Inspectors are beginning to use those, even though
24 they're not required to be used at this point.
25 MR. DAPAS: For the program I thought July

1st.

SUBCOMMITTEE CHAIR SIEBER: Correct.

MR. DAPAS: We have received training on those inspection procedures, and the inspectors should be implementing those now and identifying whether they're a safety culture, cross-cutting aspects, findings with those that the process is being implemented. What we agreed to as part of the transition, is that we wouldn't go back and look at, okay, there's been a substantive cross-cutting issue that would X for three consecutive assessment cycles, so now, go conduct a safety culture assessment, Mr. Licensee. We agreed that we would start July 1st and then subsequent to that, at three cycles later, there's a subsequent cross-cutting issue, you have the option so there's a transition period there, but correct me if I'm wrong, Brian, but I think we, as of July 1st, have implemented those new procedures.

MR. HOLIAN: Yes. Brian Holian, DRP and the only thing I was going to add to that, that is correct, is ACRS might see some correspondence here in this -- these coming few months from interested stakeholders on that transition period as we call it, as we go into it, why, NRC, aren't you looking back and there were some reasons for that.

1 For example, Indian Point had a PI&R
2 cross-cutting issue for six or seven assessment
3 periods. It closed a couple of assessment periods ago
4 but it had a longstanding one. And so the stakeholder
5 and I think Dave Locbaum raise this in a public
6 meeting during this transition was, NRC, are you going
7 to go and look back and maybe have them do on.
8 NRC thinks, you know, we know enough at
9 this time and we could always use a deviation memo
10 through our assessment process, to require that,
11 should we think that was there, but that will be an
12 item you might see correspondence on.
13 MR. BURRITT: I guess what I was talking
14 about was kind of the microscopic pieces or tools.
15 That's the macroscopic assessment tools. I'm talking
16 about inspectors are beginning to use the new cross-
17 cutting aspects, to use those to inform their
18 inspections, gather the information that's key, and
19 beginning to document it. That's the point I was
20 making.
21 AUDIENCE MEMBER: 95.003, is that also
22 being now implemented?
23 MR. DAPAS: 95.003, thanks for asking
24 that, there is a yellow binding, I think. You meet
25 the criteria for conducting a 95.003, you would follow

1 the new process and you ask the licensee to conduct a
2 safety culture evaluation and then we assess that
3 evaluation after. So in that context, yes, the new
4 process, the 95.002 and 03 would exercise the safety
5 culture review option that's built into the procedure.
6 In fact, I don't know if that's been issued. That was
7 the last set.
8 MR. BLOUGH: It's out for comment now.
9 95.003 changes to conform with safety culture or
10 actually we have it for comment sometime in the next
11 20 days or something like.
12 MR. DAPAS: But that's where we're going
13 clearly.
14 MEMBER MAYNARD: What kind of process do
15 you go through for closing out some of the cross-
16 cutting issues? Is that something that stays open for
17 a long time? I'm kind of interested in the process,
18 how defined it is and how you close out an issue.
19 MR. BURRITT: Our process is, you know,
20 you have to have more than three findings, so four or
21 more. You have to have a common, cross-cutting aspect
22 and the NRC has to have concern with the licensee's
23 ability to address or resolve those issues. And when
24 you no longer meet any of those components, then we
25 would close out the cross-cutting aspect. That's the

1 simple answer.

2 MR. DAPAS: Let me just add to that. We

3 have a mid-cycle and a new cycle assessment. The mid-

4 cycle we'll be conducting, we're going to do that one

5 next week, Brian? In two weeks, excuse me, thanks.

6 We look at that criteria. Each branch, when they

7 present their assessment of performance of each

8 facility, we look at the criteria met, number of

9 findings, a common theme and then as Art mentioned the

10 last criteria is do we have confidence in the

11 licensee's understanding of the scope and is there

12 sufficient progress being made.

13 You have to meet all three of those

14 criteria in order for us to conclude it's a

15 substantive cross-cutting issue. So each assessment

16 cycle we evaluate that. And the findings that you're

17 looking at are over the last 12 months. So a mid-

18 cycle is not just the last six months, it's the last

19 12 months and then when you do the end of cycle, so

20 there is a period there where, you know, when you do

21 the end of cycle, you've already looked at the first

22 six months, and you're looking at the second six

23 months as part of that 12-year look, I mean, 12-month

24 look. So we assess it each time.

25 Now, in the case of the SCWE cross-cutting

1 issue at Salem and Hope Creek, we have defined a
2 specific criteria that needs to be met and that is
3 that the licensee concludes that there is substantive
4 sustainable improvement and our independent assessment
5 validates or is in agreement with that licensee
6 conclusion once the licensee makes that. If I recall
7 correctly that's spelled out in a deviation memo, but
8 that's just the unique case where the SCWE cross-
9 cutting issue that we defined a criteria that had to
10 be met.
11 MR. LEW: I just want to add, this
12 assessment decision is made by a lot of the people.
13 The inspector is involved and first line supervisors,
14 the management team here in the region. The other
15 offices are all tied in as well, including the
16 headquarters office, OEE, so this is a collective
17 agency decision. It's not made in isolation.
18 MEMBER MAYNARD: A comment, it's still
19 quite subjective and it's probably one of the most
20 difficult for the licensee than the other
21 stakeholders, too, if I understand exactly what
22 criteria that -- what they're going to have to do to
23 get out of the great cornerstone area because it still
24 relies back on judgment on the part of the NRC's
25 senior staff and a lot of people to come to that

1 conclusion. And I'm not sure that there's a
2 tremendously better way but it is still fairly
3 subjective and not as visible to others as to what it
4 takes to get out of it.
5 MR. LEW: Just a clarification, just the
6 columns that they're in the action matrix is different
7 than the decision on whether they're the subject of
8 cross-cutting grade. And there are defined criteria
9 for how long a particular finding is inputted into the
10 assessment, that's well-defined. I will say that
11 there is still some subjectivity associated with this
12 but there is also some objectivity towards the
13 process. With the number of findings that are
14 actually inputted, the aspects or the theme that has
15 to be defined, those criteria are somewhat objective,
16 more objective.
17 MEMBER MAYNARD: And I agree that there
18 are some objective criteria. I don't mean that it's
19 all subjective but you still have the one override
20 criteria and the NRC's confidence and their ability.
21 MR. LEW: That's correct.
22 MR. BLOUGH: And I believe they all seem
23 to be regulatory judgments. To the extent, you accept
24 that, you'll always need to like weigh things and
25 achieve regulatory judgment, then there's going to be

1 some unpredictability where there are people from
2 outside the NRC might be weighing the same things on
3 their own and say the NRC is going to do this, and we
4 do something different. So I think that's part of it.
5 And we actually -- you have to look at all those areas
6 and see if we can make it more predictable. You know,
7 some of them, you know, ESEP is one the areas you
8 asked about. But it's an area where we have to try to
9 make it a bit more predictable by focusing on the
10 areas where we don't really have tools for the
11 external events, you know, shut-down events, shut-down
12 issues are difficult to do.
13 Some of the non-reactor safety the fleet
14 of STPs in the emergency preparedness area and health
15 physics area, industry says they're not properly
16 balanced with reactor safety ones and you know, to
17 some extent we're disagreeing on that and we're
18 thinking -- you know, we're thinking we'd like some of
19 them the way they are, others we're looking at. And
20 so but I guess my key point is, you try to look at the
21 areas where regulatory judgments have to be made and
22 where there's some unpredictable and you're looking to
23 see if you can narrow it down on those some but I
24 would still say that there will always be a need for
25 regulatory judgments.

1 MEMBER MAYNARD: And I would agree with
2 that, that there will always be a need for some. I
3 think part if it is you periodically step back, take
4 a look and see are you being consistent, are you
5 handling the various licensees consistently and
6 everything but I don't think -- I think it would be
7 the wrong thing to do would be to totally remove
8 regulatory judgment.
9 MR. DAPAS: And I think we do that with
10 annual assessment in the reactor oversight process.
11 You had asked that question earlier and as I recall
12 frankly, regarding we get feedback relative to
13 comparison of the old program where you use the
14 systematic assessment of licensee performance ourself
15 and the new program.
16 MEMBER MAYNARD: I think that was Jim.
17 MR. DAPAS: I'm sorry, yes, it was Jim.
18 My apologies, but you know, as part of this survey of
19 external stakeholders, you know, they provide input.
20 They gauge -- we ask a specific question, do you
21 consider the ROP to be scrutable, and there's feedback
22 that we get and one of the areas that we're addressing
23 is STP time limits which is a particular criticism
24 that we've received as a result of that survey and
25 then each year there's an assessment report that's

1 generated and then a briefing of the Commission
2 communicating the results of that annual self-
3 assessment that's in the vein of continuous
4 improvement and then there's action plans that are
5 developed to address the areas where we determined
6 there needs to be some additional enhancement. So
7 that's a forum to get that feedback and evaluate to
8 what degree are we satisfying the criteria.
9 There's specific criteria that are
10 identified that represent success and we gauge
11 ourselves against that.
12 VICE CHAIR SHACK: Since you brought it
13 up, are your SDP response times 1n providing --
14 MR. DAPAS: Our SDP response time in
15 Region 1 is very good.
16 MR. COOK: It's always been good.
17 (Laughter)
18 MR. DAPAS: But I did want to mention,
19 there had been an initiative, a benchmarking
20 initiative to look at as we need timeliness across all
21 the regions, individual -- Dwight Chamberlain, who is
22 the Division Director of the Division of Reactor
23 Projects in Region 4 led that effort. Just completed
24 that. He's preparing the final report with
25 recommendations as the best practices that can be

1 adopted to insure timeliness. But an example of that
2 was he came out an interviewed our folks here, the
3 Senior Reactor Analysts, the staff, to understand how
4 we implement the process and why we have been so
5 successful in reaching that 90-day goal.
6 But I think that's a good example of
7 leveraging lessons learned and improving in efforts to
8 address that specific issue, timeliness where we've
9 gotten feedback externally where the industry has said
10 it takes the NRC too long to reach a final
11 significance determination.
12 MR. BURRITT: If I can go back and make
13 one more point on the criteria for substantive cross-
14 cutting issues, we talk about our program being a
15 living, evolving program. The agency has concern and
16 would like to see scope of effort. That's been -- in
17 the most recent revision of our assessment document,
18 that's been further defined. I believe we've actually
19 got four sub-bullets which we've added to give
20 ourselves a better framework to make these what will
21 always be subjective decisions. So I wanted to call
22 your attention to that.
23 SUBCOMMITTEE CHAIR SIEBER: I'd like to go
24 back to the SDP process. To what do you attribute
25 your great success?

1 MR. DAPAS: I can try that. I'll give you
2 the long-winded answer, but I'll let Bill give you the
3 succinct answer.
4 SUBCOMMITTEE CHAIR SIEBER: Were they
5 easy?
6 MR. COOK: No, I think there's a fairly
7 simple reason for it. First off, Chris and I are
8 fairly newly qualified, but the SRAs, the third one in
9 the region right now, Wayne Schmidt has been qualified
10 for three or four years and prior to that Jim Trapp
11 and Tom Shedlosky and Jim Coby and I think the success
12 that we can attribute to timeliness is that they've
13 always been very approachable. They've made
14 themselves available early on in the inspection
15 process to engage the inspectors to understand what
16 the finding is to start early on assessing the risk
17 significance of those findings so that when the report
18 is issued, we're basically done or close to being done
19 with the risk assessment and we can meet all those
20 timeliness goals.
21 MR. CAHILL: So we're only dealing with
22 the licensee too, to understand how their plant is
23 modeled, to do logic checks between our two models so
24 that we can iron out any -- not that we come to an
25 agreement but we understand the logic of the models

1 and we're in agreement with what the models are
2 producing and then we can argue about the assumptions
3 and the finding later.
4 SUBCOMMITTEE CHAIR SIEBER: That was my
5 next question. How many contests to you get into with
6 licensees? What are the issues? What are the
7 outcomes? That's one of the controllers of the time.
8 MR. DAPAS: You're absolutely right and I
9 would offer it as something we're looking across all
10 the regions. There comes a point where we say we
11 understand the point you've offered, Mr. Licensee and
12 we understand your view on the assumptions that we're
13 using. Here is our assessment, here is our
14 preliminary assessment of the safety significance
15 getting into the next step of the process. Where it
16 can be difficult is the back and forth, I need
17 additional information, the licensee provides, the
18 challenges, that assumptions, and the key is, we need
19 to look at the information the licensee provides and
20 insure is our model sufficiently comprehensive because
21 the licensees typically have more refined models and
22 we need to understand, do their assumptions made
23 sense. But there is a point there where you have to
24 decide, here's is our assessment. We have an adequate
25 basis for that and then you get into the next step of

1 the process.

2 SUBCOMMITTEE CHAIR SIEBER: Does the

3 approaching deadline help you decide when that point

4 is?

5 MR. DAPAS: But I think -- well, yeah, but

6 the key is early engagement here, I would offer so

7 that --

8 SUBCOMMITTEE CHAIR SIEBER: What can you

9 do in the cases where the SPAR models do not model the

10 plant condition, like shut-down or the event like an

11 external? How do you deal with that because you don't

12 have any really sophisticated mechanism to deal with

13 these kinds of events?

14 MR. CAHILL: Right, at shut-down, we do

15 have an SDP module for shut-down risk. We also have

16 good support from headquarters for addressing some of

17 the nuances. A lot of times the shut-down issues

18 really revolve around operator actions and HRA

19 analysis. So sometimes we'll get support on those.

20 Those tend to drive the issues.

21 SUBCOMMITTEE CHAIR SIEBER: And they're

22 usually pretty simple events.

23 MR. CAHILL: Many times.

24 SUBCOMMITTEE CHAIR SIEBER: Once you

25 understand them.

1 CHAIR WALLIS: You do HRA based on some
2 EPRI model or something? What do you do?
3 MR. COOK: We use the SPAR H on that.
4 CHAIR WALLIS: SPAR H, is that
5 satisfactory?
6 MR. COOK: We think it's good.
7 CHAIR WALLIS: Too bad George isn't here.
8 SUBCOMMITTEE CHAIR SIEBER: I was just
9 thinking the opposite.
10 MR. COOK: Well, at least it's a
11 consistent methodology that we use for all the
12 facilities, so whether you like it or whether you
13 don't, at least it's consistent --
14 MR. DAPAS: Right now, they can come back
15 with a different human error probability basis and we
16 would have to look at that and decide have they
17 appropriately justified the use of the HEP number.
18 MR. LEW: I think also the outcome of the
19 results here is a determination of where we pull out
20 resources. So that's a different level of assuring
21 that there is a licensing amendment, or, you know,
22 there is a safety impact, there is a resource
23 determination. I was going to say the short answer to
24 why we do the SDP, I think, is we have just great
25 SRAs.

1 VICE CHAIR SHACK: They won't disagree.
2 I was just curious. I was just reading this
3 inspection thing for the component design basis
4 inspection. While it doesn't answer our philosophical
5 problems with margin, it looks like an interesting
6 inspection procedure. How long has it been in -- you
7 know, is it new? That doesn't register with anything
8 I've heard with the ROP before.
9 MR. PINDALE: It is new. I'm not sure
10 exactly the date of the -- when it was originated, but
11 our first inspection in the region under the current
12 procedure was early this year, January this year.
13 That was the one that we did at Salem. And it was
14 piloted over several plants. I believe there was one
15 in each region, before this year. So it's a
16 relatively new procedure.
17 VICE CHAIR SHACK: Now, is it coming out
18 of somebody's hide or do you have more inspection
19 hours?
20 MR. COOK: It's being performed in lieu of
21 the safety system functional inspections.
22 VICE CHAIR SHACK: Ah. So you know have
23 a new performance indicator.
24 MR. PINDALE: Well, it's a different
25 design inspection.

1 VICE CHAIR SHACK: Design inspection.

2 MR. LEW: I look at it more as an

3 evolution of engineering specialists.

4 MR. DAPAS: If I could just -- I have to

5 go attend a conference call with Bill Kane, but I want

6 to take the opportunity to thank the members of the

7 ACRS for coming out to the region. Sam asked me to

8 convey his appreciation as well. He's traveling right

9 now to support a Dominion status of the fleet and

10 he'll appreciate your coming out here and engaging us.

11 Both Sam and I feel it's a great opportunity for the

12 staff to communicate to you the different program

13 elements and their involvement and degree of ownership

14 and offer their insights and perspectives and

15 certainly to hear form you your views on the different

16 issues that we deal with.

17 So I thought it was a very productive

18 discussion and we do appreciate the time. So on

19 behalf of Sam and myself, thank you and I'll be

20 joining you tomorrow on our way to Limerick, so I'll

21 get a chance to talk to you more. We can engage in

22 some of these discussions on uncertainty with CDVI and

23 talk about risk as much as you'd like. I used to be

24 a Senior Reactor Analyst so that's an area that's near

25 and dear to my heart, not quite at the same level as

1 Dr. Apostolakis, but I'm certainly willing to discuss
2 that. Again, thank you and I hope this was productive
3 for --
4 VICE CHAIR SHACK: The bus ride isn't long
5 enough.
6 (Laugher)
7 SUBCOMMITTEE CHAIR SIEBER: I guess, on
8 behalf of the ACRS, we owe you a debt of gratitude
9 also for your participation and the honest interchange
10 of ideas and the insights that you've given us and to
11 me, I look forward to these visits and I've learned a
12 lot and I think it adds to our perspective and it's
13 valuable. So thank you very much.
14 MR. DAPAS: Thank you.
15 VICE CHAIR SHACK: I think we got
16 distracted before. You were asked the question about
17 what enhancements you thought were necessary and I
18 don't know that we really got into that very much.
19 What enhancements would you like to see to the ROP at
20 this point, more hours, different procedures, areas
21 that you think should be inspected aren't.
22 MR. CAHILL: Well, one of the areas I
23 think we need enhancement on and we had a good start
24 with the pilot or the initiation of some external
25 event notebooks is the further development of an

1 external tool and there is some effort down at
2 headquarters of what that's going to be, developed
3 whether it's developed through SMAR or through an
4 external event notebook but that would give us a
5 better or a more independent assessment for findings
6 in the external event arena instead of just relying on
7 the IEEE which is on older document, typically not a
8 living document, and give us some independent
9 assessment of what the licensee evaluates with that.
10 So that's one area that would be beneficial.
11 And there's been some work in there and
12 it's just a matter -- it's one of those which way are
13 we going to go now kind of questions and --
14 VICE CHAIR SHACK: Now, is SPAR an
15 external event in this context?
16 MR. CAHILL: No, well, SPAR is handled two
17 ways. One, we have our Appendix F, which I think has
18 been -- Appendix F to the SDP has been very valuable
19 to us. Some people -- it's long and you have to
20 exercise it a few times, become familiar with it, but
21 it's -- once you do that, you have to understand what
22 it is you're trying to do, develop a flyer, develop
23 targets, and look for flyer propagation, and my shut-
24 down methodologies. And you exercise a few times so
25 that when you walk into a room you know what you're

1 looking for instead of having to go back to the
2 document, you're much better off.
3 So we have fire protection findings
4 handled through Appendix F where a finding -- a
5 performance deficiency finding external events and the
6 notebooks that we developed is also evaluated. It's
7 not looking at flyers. It's looking at flyers, but
8 it's -- really, they've taken a component saying what
9 is its impact in a flyer, instead of looking at a
10 flyer scenario development. So it's handled a little
11 bit differently but we have come a long way with
12 flyers. Some of the plants moved to NFTA, Beaver
13 Valley, Ginna, Nine-Mile and Calvert Place, I believe
14 Constellation and so we're expecting to see some
15 improvement there as they transition to 805.
16 VICE CHAIR SHACK: Will you need new tools
17 when they transition to 805?
18 MR. CAHILL: We're going to need more --
19 we're developing the tools to be able to set the 805,
20 so, John Rogge's branch who also has equipment
21 liability, they're engaged with the 05 transition now,
22 and they will be involved in the risk assessment
23 aspect of that.
24 R. LEW: Maybe I should give you a little
25 bit of my perspective. I think you're asking what

1 enhancements can happen. It's not the overflowing
2 response here and it's not because we are not thinking
3 to continuous improvement but we are very much
4 continually providing feedback to the program office.
5 They are making adjustments. They call us every week,
6 bi-weekly on ROP. There are a number of activities
7 we're engaged, budget, program development feedback.
8 And there's a lot of changes that have happened as a
9 result of that feedback and you know, as we start
10 implementing some of these new changes, when we
11 implement safety culture. So it's an ongoing I guess
12 activity and I asked the -- one of my staff and said,
13 "Hey, get me a list of the feedback forms that Region
14 1 generates since 2004". There's just a lot of
15 feedback that we provide to the program office. They
16 do listen. We are partners with them as we make
17 changes.
18 They get our concurrence and they want to
19 make sure because we have the field experience and you
20 know, we inform their decision making process as well.
21 MR. CAHILL: And we've also just
22 implemented the MSPI which we'll start exercising that
23 and I'm sure we'll develop -- there will be some
24 development of feedback from that once we exercise
25 that.

1 MR. LEW: MSPI is a change, the CBBI is a
2 big change, safety culture is a big change, all
3 changes as we're enhancing the current Reactor
4 Oversight Process. And that's why we're trying to
5 say, hey, this is a living process. We are engaging
6 and we have a voice in the changes that are made.
7 MR. COOK: I can't remember which one of
8 you gentlemen asked the question, you know, those of
9 us who have lived through the old process and are now
10 under the new ROP which do we like better? I'm
11 committed to the new process. I think it's a vast
12 improvement over the old inspection program and self
13 process, probably because I hope to claim that I had
14 the same approach from day one. And that is, you look
15 at the more risk significant, the more safety
16 significant issues and it was very easily under the
17 old program to go off on a tangent and waste a lot of
18 valuable inspection hours and resources as well as
19 licensee resources on things that weren't really very
20 important but were something that the inspector really
21 felt was necessary to pursue. So I think the --
22 SUBCOMMITTEE CHAIR SIEBER: That as one of
23 the things that killed the old self process because
24 there was a belief that if a licensee wasn't
25 performing well, whether you could prove it or not, if

1 you can find enough violations, stack them up. That,
2 in itself, even though they may not be safety
3 significant, that in itself would prove your case.
4 And it turned out that in some cases that was, in
5 other cases it didn't.
6 The process was change. We were not
7 longer faced with that. And so from that standpoint,
8 it's a good thing.
9 MR. BLOUGH: All right, asking what areas
10 we need to look at or need to adjust in the program
11 beyond what's been mentioned here, the MSPI is coming
12 but we need to look at the PI's as a whole because the
13 original thought is that you would get a lot of
14 assessment information from inspection that you get a
15 substantial amount from TI's and so I think that
16 always you get most of your insight for the assessment
17 from inspection but not that the balance would be this
18 much from inspection and this much from TI's which is
19 really what we're getting now. You know, the PI's are
20 pretty much all green but TI's are involved in the
21 program whereas, you know, if we decide there's a
22 better way to inspect, we, you know, we have complete
23 freedom, obviously to do that on our own but it's an
24 easier process to change the inspection than to change
25 the TI's so that's an area that we have to look at and

1 with the CDBI, CDBI is -- back to inspection, CDBI is
2 a new program, so we've got to be right on top of
3 that, how it's going. And I know industry feels that
4 CDBI is a big impact on them.
5 And we believe that, yes, it is but it's
6 worth it. Someone asked, you know, are you sure that
7 you're not distracting the licensee from more
8 important work? I mean, that's a question that would
9 be relevant to that. So we have to work through that.
10 We also have to work through, you know, what's the
11 second rung of CDBI's look like and will there be any
12 changes for that and, you know, if you deliberately go
13 through this methodology, you know, after you've been
14 through it three or four times, will there e some
15 decreasing returns you're getting from doing that.
16 But that's all future questions. But similarly we
17 have to kind of look at everything every now and then
18 and go back and look at what ways are we looking at
19 radiation protection, what's our way of looking at
20 emergency preparedness, what's our way of looking at
21 the various things that resident inspectors look at
22 and is there a better way to do it or even is it
23 worthwhile just to change it up to freshen it up a
24 bit, you know, make some changes, just so we don't
25 become stale. So I think we need to do all those

1 things.

2 MEMBER MAYNARD: Well, back to the

3 performance indicators, is there really anything wrong

4 with them being so many green? In fact, from a

5 regulatory standpoint, I would think that you would

6 want to see most of the performance indicators green

7 and not go to a process to where you have a lot more

8 yellow or red.

9 MR. BLOUGH: I think from a regulatory

10 standpoint, green is not bad.

11 VICE CHAIR SHACK: Well, I think there was

12 some expectation there were doing to be one or two

13 percent that were not and --

14 MR. BLOUGH: And it would help inform what

15 plant schedule a little more regulatory attention and

16 so --

17 VICE CHAIR SHACK: The question is,

18 whether it would be managing the indicators.

19 MR. BLOUGH: Yeah, from an absolute risk

20 standpoint, it's good that most of them are green.

21 From a regulatory standpoint are we missing

22 opportunities where there really should reasonably be

23 some regulatory engagement and there isn't. You know,

24 there is some -- I believe there are several PI's that

25 have never been anything but green anywhere.

1 MR. COOK: My recollection the one that
2 was developed, the PI's were to cover areas there the
3 inspection program didn't. So yeah, I agree with you
4 if it's green that's a good indication that we don't
5 need to look there. So that's a positive aspect of
6 it. On the other hand, we want it to be sensitive
7 enough that it will give you some valuable feedback or
8 identification of an issue if there is one. I think
9 that's where the struggle is. That's the principal
10 driver behind the new MSPI. Mitigating System
11 Performance Indicator is to make those mitigating
12 systems performance indicators more reflective of
13 system unavailability or availability and it's
14 reliability or unreliability.
15 As if, I guess, July 21st there were, I
16 think five or six plants in the US that have white
17 indicators. Will the continue? Will the licensee
18 manage them? Well, it's too early to say. It's a
19 brand new program.
20 MEMBER MAYNARD: I would just caution you.
21 I think the PI's need to be set at the appropriate
22 level to provide adequate safety assurance for the
23 health and safety of the public. If you're going to
24 drive them down too low just so you start getting some
25 that are yellow or other indications, you could be

1 inappropriately driving licensee performance dedicated
2 to areas that may not be safety significant. So I
3 would be careful on what you do with the performance
4 indicators.
5 MR. CAHILL: And they're trying to balance
6 out again, as PI, how much unavailability to take on
7 line to do maintenance during an outage, because, you
8 know, there's different -- there's competing interest
9 there from what IMPO is recommending versus what the
10 MSPI algorithm might be driving as far as an
11 indicator. So industry is wrestling with that as far
12 as managing that, not -- I don't mean managing the PI,
13 but, you know, what information do I have out there,
14 what's the correct way to proceed.
15 MR. BLOUGH: I just have, if you would
16 indulge me, looking ahead to the ROP, this region is
17 going to be the first region where we'll have a
18 substantial growing number of our plants beyond the
19 four-year point, and so Michael Modes talked about the
20 license renewal inspections. We're putting what I
21 call a just in time inspection that looks at the
22 commitments, right around the time of exceeding 40
23 years but really these plants will have a new
24 licensing basis and so, we'll have to look at our
25 inspection procedures and the guidance to see if they

1 need to be changed in any way to reflect inspection of
2 plants that are beyond the 40-year point. And those
3 may or may not be changed, but certainly all the
4 inspectors will need to be trained as well and what is
5 the new licensing basis and what are your new
6 resources and requirements for preparing to and
7 inspecting and evaluating the results of these plants
8 that are beyond 40 years.
9 And we, in Region 1, will be at the
10 forefront of that just because of our plants.
11 SUBCOMMITTEE CHAIR SIEBER: Any other
12 questions? If not, somehow or other we almost made up
13 the time. Again, I'd like to thank Region 1, New
14 Jersey and Pennsylvania for being here and our friends
15 from Great Britain. And I think this has been a very
16 valuable day for us and we appreciate your insights
17 and your work and wish you success in your mission and
18 I hope that we can share insights soon in the future
19 that under circumstances that are not adverse.
20 With that, the meeting is adjourned.
21 (Whereupon, at 4:43 p.m. the above-
22 entitled matter concluded.)
23
24
25

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, Pennsylvania

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.

Doug Turner
Official Reporter
Neal R. Gross & Co., Inc.

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

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

July 26, 2006
-AGENDA-

Time	Topic	Presenter	Time Allotted
8:30 - 8:35 am	Opening Remarks	M. Dapas, RI [ACRS Rep]	5 minutes
8:35 - 9:05	Region I Overview and Challenges	M. Dapas	30 minutes
9:05 - 9:35	External Environment/Stakeholder Communications	B. Holian R. Barkley	30 minutes
9:35 - 10:05	Knowledge Management	M. Gamberoni L. Manning	30 minutes
10:05 - 10:20	BREAK	-	15 minutes
10:20 - 10:50	Operating Experience	K. Diederich	30 minutes
10:50 - 11:20	Grid Reliability	R. Bhatia	30 minutes
11:20 - 11:35	Limerick Activities	J. Trapp C. Bickett	15 minutes
11:35 - 12:35 pm	LUNCH	-	1 hour
12:35 - 1:05	License Renewal Activities in Region I	M. Modes	30 minutes
1:05 - 1:35	Power Uprate Activities in Region I	L. Doerflein	30 minutes
1:35 - 2:05	Safety Culture	A. Burritt	30 minutes
2:05 - 2:20	BREAK	-	15 minutes
2:20 - 4:20	ROP Roundtable Discussion -ROP Overview -Evaluated/Region Identified -Successes/Challenges	D. Lew C. Cahill W. Cook A. Blamey A. Burritt S. Pindale	2 hours
4:20 - 4:30	Closing Remarks	M. Dapas, RI [ACRS Rep]	10 minutes

RI CONTACT: Rich Barkley, rsb1@nrc.gov or (610) 337-5065
ACRS CONTACT: Michael Junge, mxj2@nrc.gov or (301) 415-6855

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS BRIEFING NRC Region I - July 26, 2006

Overview of Region I

Samuel Collins, Regional Administrator
Marc Dapas, Deputy Regional Administrator

Opening Remarks

- Welcome to Region I!
- Introduction of ACRS Members and Staff
- Introductions of Public Meeting Guests / Public Attendee Protocol
- Region I Staff Introductions
- Agenda for Today

Region I Organization

- Color Photo Organization Charts Provided in Your Briefing Package

- Office of the Regional Administrator
- Division of Resource Management
- Division of Nuclear Materials Safety
- Division of Reactor Projects
- Division of Reactor Safety

US NRC

Region I
Office of the Regional
Adminstrator
July 25, 2006

Regional
Administrator
Samuel J. Collins
(SJC1) - 5299

Gina Matakas
(GRM) - 5105

Secretary

Deputy
Regional
Administrator
Marc Dapas
(MLD) - 5340

arjorie McLaughlin
(MMM3) - 5240

State Liaison

Nancy McNamara
(NTM) - 5337

State Liaison

Karl L. Farrar
(KLF) - 5301

Regional Counsel

Diane Screnci
(DPS) - 5330

Sr. Public Affairs
Officer

Neil Sheehan
(NAS) - 5331

Public Affairs Officer

Richard Barkley
(RSB1) - 5065

Technical
Communications
Assistant

Daniel J. Holody
(DJH) - 5312

Team Leader

Richard Urban
(RJU) - 5271

Robert Summers
(RJS) – 5210

John McFadden
(JRM5) - 5257

John R. Wray
(JRW3) - 5268

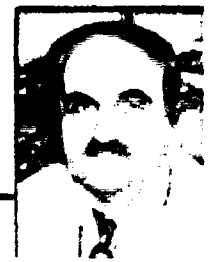
Sharon Johnson
(SLJ) - 5374

US NRC

Region I
Division of Resource Management
July 25, 2006

Division Director
Frank Costello
(FMC) - 5310

Deputy
Division Director
Robert Nelson
(RAN) - 5393



Richard Conte
(RJC) – 5183

DRM Pilot Project Manager

Linda Larche
(LML2) – 5201

Secretary

Judith Royal
(JER5) - 5141

Chief
Human Resources Office

Robert Gross
(RJG) - 5350

Chief
Financial Resources

Louis Manning
(LXM) - 5044

Chief
Information Resources

US NRC

Region I
Division of Nuclear
Materials Safety
Management and Support
July 20, 2006

DNMS FAX	5269
DNMS FAX (ALT)	404-562-4955
MATLS DR FAX	5393
HN FAX	860-267-6234
MY FAX	207-882-7715
MILLSTONE FAX	860-443-5893
DNMS CONF RM	5038

Division Director
George Pangburn
(GCP) - 5281

Acting Deputy
Division Director
Michael Layton
(MCL) - 5283

Pamela Henderson
(PJH1) - 6952

Chief
Medical Branch

James Dwyer
(JPD1) - 5309

Chief
Commercial and R&D Branch

John Kinneman
(JDK) - 5252

Chief
Material Security and Industrial Branch

Marie Miller
(MTM1) - 5205

Chief
Decommissioning Branch

Michael Perkins
(MAP1) - 5398

icensing Assistant

Rebecca Junod
(RLJ) - 5260

Licensing Assistant

Donna Gruber
(DMG1) - 5313

Licensing Assistant

Sheryl Villar
(SOV) - 5239

Licensing Assistant

Constance Yusko
(CMY) - 5274

Divisional Secretary

Trish Haverkamp
(TMH) - 5248

Branch Secretary

Gerry Powell
(GMP) - 5383

Branch Secretary

Sheri Minnick
(SAM9) - 5358

State Agreement Officer

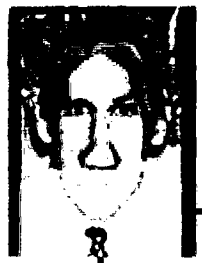
Duncan White
(ADW) - 5042

State Agreement Officer

Click on Branch Chief picture for Branch Staff

US NRC

Region I
Division of Reactor Projects
July 12, 2006



Division Director
Brian E. Holian
(BEH) - 5080

Deputy
Division Director
David Lew
(DCL) - 5229

Riqueza Marziale
(RSM) – 5133
Division Secretary

Kelly Toukatly
(KMT1) – 5133
Branch 1,2,4,5
Secretary

Keith Heater
(KAH) – 5226
Branch 3,6,7
Secretary

Samuel Hansell
(SLH1) – 5233

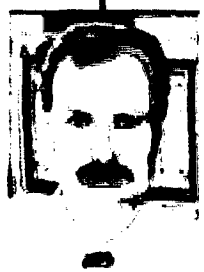
Acting Chief
Branch 1

Eugene Coby
(EWC) – 5171

Chief
Branch 2

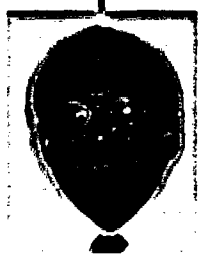
Mel Gray
(MXG3) – 5171

Chief
Branch 3



James Trapp
(JMT1) – 5186

Acting Chief
Branch 4



Raymond Powell
(RJP) – 6967

Chief
Branch 5

Paul Krohn
(PGK1) – 5120

Chief
Branch 6

Ronald Bellamy
(RRB) – 5200

Chief
Branch 7

Click on Branch Chief picture for Branch and Resident Staff

US NRC

Region I
Division of Reactor Safety
Management and Support
July 12, 2006

Division Director
A. Randolph Blough
(ARB) – 5126
Cell - 2188

Deputy Division Director
Marsha K. Gamberoni
(MKG) – 5128
Cell - 2186

Kay Gallagher
(KLG) – 5191
Divisional Secretary

Cheryl Miskey
(CMM) – 5277
Branch Secretary

Donna Sullivan
(DMS8) – 5153
Branch Secretary

Raymond Lorson
(RKL) - 5282
Cell – 7012
Chief
Plant Support
Branch 1

John White
(JRW1) – 5114
Cell -2206
Chief
Plant Support
Branch 2

Don Jackson
(DEJ1)
Acting Chief
Engineering
Branch 1

Larry Doeflein
(LTD) – 5378
Cell - 2207
Chief
Engineering
Branch 2

John Rogge
(JFR) – 5146
Cell – 2282
Chief
Engineering
Branch 3

Marvin Sykes
(MDS1) – 5046
Cell - 2208
Chief
Operations Branch

Bill Cook
(WAC1) – 5074
Cell - 0026
Sr. Reactor Analyst

Chris Cahill
(CGC) – 5108
Cell - 8344
Sr. Reactor Analyst

Wayne Schmidt
(WLS) – 5315
Cell - 2218
Sr. Reactor Analyst

Region I Overview and Challenges

- Historical Perspective
- Licensee Ownership Changes Prompted by Deregulation
- High Level of Interest and Involvement by Stakeholders
- Staffing Dynamics / Current Issues

Historical Perspective

- Early Involvement in Nuclear Power (Indian Point 1, Yankee Rowe, Oyster Creek & Ginna)
- Large number of single unit site with multiple owners ("Yankee" Plants)
- Three Mile Island Accident
- Historical plant performance problems - large number of former "Watch List" plants
- Early movement into Economic Deregulation

Licensee Ownership Changes

- Several Operating Reactors Decommissioned prior to 1999 for Technical/Economic Reasons
  - Yankee Rowe, Haddam Neck, Maine Yankee & Millstone Unit 1
- Reactor Sales/Ownership Transfers prompted by Deregulation
  - TMI Unit 1 - 1st Nuclear Reactor sold in the USA
  - Last transfer was Ginna in 2004
- Pending PSEG/Exelon Merger, Region I will drop from 17 Owner Operators to 7 since 1999
- Transition Issues Noted Following Transfers, but More Consistency in Operations; Benefits of Tapping Fleet Experience & Talents

High Level of Stakeholder Involvement and Interest

- Public Interest and Intervention since 1970s
- TMI Unit 2 Accident - 1979; TMI Cleanup - 1980s; TMI Unit 1 Restart -1985
- State/Local Concerns and Objections to Emergency Planning
- Significant interest in security since 9/11
- Substantial involvement by state governments in NJ, PA, VT, NY
- Congressional interest in the NRC and/or select sites

Region I Staffing Dynamics

- Region I successful in recruiting and developing highly qualified staff
- Proximity to HQ facilitates staffing transfers
- Former Region I staff occupy many senior HQ positions (e.g., Kane, Wiggins, Strosnider, Borchardt, Tracy)
- Employee qualification and development a high priority
- Knowledge management a necessity not only due to retirements, but staff transfers to HQ
- Has at times been a challenge to ROP execution

Current Region I Issues

- Implementation of the new ROP Safety Culture Initiative is new
- Fire Protection and the Reactor Oversight Process - Resolution of issues protracted
- Interface of Operations, Emergency Planning, enhanced Security provisions is more challenging than ever
- Currently have two ROP deviations in place
- Knowledge management a necessity not only due to retirements, but staff transfers to HQ
- Pending Region I Office Relocation

ACRS Insights

- We look forward to any insights you can provide today and tomorrow
- Appreciate the ACRS role and contributions to nuclear reactor safety
- Region I staff have made many presentations before the ACRS in recent years (e.g., License Renewal, Extended Power Uprates)
- Appreciated ACRS meeting with the public in Vermont - Your chance to see first-hand the external environment in which we work

Enjoy Your Meeting with Staff of Region I

We Hope to Help Make Your Visit Rewarding and Productive

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS BRIEFING NRC Region I - July 26, 2006

External Environment / Stakeholder Communications

Brian Holian, Director, Division of Reactor Projects
Richard Barkley, P.E., Technical Communications Assistant

History of the External Environment In Region I

- Early intervention in plant construction in the 1970s (Seabrook, Shoreham)
- Three Mile Island accident - 1979
- State/Local Objection to Emergency Preparedness (EP) in the 1980s (Indian Point, Seabrook and Shoreham)
- Continued interest at select sites in the 1990s (Vermont Yankee, Pilgrim, Maine Yankee, Millstone and Indian Point)

Impact of the 9/11/2001 Attacks on the External Environment

- Expanded role of National Guard, State Police and Local Law Enforcement at sites in PA, NJ & NY
- National Guard and State Police remain at sites in NJ & NY
- Calls for expanded security provisions, site hardening, airspace exclusions
- Extensive interest in Indian Point security and emergency planning

Indian Point Stakeholder Interest Since 9/11

- Concerns with Emergency Preparedness from four counties in the Indian Point EPZ
- 2003 report by James Lee Witt on EP adequacy post-9/11
- Substantial interest from the New York State Congressional delegation
  - Senators Clinton & Schumer
  - Representatives Engel, Kelly, Lowey
  - NY State Representatives Galef & Brodsky

Indian Point Stakeholder Interest Since 9/11 (Cont.)

- Stakeholder interest exemplified by:
  - Numerous pieces of Congressional correspondence regarding Indian Point since 2002 (highest volume of reactor-related correspondence for the NRC)
  - Multiple Commission briefings of members of the New York Congressional delegation
  - Frequent meetings with New York State and Westchester County officials
  - Stakeholder interest refocused since September 2005 identification of onsite tritium contamination

Impact of Stakeholder Involvement

- Substantial resources devoted to concerns/allegations related to security at Indian Point and other sites
- Calls for stakeholder meetings/briefings on emergency preparedness
- Numerous correspondence requests on EP and security concerns
- Frequent briefings of elected officials

Reactor Licensee Changes since 1999

Outfall of Deregulation

- 11 owner operators have departed since 1999 (17 → 8) -Pending PSEG/Exelon merger will drop owner/operators to 7
- Entergy/Exelon/FP&L/FENOC & Dominion sites span > 1 regional office
- All Region I plants now operate as merchant plants
- Impact of consolidation and deregulation

Region I Response to Involved Stakeholders

- Additional staff recruited and trained in the security area
- Increased management oversight
- Support provided by NSIR and NRR at critical junctures
- Senior staffer provided to support technical communications by the ORA

Region I Response to Involved Stakeholders (Cont.)

- Staff responded to numerous emergency preparedness and security information requests
- Expanded discussions of security and EP at Annual Assessment Meetings
- Outreach at selected sites - e.g., Government-to-Government meetings at Oyster Creek and Indian Point

Region I Response to Involved Stakeholders (Cont.)

- Congressional office and local political briefings
- Biweekly conference calls with Indian Point stakeholders since 10/2005 on groundwater contamination
- Supported highly controversial meetings related to the VY Power Uprate, Salem/Hope Creek Safety Conscious Work Environment (SCWE)

Outlook Going Forward

- Continued high interest in Indian Point
- Substantial interest in Pilgrim, VY and Oyster Creek license renewal
- Continued need for proactive public outreach
- Expanded Congressional Outreach planned and funded
- Office/agency teamwork essential to met critical peak information demands

Contacts

- Brian Holian (BEH@nrc.gov)
  610-337-5080
- Richard Barkley (RSB1@nrc.gov)
  610-337-5065

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS BRIEFING NRC Region I - July 26, 2006

Knowledge Management

Marsha Gamberoni/Louis Manning

Purpose

- To address the question – "does the NRC offer sufficient training towards the development of new inspectors?"
- To convey the region's activities involving knowledge management.

Background

- NRC hires two types of reactor inspectors:
  - Experienced
  - Entry level (Nuclear Safety Professional Development Program candidates)
- Both complete formal training and development programs

Training and Development Overview

Qualification Program

References

Person to Person Interface

Additional Training

On the Job Training

Qualification Program - Experienced Reactor Inspectors

- Assigned to Division of Reactor Safety
- Formal training program
  - Approximately one year to complete
  - Assigned a peer sponsor
  - Completes NRR's qualification requirements outlined in Inspection Manual Chapter 1245

Qualification Program - Entry Level Reactor Inspectors

- Assigned to Division of Reactor Projects
- Formal training program - Nuclear Safety Professional Development Program (NSPDP)
  - Approximately two years to complete
  - Assigned a peer sponsor and mentor

Qualification Program - Entry Level Reactor Inspectors

- Formal inspection training program
  - Completes NRR's qualification requirements outlined in Inspection Manual Chapter 1245
  - Assigned reference site
- NSPDP requirements
  - Completes two rotational assignments
    - Three month rotation to reference site
    - Three month rotation to headquarters

Person to Person Interface

- The peer sponsor/mentor
  - Discusses knowledge management subjects
  - Keeps track of training and development
  - Ensures new inspector is on pace to complete inspector qualifications
  - Discusses goals and career options
  - Discusses branch expectations (informal)

Knowledge Management Meetings

- Conducted weekly by experienced inspectors
  - Subjects include current and historic events
  - Questions and answers
- Conducted semi-annually during inspector seminars
  - Experienced inspectors present the technical aspects of their value added findings
  - Experienced inspectors describe the methodology for development of their findings

Additional Training

- External training
- Division training
- Strategic Workforce Planning
  - Gap analysis
  - Hiring strategies
- Probablistic Risk Analysis Basics

On the Job Training

- Progression of inspection assignments
- Expert development
- Independent study assignments
- Job rotation opportunities
- Benchmarking and objectivity visits

References

- Inspection Procedures
- Region I Website
  - Operating experience page(s)
  - Construction inspection page(s)
- Regional Instructions
- Division Policies and Procedures
- Inspector Field Observation Best Practices

Any Questions?

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS BRIEFING NRC Region I - July 26, 2006

Operating Experience

Karl Diederich

Agenda - Operating Experience

- History of Operating Experience program
- What are sources of Operating Experience?
- How is it used?
- What processes support its use?
- Example applications

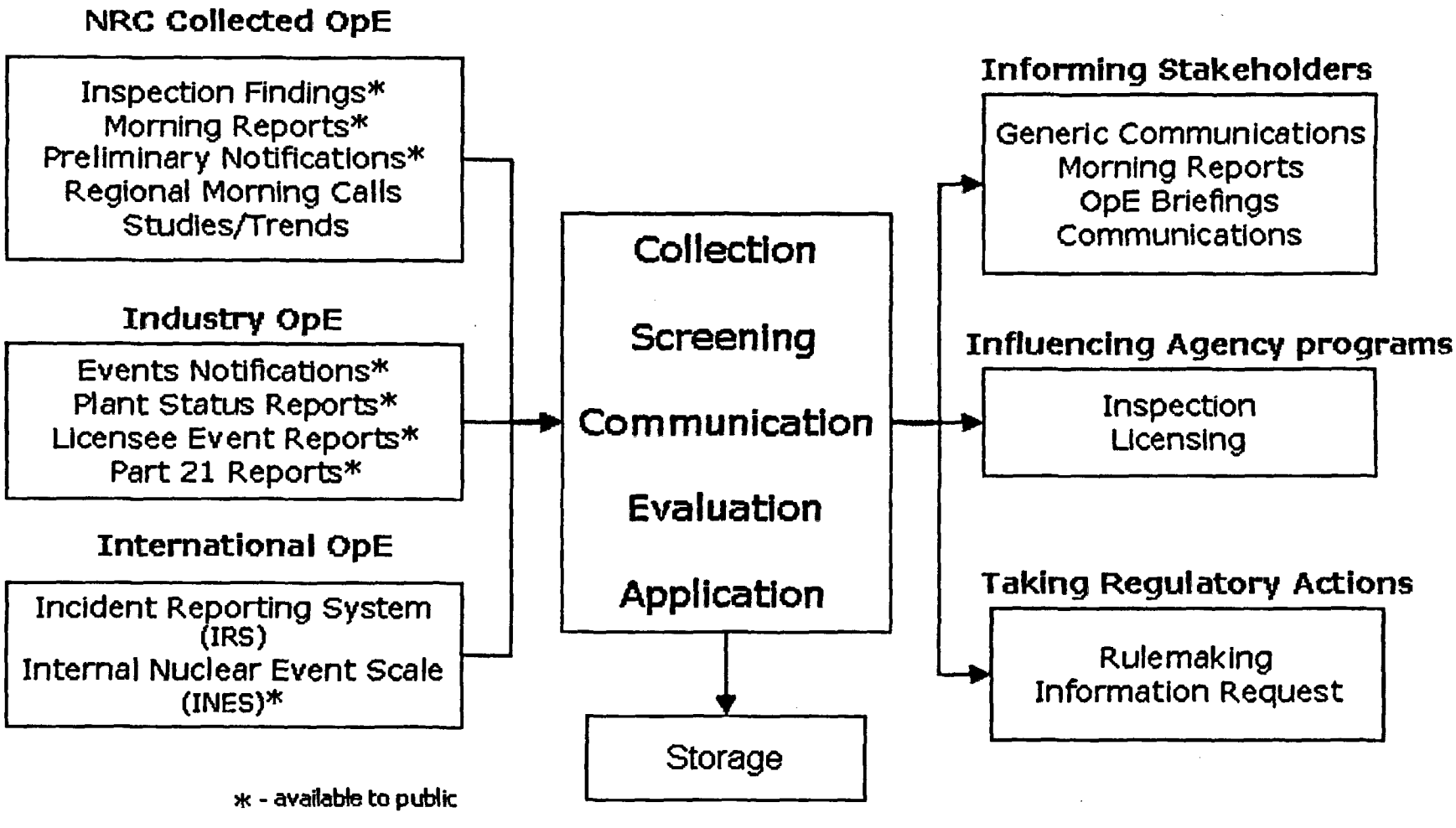
What is Operating Experience?

- Operating Experience (OpE) is:
  - that body of knowledge
  - that comes from industry activities
  - and can beneficially inform actions
- Characteristics
  - Generic applicability
  - Safety significance

History of OpE Program

- 1979 - Three Mile Island accident
- 1980 - Office of Analysis and Evaluation of Operational Data
- 1999 - NRR (short term) and RES (long term)
  (Events Assessment and Generic Communications Branch)
- 09/02 - Davis-Besse Task Force draft report
- 11/03 - Reactor Operating Experience Task Force final report
- 06/03 - Davis-Besse Task Force Lessons-Learned
- 01/04 - NRR Operating Experience Section established
- 04/04 - NRR Implementation Plan
- 01/05 - NRR Clearinghouse function rolled out
- 04/05 - Region I Policy formalized regional implementation

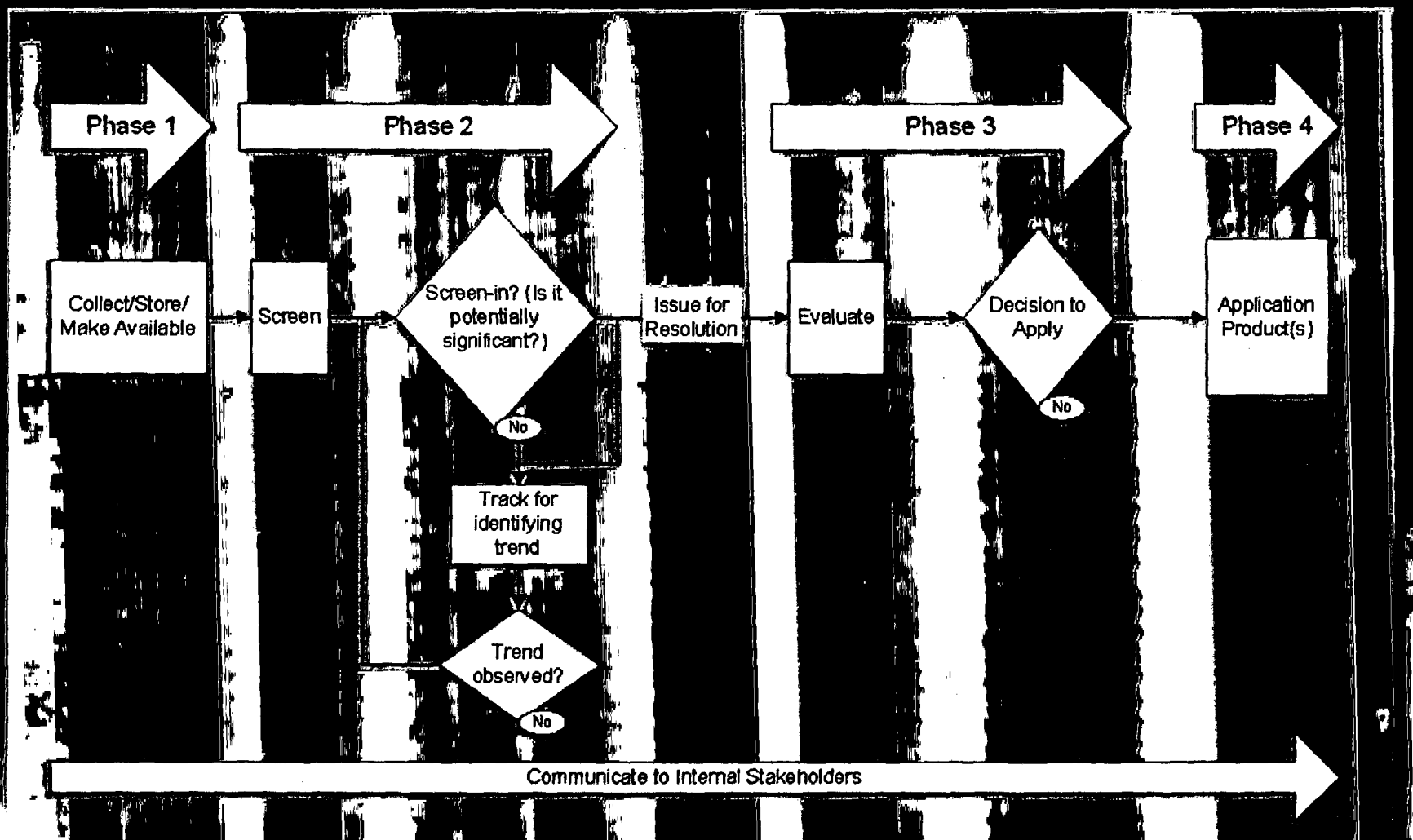
Sources and Uses of Operating Experience



Sources of Operating Experience

- Inspector identified issues
- Morning calls
- Inspection findings
- Licensee Event Reports
- Part 21 Reports
- INPO SEE IN reports
- International Incident Reporting System

OpE Process -Overview



Operating Experience - Application

- OpE functions in a support role...
- Inspection sample selection
- Event evaluation
- Codifies internal communications
- Operating Experience Voluntary Sample
- Regulatory decision-making
  (IPs, Licensing, Rulemaking)
- Generic Communications

Example Applications

- Millstone trip due to "tin whisker" on circuit card
- Barton gage - potential need for Part 21
- Fire protection and internal flooding inspection samples

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS BRIEFING NRC Region I - July 26, 2006

Grid Reliability

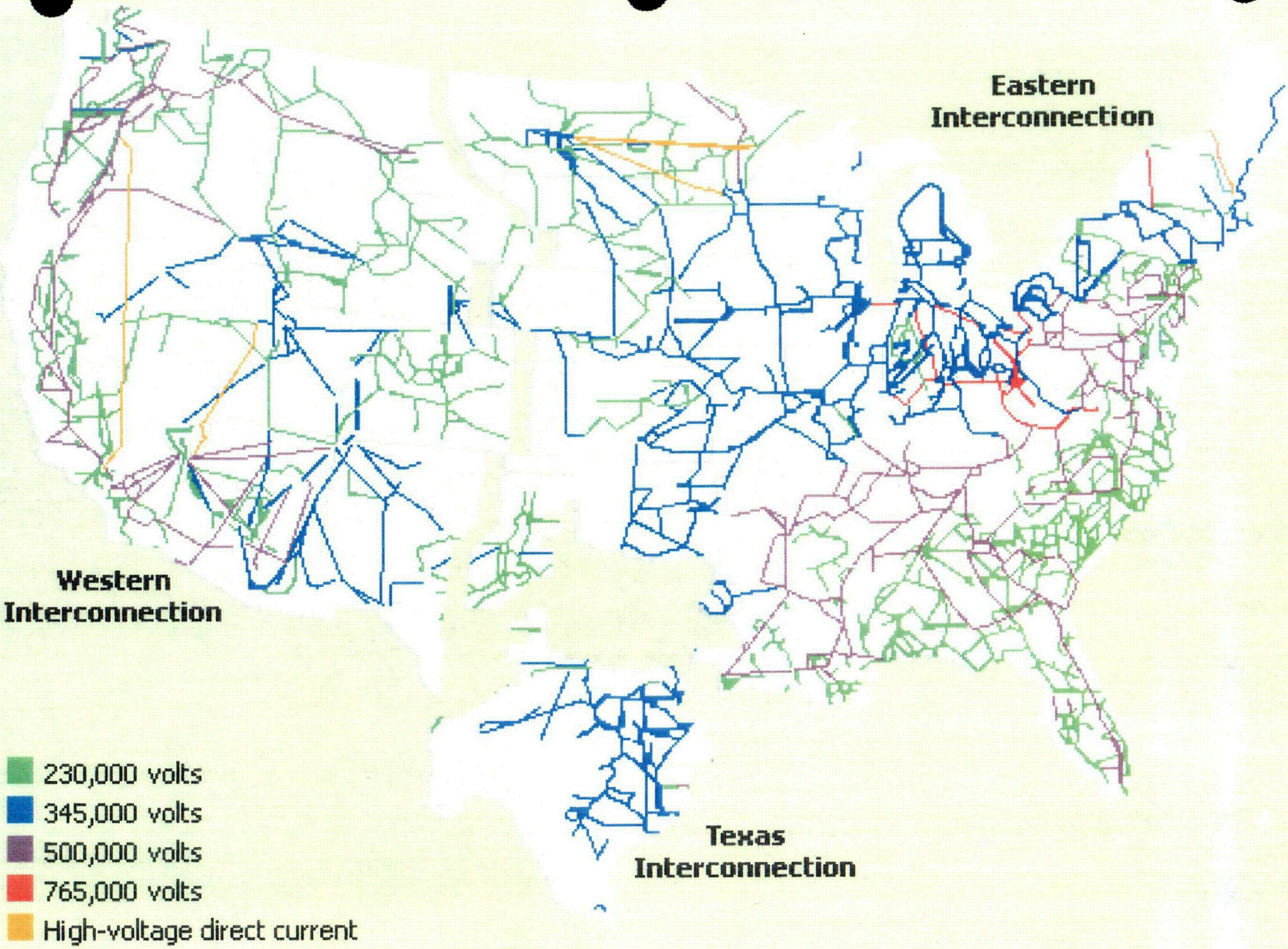
Ram Bhatia, Reactor Inspector
Engineering Branch 3, DRS

Overview

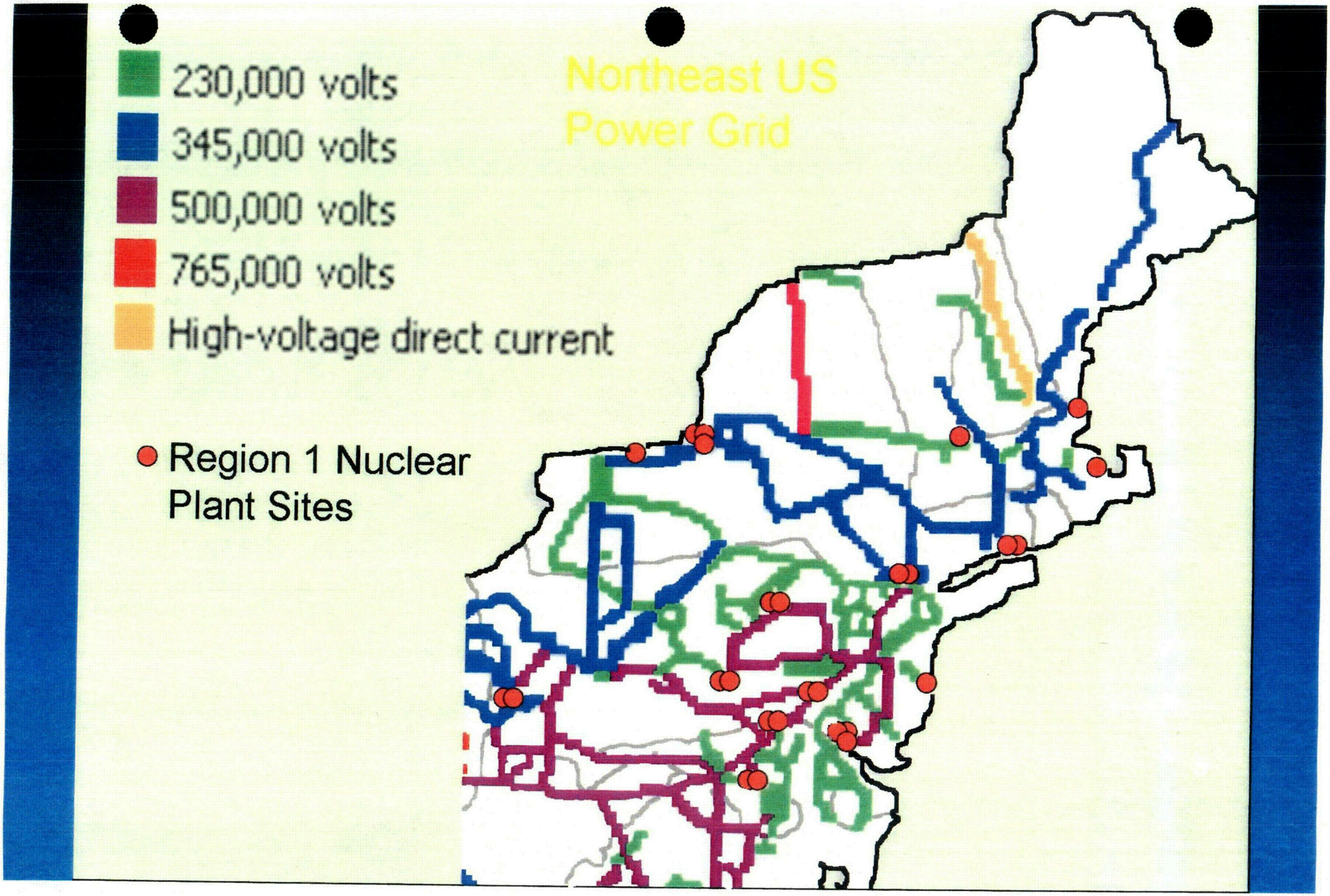
- Region I Grid Environment
- Offsite Power Temporary Instruction Results
- Limerick Generating Station
- Recent Grid Issues

Region I Grid Environment

- 17 nuclear sites
- No vertically integrated utilities
- Three ISOs
  - ISO-NE
  - NYISO
  - PJM
- Each site communicates with its respective transmission operator.


Eastern Interconnection
Western Interconnection
Texas Interconnection
230,000 volts
345,000 volts
500,000 volts
765,000 volts
High-voltage direct current

C-01


Northeast US
Power Grid
230,000 volts
345,000 volts
500,000 volts
765,000 volts
High-voltage direct current
Region 1 Nuclear
Plant Sites

C-62

Offsite Power Temporary Instruction Results

- Three TIs issued:
  - TI 156, April 2004
  - TI 163, May 2005
  - TI 165, March 2006
- Responses in line with headquarters expectations.
- Improved procedures for post trip voltage inadequacy and real time contingency monitoring.
- Region I has no outliers in respect to TI responses.

Limerick Generating Station

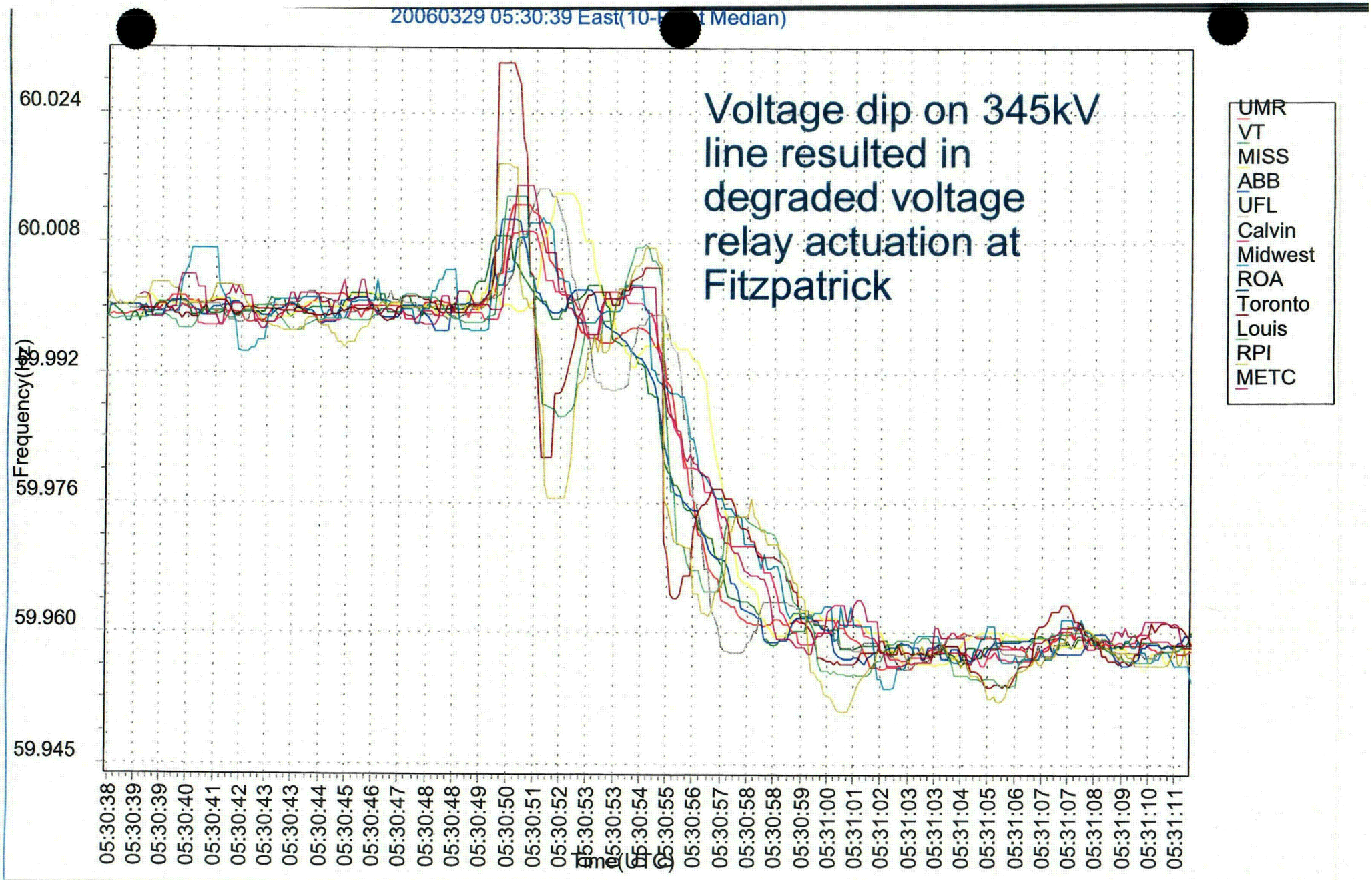
- Regional Transmission Operator: PJM
- Transmission Owner: PECO Energy

- Agreements exist between Limerick and PECO and between Limerick and PJM for notification requirements.

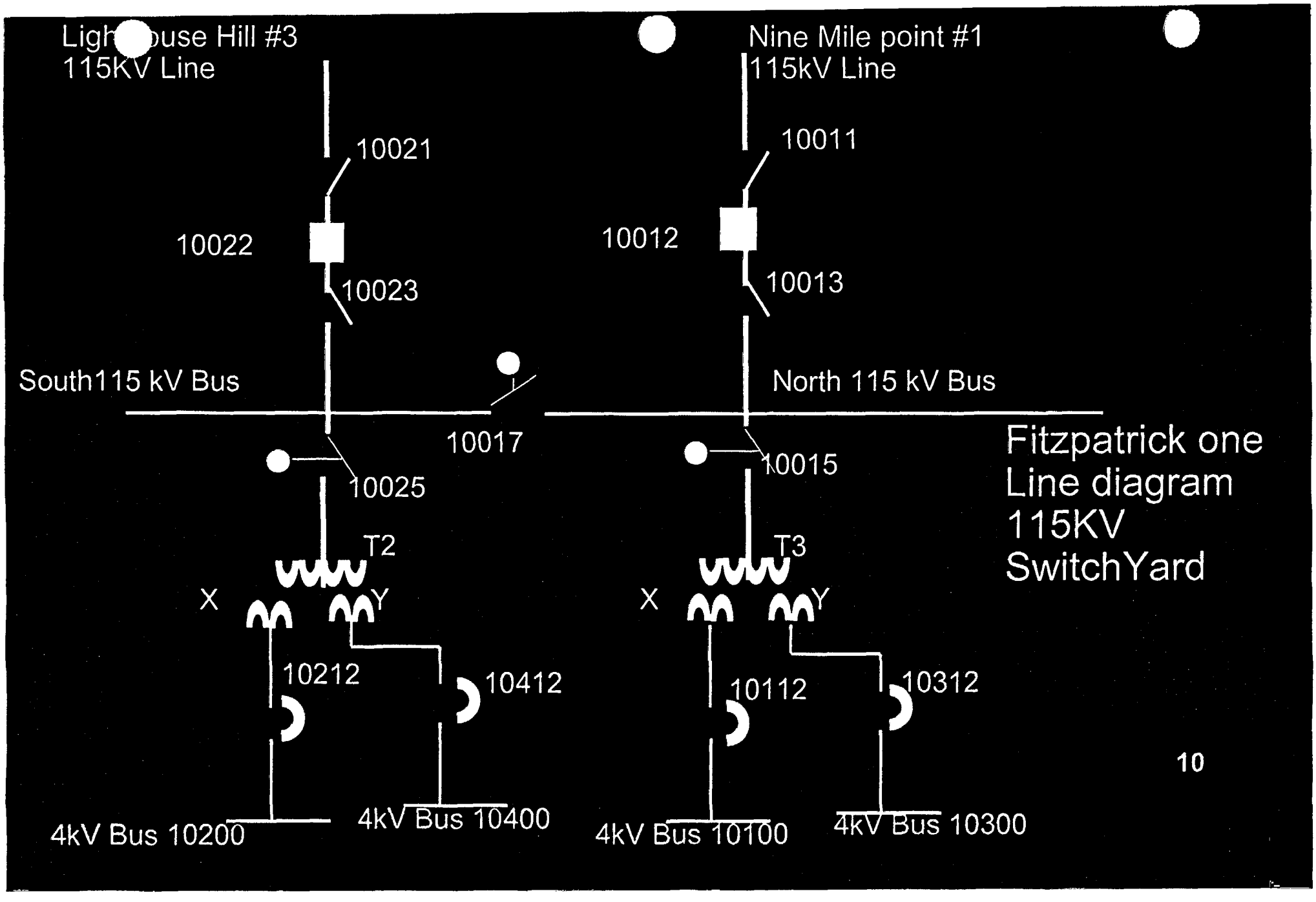
- Limerick has not experienced a LOOP event in the last 20 year period.

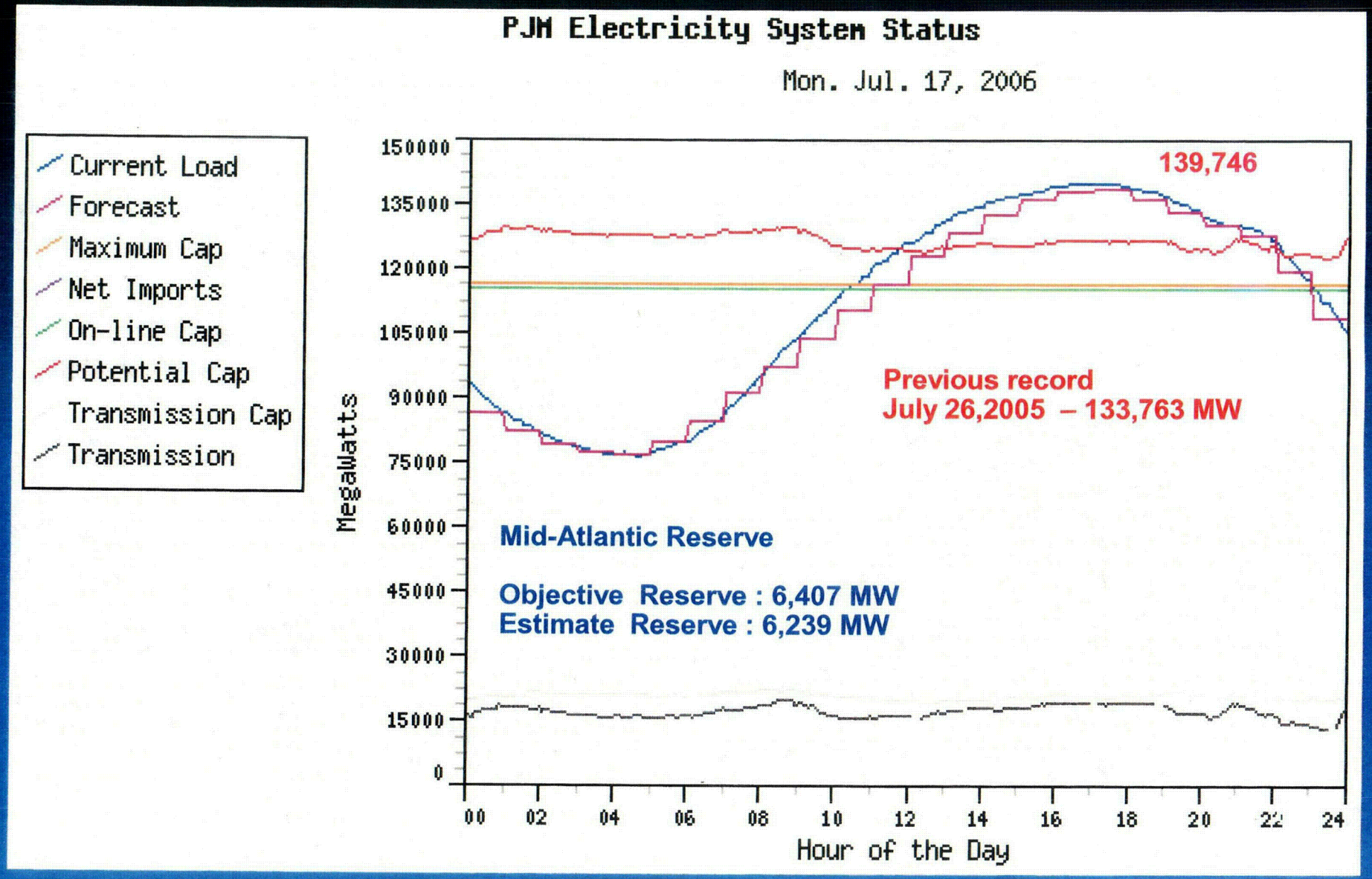
Recent Grid Issues

- Seabrook: Numerous requested downpowers by ISO-NE
- FitzPatrick: 4160VAC safety bus degraded voltage relay alarm.
- Nine Mile Unit 1: 115 kV offsite power line # 4 open phase status reported by National Grid Operator - another good example of protocol


20060329 05:30:39 East(10-
Median)
Voltage dip on 345kV line resulted in degraded voltage relay actuation at Fitzpatrick
Frequency(Hz)
60.024
60.008
59.992
59.976
59.960
59.945
Time(Hr:Min:Sec)
05:30:38
05:30:39
05:30:39
05:30:40
05:30:41
05:30:42
05:30:43
05:30:43
05:30:44
05:30:45
05:30:46
05:30:47
05:30:48
05:30:48
05:30:49
05:30:50
05:30:51
05:30:52
05:30:53
05:30:53
05:30:54
05:30:55
05:30:56
05:30:57
05:30:58
05:30:58
05:30:59
05:31:00
05:31:01
05:31:02
05:31:03
05:31:03
05:31:04
05:31:05
05:31:06
05:31:07
05:31:07
05:31:08
05:31:09
05:31:10
05:31:11
UMR
VT
MISS
ABB
UFL
Calvin
Midwest
ROA
Toronto
Louis
RPI
METC

C-03


Lighthouse Hill #3
115KV Line
10021
10022
10023
South115 kV Bus
10017
10025
T2
X
Y
10212
10412
4kV Bus 10200
4kV Bus 10400
Nine Mile point #1
115kV Line
10011
10012
10013
North 115 kV Bus
10015
T3
X
Y
10112
10312
4kV Bus 10100
4kV Bus 10300
Fitzpatrick one
Line diagram
115KV
SwitchYard


PJM Electricity System Status
Mon. Jul. 17, 2006
Current Load
Forecast
Maximum Cap
Net Imports
On-line Cap
Potential Cap
Transmission Cap
Transmission
Megawatts
150000
135000
120000
105000
90000
75000
60000
45000
30000
15000
0
00
02
04
06
08
10
12
14
16
18
20
22
24
Hour of the Day
139,746
Previous record
July 26,2005 – 133,763 MW
Mid-Atlantic Reserve
Objective Reserve : 6,407 MW
Estimate Reserve : 6,239 MW

C-04

Conclusion

- No Region I utilities are vertically integrated utilities
- All three ISOs fully regulated, proactive, progressive & forward thinking for Grid Reliability compared to other Regions
- All Region I offsite power TI responses are inline with HQ expectations with no outliers
- Limerick generating station and others are ready for 2006 summer

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS BRIEFING NRC Region I - July 26, 2006

Limerick Generating Station Overview

Carey Bickett (RI) / Jim Trapp (BC)

Plant Overview

- Plants Owned/Operated by Exelon
- Twin GE BWR 4's - Mark II Containment
- Operating License 1985 (U1) & 1989 (U2)
- 1134 MW(e) each

Plant Performance

- Currently Licensee Response Column
- Last > Green finding or PI in 2001
- Only 6 Green Findings For Past 12 months
- Last Scram (U2) October 12, 2005
- Occupational Rad. Exposure Top Quartile
- Last Refueling Outage = 17 Days - No > Minor Findings

NRC/Plant Issues

- License Renewal - 2009 Application Allowed
- Power Uprate - None Currently Planned
- Implementing Plans for an Independent Spent Fuel Storage Installation (ISFSI)
- Tritium Monitoring Program
- Pilot Risk-Informed TS Surveillance Intervals
- Alternate Source Term

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS BRIEFING NRC Region I - July 26, 2006

License Renewal
Michael Modes

LICENSE RENEWAL

Region I Activity

- Completed Applications
  - Calvert Cliffs - March 2000
  - Peach Bottom - May 2003
  - Ginna - May 2004
  - Millstone - November 2005
  - Nine Mile Point - ACRS reviewed on July 12, 2006

LICENSE RENEWAL

Region I Activity

- Current Applications
  - Oyster Creek
    - Application Received 7/27/05
    - On-site Inspection Completed 3/31/06
    - Waiting NRR Resolution of Open Item on Containment Liner Integrity

LICENSE RENEWAL

Region I Activity

- Current Applications
  - Oyster Creek
  - Pilgrim
    - Application Received 01/27/06
    - Inspection Planned September '06

LICENSE RENEWAL

Region I Activity

- Current Applications
  - Oyster Creek
  - Pilgrim
  - Vermont Yankee
    - Application Received 01/27/06
    - Inspection Tentatively Scheduled Nov/Dec '06

LICENSE RENEWAL

Region I Challenges

- Oyster Creek
  - Former Sand Bed Area - Liner Corrosion Issue
    - Nuclear Information Resource Service (NIRS) Petition
    - ASLB refined issue to Sand Bed and Accepted
    - AMERGEN response
    - ASLB Vacates the contention in 20 days
    - NIRS Rebuttal: inadequate, no threshold

LICENSE RENEWAL

Region I Challenges

- Oyster Creek
  - Former Sand Bed Area - Liner Corrosion Issue
  - NJ State Petition
    - Severe Accident Management Alternative
    - Interim Compensatory Measures for Design Basis Threat (DBT)
    - Spent Fuel Pool Vulnerable to Attack
    - Fatigue Cumulative Usage Factor (CUF) of Reactor Vessel is inappropriate
    - SBO Combustion Turbine control is inadequate

LICENSE RENEWAL

Region I Challenges

- Oyster Creek
- Pilgrim
  - State Attorney General Petition to Intervene and Petition for Backfit: Spent Fuel Pool Fire
  - Pilgrim Watch adoption of the Contention

LICENSE RENEWAL

Region I Challenges

- Oyster Creek
- Pilgrim
- Vermont Yankee
  - Vermont Deptartment of Public Service
    - State Action: Certificate of Public Good
    - Containment Concrete Aging Management Program (AMP) inadequate
    - Failure to Consider Fuel Storage in EIS
    - Failure to Scope in Security Systems req'd in Part 73

LICENSE RENEWAL

Region I Challenges

- Oyster Creek
- Pilgrim
- Vermont Yankee
  - Vermont Dept of Public Service
  - Mass Attorney General
    - Petition to Intervene - Failure to State a New Contention

LICENSE RENEWAL

Region I Challenges

- Oyster Creek
- Pilgrim
- Vermont Yankee
  - Vermont Dept of Public Service
  - Mass Attorney General
  - New England Coalition
    - Thermal Discharge
    - Metal Fatigue AMP Inadequate
    - Steam Dryer AMP Inadequate
    - Flow Accelerated Corrosion (FAC) monitoring Inadequate

LICENSE RENEWAL

Region I Challenges

- Oyster Creek
- Pilgrim
- Vermont Yankee
  - Vermont Deptartment of Public Service
  - Massachusetts Attorney General
  - New England Coalition
  - Town Of Marlboro
    - Emergency Planning Inadequate; Include in EPZ

LICENSE RENEWAL

Inspection

- Non-Safety affects Safety
  - One week dedicated
- Aging Management Programs
  - Existing Program
  - Revised Program
  - New Program
- Team Membership
  - Mechanical, Metallurgical, Electrical, Structural, Operational

LICENSE RENEWAL

Additional Inspection

- Optional One Week Inspection
- Commitments Inspection prior to Extended Period (IP 71003)

LICENSE RENEWAL

Additional Inspection

- Commitments Inspection
  - Oyster Creek - April 9, 2009
  - Nine Mile Point Unit 1 - August 22, 2009
  - Ginna - September 18, 2009

LICENSE RENEWAL

Additional Inspection

- Commitments Inspection
  - Oyster Creek - April 9, 2009
    - Implementing Liner Commitments during Outage '06
    - Implementing Remaining Commitments Outage '08
    - Indeterminate Number of Commitments
  - Nine Mile Point Unit 1 - August 22, 2009
  - Ginna - September 18, 2009

LICENSE RENEWAL

Additional Inspection

- Commitments Inspection
  - Oyster Creek - April 9, 2009
  - Nine Mile Point Unit 1 - August 22, 2009
    - Commitments Indeterminate
  - Ginna - September 18, 2009

LICENSE RENEWAL

Additional Inspection

- Commitments Inspection
  - Oyster Creek - April 9, 2009
  - Nine Mile Point Unit 1 - August 22, 2009
  - Ginna - September 18, 2009
    - IP 71003 Attachment 15
    - 40 Commitments Listed
    - Delay to Extended Period

LICENSE RENEWAL

Additional Inspection

- Additional Applications
  - FitzPatrick - July '06
  - Susquehanna - Sept '06
  - Beaver Valley - 2nd Quarter '07
  - Three Mile Island - 2nd Quarter '08

LICENSE RENEWAL

Future Work

- 20 Weeks of License Renewal Inspection in the next 20 months
- Region I will be standing before ACRS seven (7) more times to present our findings

LICENSE RENEWAL

END

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS BRIEFING NRC Region I - July 26, 2006

Power Uprate Activities

Larry Doerflein, Chief
Engineering Branch 2, DRS

Discussion Topics

- Reactor Oversight Process
- EPU status for Region I plants

Reactor Oversight Process

- Inspection Procedures
  - IP 71004, Power Uprate
  - IP 71111.21, Component Design Bases Inspection (CDBI)

Inspection Procedures

- IP 71004, Power Uprate
  - 10CFR50.59 evaluations (IP 71111.02 /17 /21)
  - Plant Modifications (IP 71111.17 / 07)
  - PMT and ST (IP 71111.17 / 19 / 22)
  - Power Ascension Testing (IP 71111. 14 / 20 / 11)
  - Major Plant Tests (IP 71004)
  - Erosion and FAC programs (IP 71004)
  - Actions to address impact of EPU on Initiating Event likelihood (IP 71004)
- IP 71111.21, CDBI
  - Reviews changes in margin caused by EPU

Advantages / Challenges

- Advantages
  - ROP Flexible
  - Specialists Involved
- Challenges
  - Coordination (DRP, DRS, NRR)
  - Timing (Inspection schedules, Licensing issue resolution)
  - Sample size / selection
  - Accounting
  - Stakeholder involvement

Region I EPU Status

- Vermont Yankee - 20%
  - Request 9/10/03, ACRS rec 1/4/06, Amend 3/2/06
  - IP71004 and TI-158 (engineering pilot insp) completed
- Ginna - 16.8%
  - Request 7/5/05, ACRS rec 5/22/06, Amend 7/11/06
  - Insp Plan Developed - IP71111.02 /17 schd 8/06, IP71004 (FAC) 11/06, IP71121 (HP) 11/06
- Beaver Valley 1 & 2 - 8%
  - Request 10/4/04, ACRS rec 5/22/06, Amend 7/19/06
  - IP71111.21 completed 7/20/06

Power Uprate Activities

Questions

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS BRIEFING NRC Region I - July 26, 2006

SAFETY CULTURE ISSUES

Art Burritt

SAFETY CULTURE ISSUES

Purpose

- Describe NRC Region 1 experience with safety culture at Salem and Hope Creek
- Discuss lessons learned and ROP safety culture initiative
- Answer specific questions from the ACRS subcommittee

SAFETY CULTURE ISSUES

Background

- 2002 End of Cycle Assessment - NRC Identified Substantive cross-cutting issue in PI&R
- Late 2003 - NRC initiated Special Review of PSEG's Salem/Hope Creek work environment
- January 2004 - Issued interim results. While no serious violations, NRC:
  - Identified concerns related to handling of emergent equipment issues and management openness to alternative views
  - Identified concerns with effectiveness of corrective action, feedback, and work management processes

SAFETY CULTURE ISSUES

Background

- May 2004 - PSEG completed surveys/assessments with similar results and developed action plans
- July 2004 - NRC Issued Special Review Final Results
  - Confirmed interim results
  - Identified NRC oversight process going forward:
    - "At a point when PSEG concludes substantial, sustainable progress has been made to improve the work environment, obtain peer assessment to evaluate effectiveness and provide the results to the NRC."

SAFETY CULTURE ISSUES

Background

- August 2004 Mid-cycle Assessment Letter - Identified SCWE substantive cross-cutting issue based on special review results and continuing PI&R issue

- August 2004 - NRC EDO Approved Deviation Memo to ROP to closely monitor SCWE. (Renewed in July 2005) Memo provides for:
  - Periodic meetings with senior NRC management
  - Internal NRC Coordination Team
  - Increased ROP inspections in PI&R
  - Periodic review of SCWE metrics
  - SCWE team inspections

SAFETY CULTURE ISSUES

Background

- September 2005 - NRC SCWE Team Inspection
  - Progress made in addressing work environment
  - Focused attention still required on certain work groups

- End of Cycle 2005 - NRC closes PI&R cross-cutting issue. SCWE cross-cutting issue remains open.

SAFETY CULTURE ISSUES

Background

- April 2006 - PSEG sponsors peer self assessment. Team concludes substantial, sustainable progress made.
- June 2006 - NRC SCWE team inspection independently evaluated if PSEG made substantial and sustainable progress in improving work environment.
- July 2006 - Inspection results to be considered in Mid-cycle assessment process.

SAFETY CULTURE ISSUES

Lessons Learned

- ROP Safety Culture Initiative Informed By Salem/Hope Creek Experience
  - Key Coordination Team members assigned to Safety Culture Initiative
  - Branch Chief responsible for S/HC oversight in 2004 - 2006 loaned to headquarters as technical lead for safety culture initiative

SAFETY CULTURE ISSUES

Lessons Learned

- Condition that led to Substantive Cross-cutting issue in SCWE informed criteria in revised IMC 0305
- IMC 0305 revised to:
  - Green finding with SCWE cross-cutting aspect, or
  - Chilling effect letter, or
  - Enforcement action involving discrimination; AND
  - Impact on SCWE not isolated, AND Agency has concern with licensee's scope of effort or progress

SAFETY CULTURE ISSUES

Lessons Learned

- Continuing weaknesses in S/HC PI&R and work management processes were precursors to SCWE substantive cross-cutting issue.
  - Employees may hesitate to raise issues due to previously identified issues not being effectively resolved.
- Revised IMC 0305 provides option for NRC to request licensee to assess safety culture in the case where a substantive cross-cutting issue with the same theme (PI&R continues for 3 or more assessment periods).

SAFETY CULTURE ISSUES

Lessons Learned

- Develop Regional Capability to Perform SCWE Team Inspections
  - Specialists from NRC Offices of Enforcement and Research combined with Region I inspectors on SCWE inspection teams
  - Specialist assisted with conducting focus groups
- Having Regional Inspectors Complete SCWE Team Inspections would:
  - Improve efficiency because inspectors would have both capability to implement focus group methodology and provide operational and safety context
  - Ensure consistency in focus group implementation
  - May enhance licensee confidence in SCWE team inspections

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS BRIEFING

NRC Region I - July 26, 2006

ROP Roundtable Discussion

Dave Lew, Deputy Director, DRP
Chris Cahill, Senior Reactor Analyst
Bill Cook , Senior Reactor Analyst
Alan Blamey, Senior Resident Inspector
Art Burritt, Senior Project Engineer, DRP
Steve Pindale, Senior Reactor Inspector, DRS

Overview

- The ROP provides a solid framework for inspecting and assessing plant performance and is an improvement over the pre-2000 NRC Inspection Program.
- Region I faces unique challenges in the implementation of the ROP; however, flexibility within the ROP allows the region to meet these challenges.
- As more experience is gained, areas for potential enhancement and refinement continue to be identified. The ROP is a "living" program; and, processes provide for continuous improvement.

ROP

Working Well

- The ROP is transparent, scrutable, and safety focused.
- The program provides flexibility to ensure safety and public confidence is maintained.
- The program is balanced in the application of routine inspection and in-depth engineering inspection.
- The program has increased focus in the areas of Emergency Preparedness and Security.

ROP

Meeting the Challenges

- Wide range of stakeholder involvement in Region I plants.
- High Region I staff turnover has warranted significant emphasis on staff training and knowledge transfer.
- Staff participation in the development of new inspection procedures and assessment tools.

ROP

Living Process

- Some of the Performance Indicators have evolved from deterministic criteria to risk informed criteria (SSU to MSPI)
- The Component Design Basis Inspections were implemented to incorporate a broader look at high risk/low margin components, systems, and operator actions.
- Safety Culture has been better defined and given a more thorough and systematic examination.
- Frequent interactions between the Regions and NRR to ensure consistency.

2006 Inspection Findings

- CDBI Team
  - NCV involving inadequate procedure for coping with a loss of component cooling water event.
- PI&R Team
  - Failure to implement effective corrective actions to prevent repetitive failures of the TDAFWP.
- Event Follow-up, Resident Inspector
  - Draft - Inadequate design control involving EDG MCC amptector setting.
- PI&R Team
  - Failure to identify and correct conditions adverse to safety involving installation of scaffolding.

CLOSING REMARKS

Marc Dapas, Deputy Regional Administrator
Region I