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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

OCTOBER 20, 2000

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UNITED STATES

NUCLEAR REGULATORY COMMISSION

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

SUBCOMMITTEE ON PLANT LICENSE RENEWAL

Friday, October 20, 2000

U.S. NRC

11545 Rockville Pike

Room T2-B1

Rockville, Maryland

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P R O C E E D I N G S

[8:30 a.m.]

CHAIRMAN BONACA: The meeting will now come to order. This is the second day of meeting of the ACRS Subcommittee on Plant License Renewal.

I'm Mario Bonaca, Chairman of the Subcommittee. The ACRS members in attendance are Vice Chairman, Robert Seale; Thomas Kress; Graham Leitch; John Sieber; William Shack; and Robert Uhrig.

The purpose of this meeting is for the Subcommittee to hear presentations by the Staff and the Nuclear Energy Institute concerning drafts of the Standard Review Plan for License Renewal, the Generic Aging Lessons Learned Report, the Draft Regulatory Guide G1104, Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses, and NEI 95-10, Revision 2, Industry Guidelines for Implementing the Requirements of 10 CFR Part 54, the License Renewal Rule.

The Subcommittee will gather information on relevant issues and facts and formulate positions and actions as appropriate for the deliberation by the full Committee. Mr. Noel Dudley is the cognizant ACRS Staff Engineer for this meeting.

The rules for participation in today's meeting have been announced as part of the Notice of this meeting,

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1 previously published in the Federal Register on October 4,
2 2000.

3 A transcript of this meeting is being kept, and
4 will be made available as stated in the Federal Register
5 Notice. It is requested that speakers first identify
6 themselves, and speak with sufficient clarity and volume so
7 that they can be readily heard.

8 We have received no written comments or requests
9 for time to make oral statements from members of the public.
10 We will now proceed with the meeting, and I call upon Mr.
11 Christopher Grimes, Chief of the License Renewal and
12 Standardization Branch to begin.

13 MR. GRIMES: Thank you, Dr. Bonaca. I think my
14 introduction to yesterday's meeting was sufficient for the
15 purpose, and so I'll introduce Rani Franovich, who is going
16 to lead the next section on Engineered Safety Features.

17 MR. FRANOVICH: Good morning. My name is Rani
18 Franovich. I'm a Resident Inspector from the Catawba Plant
19 in Region II, and while I was on rotational assignment to
20 the License Renewal and Standardization Branch, my
21 assignment was to resolve or coordinate the resolution of
22 NEI comments on Chapter 5 of the GALL report, and the
23 associated section of the Standard Review Plan.

24 Chapter 5 is on the engineered safety features of
25 plants. And to my immediate left, I have Dr. Jim Davis from

1 the Division of Engineering in NRR, and to his left, I have
2 Chris Parczewski, also from the Division of Engineering in
3 NRR.

4 To my immediate right, I have Dr. Vic Shah, who is
5 from Argon National Lab, and to his right, I have Chuck Hsu
6 from the Office of Research.

7 I think it was made pretty clear yesterday that
8 one thing we can do assist you all is clarify what has
9 changed significantly from the last rev, the 12/99 rev of
10 the GALL report. So I have modified my presentation to
11 accommodate that request.

12 Before I go through with my presentation with
13 slides, let me just highlight those areas that you might
14 want to focus your attention on:

15 Section E of Chapter 5 used to be fan cooler
16 systems for PWRs. We received comments from NEI that some
17 of the components in that section, predominantly fans, were
18 active components and scoped out of the license renewal
19 rule.

20 So when we deleted those items, we had only two
21 items remaining, and they were both plant-specific aging
22 management programs. So since there was no longer much
23 value-added, we deleted that section.

24 We added a section which we then called Section E
25 to address external surfaces of carbon steel components and

1 bolts, and aging mechanisms associated with those.

2 And that was a generic change to multiple
3 mechanical sections or mechanical chapters of the GALL
4 report. And specifically, we added external surfaces of
5 carbon steel components, which has two aging mechanisms.
6 One is boric acid corrosion of external surfaces.

7 We had this in here before, but only for borated
8 water systems. We added it for non-borated water systems
9 because of the potential for external systems to leak onto
10 non-borated water system piping or components.

11 We also added atmospheric corrosion of external
12 surfaces for PWRs and BWRs, and for those two aging
13 mechanisms, the aging management programs are in Chapter 11,
14 M-5, the Boric Acid Corrosion Program, for the first one,
15 and then for the atmospheric corrosion aging mechanism, in
16 Chapter 11, we have Program S-8, which is the coding
17 program.

18 For closure bolting and high pressure or high
19 temperature systems, we also added generically in multiple
20 chapters, atmospheric corrosion, stress relaxation, and
21 cyclic loading stress corrosion cracking as aging
22 mechanisms. And the aging management program that addresses
23 those aging mechanisms is in Chapter 11, Program M-12, which
24 is the Bolting Integrity Program.

25 Another change to Chapter 5 was more of an

1 internal recognition that for Section Bravo, which is the
2 Standby Gas Treatment Systems, we used to have an aging
3 management program reference to NRC Reg Guide 1.52, which
4 effectively provided controls for humidity.

5 However, since this system is in standby mode most
6 of the time, we removed that reference because humidity
7 would not be controlled unless the system was operating.

8 There are some additional changes to Chapter 5
9 that I'll bring to your attention as I go through the rest
10 of my presentation.

11 Do I have any questions on what I've presented so
12 far?

13 [No response.]

14 MS. FRANOVICH: Okay. The more significant
15 comments that we received from NEI on Chapter 5 are fairly
16 generic in nature and apply to other mechanical chapters as
17 well.

18 One of NEI's comments was that they didn't feel
19 that one-time inspections were needed for certain aging
20 mechanisms. And for Chapter 5, this applied primarily to
21 water systems that had chemistry control programs associated
22 with them.

23 NEI felt that chemistry programs were adequate, in
24 and of themselves, and that one-time inspections did not
25 provide any additional value.

1 However, the Staff felt that in order to establish
2 the premise that water chemistry control programs are
3 effective, one-time inspection would suffice. Another
4 option could be presented by an applicant, but a one-time
5 inspection would be adequate.

6 So, we decided to keep one-time inspections in the
7 GALL report.

8 DR. SEALE: There are already existing inspection
9 requirements for many of these systems. I can envision a
10 situation where the alternative might be to augment the
11 requirements of an existing program with additional
12 requirements that are focused on some particular aspects of
13 aging, perhaps not to be used or invoked on every
14 inspection, but, say, every third or every fifth or
15 whatever.

16 Has anyone done anything along those lines?

17 MS. FRANOVICH: Let me defer that question, but
18 before I do, I can answer that if an applicant wanted to do
19 that, the Staff would review the proposal and perhaps --

20 DR. SEALE: I would think so. I was really
21 wondering if anyone had made those -- had seen fit to use
22 this as an opportunity to essentially supplement the
23 inspection requirements?

24 MR. LEE: This is Sam Lee from License Renewal
25 Standardization Branch, NRR. We actually discussed with NEI

1 at the public meeting, exactly the option you are talking
2 about.

3 Okay, they are think -- they have a thing about
4 how do they come about doing that? Because they need to
5 revise the procedure, perhaps, to address that, to actually
6 supplement their existing maintenance by looking at aging
7 effects.

8 DR. SEALE: From an economics point of view, it
9 makes a great deal of sense to do it that way, really, I
10 would think, if it's a legitimate, inspectable need.

11 MR. GRIMES: This is Chris Grimes. I'd like to
12 add that during the review of the first two applications, we
13 ran into some circumstances where there was a question about
14 whether or not a one-time inspection would be sufficient, or
15 whether or not it would need to be conducted on a periodic
16 basis.

17 And that was, I think, a more difficult decision
18 for us, in circumstances where we were really looking for a
19 verification that the aging effect is not occurring to the
20 extent that it needs to be managed.

21 And I think that for these circumstances, even
22 though there are existing -- there may be existing
23 inspection requirements for particular systems, the concept
24 of a one-time inspection is to specifically look for
25 evidence of a particular aging effect that you want to make

1 sure does not need to be managed. So even though you may
2 have inspections of ISI inspection requirements, this
3 concept is to go in and over and above that inspection, to
4 specifically look for a particular aging effect.

5 And I think that the industry concern is that --
6 not the concern, but their view is that you don't even need
7 to do one-time, because if it isn't going to occur and
8 doesn't need to be managed, their quality assurance process
9 will pick it up if evidence occurs much later in plant life.

10 And we simply want to memorialize that in a
11 specific commitment to go look at least one time. So for
12 our purposes, we're going to make a distinction between
13 one-time inspections to verify that aging does not need to
14 be managed, from augmented inspection activities to
15 periodically look for any evidence of an aging effect that
16 may warrant some action in the future.

17 DR. SEALE: So you're really touching both bases?

18 MR. GRIMES: Yes, sir.

19 MR. DAVIS: This is Jim Davis from the staff. In
20 doing the reviews, I notice that they are now saying when
21 they are going to do the one-time inspection. And then
22 they're committing to, based on the outcomes of inspection,
23 and make the decision whether to do periodic inspections.

24 MS. FRANOVICH: Thanks, Jim.

25 DR. SHACK: Can you send me to a specific example

1 in Chapter 5 where you have a one-time inspection.

2 MR. SHAH: D-2, Section D-2.4, D-2.5.

3 CHAIRMAN BONACA: Sorry, can you repeat that?

4 MS. FRANOVICH: It's page D2-4, we have an item
5 D2.1.1 through D2.1.7, piping and fittings and high pressure
6 coolant injection and various other ECCS type systems. And
7 if you look on the associated right-hand page, the aging
8 management program that is provided is the water chemistry
9 program.

10 And then in the evaluation and technical basis
11 column, it really references where that program is described
12 in Chapter 11.

13 MR. CHOPRA: Maybe I can clarify that. This is
14 Omesh Chopra from Argon National Labs.

15 One time in GALL, one-time inspection is asked for
16 in situations where normal ISI either asked for only a leak
17 test. There is no inspection. For example, in certain --
18 one case would be pitting and crevice corrosion.

19 The program relied on is just water chemistry.
20 ISI is just leak test. So, one-time --

21 DR. SHACK: I have a simple-minded question. I
22 just want to see where in the document it says do a one-time
23 inspection.

24 CHAIRMAN BONACA: Right.

25 MR. CHOPRA: One-time is to verify the

1 effectiveness of the program.

2 DR. SHACK: Where does it say that?

3 DR. SEALE: It doesn't.

4 MR. GRIMES: Chapter 11, under the Water Chemistry
5 Program.

6 MS. FRANOVICH: In the Table under Further
7 Evaluation column, it reads, yes, detection of aging effects
8 should be further evaluated, and what that implies is the
9 Water Chemistry Program, as described in Chapter 11, is not
10 in and of itself sufficient. Further evaluation is
11 required, and a one-time inspection is an acceptable means
12 of providing the further evaluation.

13 DR. SHACK: Okay, got it.

14 CHAIRMAN BONACA: And that's in Chapter 11.

15 MR. SHAH: There is one other place where we
16 require the one -- we recommend one-time inspection, the
17 refueling storage tank where there is a concern for the
18 cracking from the inside, but the ASME section requires only
19 visual inspection from the outside. That's another place,
20 Section D-1.

21 MS. FRANOVICH: Any other questions on one-time
22 inspections?

23 MR. GRIMES: For Dr. Shack's benefit, on page 11,
24 M-25, under Program Description for Water Chemistry, towards
25 the bottom of the paragraph it says as set forth below, and

1 acceptable verification program may consist of a one-time
2 inspection of selected components and susceptible locations
3 in the system.

4 CHAIRMAN BONACA: And under monitoring and
5 trending, also there is a reference, okay.

6 DR. SHACK: So, every time an XM-11 is called, you
7 may well be set up then for a one-time inspection also.

8 MR. GRIMES: Correct.

9 DR. SHACK: When you're relying on water
10 chemistry, you want the verification inspection?

11 MR. GRIMES: No.

12 MS. FRANOVICH: I believe there are exceptions to
13 that, but in general, if the applicant would like to take
14 credit for water chemistry control, we, the Staff, think
15 it's fair to ask them to establish the effectiveness of that
16 program before they credit it.

17 So, for the most part, I think you'll find that
18 that's the case, but there are exceptions.

19 MR. SHAH: There are cases where the ASME Section
20 11 --

21 DR. SHACK: If you're already doing Section 11
22 inspections --

23 MR. SHAH: So you don't need it. So it is only
24 where we have mentioned; that is only place we need a
25 one-time inspection.

1 DR. SHACK: Now, suppose you're looking at MIC
2 problems? Is it the same sort of thing, that you're relying
3 on water chemistry to control MIC, or you're allowed a
4 one-time shot?

5 MR. SHAH: We have a separate program called open
6 cycle water chemistry program and that program addresses
7 that.

8 MS. FRANOVICH: Shall we go on?

9 CHAIRMAN BONACA: Yes, but I would like to make
10 just a comment. This is valuable. You pulled that thing
11 and it went through, and I think it would be good for the
12 full Committee presentation to have an example like this, so
13 that there's an understanding for the members of how it went
14 through.

15 Because without that kind of guidance, at times it
16 wasn't easy to review the Staff and see how you came from
17 the SRP to a program and down to the detail, and this was
18 very valuable.

19 MR. DAVIS: In addition there's the 89-13 Generic
20 Letter that tells you what you're supposed to do to avoid
21 fouling, one of which is heat exchanger efficiency.

22 DR. SHACK: Okay, you actually have a performance
23 measure you can look at, and that --

24 MR. DAVIS: Right.

25 DR. SEALE: One of the problems with this seems --

1 just listening to this, is that sometimes it's hard to
2 figure out which string to pull in order to identify this,
3 and I guess at this point, you're at -- probably loggerheads
4 is not an appropriate word -- but there is some negotiation
5 between Staff and NEI as to whether or not one-time
6 inspections are needed.

7 And that's probably a discussion that is specific
8 to individual inspections, rather than the principle of
9 one-time inspections.

10 But nonetheless, somewhere in this, it would seem
11 to me desirable to get some kind of reaction from NEI to the
12 idea that, okay, you are going to have one-time inspections.

13 How easy is it for a given utility to dig the
14 requirement as you envision it being applied, out of these
15 documents, so that when they come in with their initial
16 plan, one -- the first set of RAIs is not dominated by
17 requests for additional one-time inspection program needs
18 and that sort of thing.

19 MS. FRANOVICH: I think that in the meeting we had
20 with NEI, one of the things, as Chris mentioned, that we
21 discussed is actions that they're doing currently, and have
22 done in the past, the recent past, maintenance activities,
23 modifications to the plant, where they can take advantage of
24 that activity, ongoing, to do inspections, document them so
25 that they are retrievable and auditable, and say we did this

1 inspection at this time, and did not see any indications of
2 corrosion or aging degradation.

3 In fact, at Catawba, in their current refueling
4 outage, they are cleaning a lot of service water piping
5 that's buried, and one of the things that the license
6 renewal folks can do -- have asked them to do, is an
7 inspection while they're doing that, that's documented, so
8 that when they submit their application next Summer, that's
9 something they can provide to the Staff, if needed.

10 So I think that is probably a little bit
11 negotiable to avoid, you know, high costs for doing this.

12 DR. SEALE: Well, and that's exactly the reason
13 that it ought not to be an item of extended discussion, but
14 rather prompt agreement one way or the other so that if the
15 opportunity to do these things arises, you just go ahead and
16 do it and get it out of the way.

17 MS. FRANOVICH: Right. As far as I can recall
18 from our meeting, that was an idea that sounded appropriate
19 to us. If they had an opportunity to do it in their normal
20 maintenance and modification processes, that would be fine,
21 as long as it's documented and auditable.

22 DR. SEALE: As long as it is truly a competent
23 inspection.

24 MS. FRANOVICH: Agreed.

25 MR. GRIMES: This Chris Grimes, but, Dr. Seale, I

1 understand the point that you've made about making sure that
2 the guidance is clear in terms of what the expectation is,
3 and as we go through our efforts to improve the packaging of
4 the guidance, that we look to call out --

5 DR. SEALE: Italics.

6 MR. GRIMES: Big stars on the page or something
7 like that, but I'm sure that there are --

8 DR. SHACK: Hyperlinks.

9 [Laughter.]

10 MR. GRIMES: I was warned that I'm not allowed to
11 use hyperlinks until we go totally electronic.

12 DR. SEALE: That's more room in Hilbert's space.

13 MS. FRANOVICH: Okay, the next item I want to talk
14 about was touched on yesterday as a result of Bill Shack's
15 question about the use of GALL and whether or not an
16 application that does not list all of the SSCs that are in
17 the GALL report is, indeed, complete.

18 NEI raised the same question. They were concerned
19 that the GALL report would be used by the Staff for scoping
20 implications.

21 And we made it very clear that the GALL report
22 neither implies what should be scoped under the rule, nor
23 does it impose additional requirements. All it is is a
24 compendium of what the Staff has previously evaluated and
25 made a determination on.

1 So, I think we laid NEI's concerns to rest about
2 the scoping question.

3 MR. SIEBER: Does it say that someplace in here
4 that you aren't supposed to rely on GALL as the scoping?

5 MS. FRANOVICH: Yes, it does.

6 MR. LEE: It says it in more than one. Also about
7 the application of GALL, that it's not a scoping document.

8 MS. FRANOVICH: It's clearly articulated.

9 MR. SIEBER: Thank you.

10 MS. FRANOVICH: Sure.

11 Our next item I want to mention was another fairly
12 significant NEI comment. Inservice testing, at one time,
13 was in the GALL report in the December '99 rev it was in the
14 GALL report in Chapter 5 as well as other chapters.

15 And NEI was concerned that inservice testing was
16 referenced as an aging management program because its
17 objective is to reveal problems, failures, of active
18 components.

19 So, when we heard that comment and discussed it,
20 we agreed, and decided to remove reference to inservice
21 testing from the GALL report.

22 In addition to that, for Chapter 5 specifically,
23 NEI was concerned about the reference to Appendix J leak
24 rate testing for containment isolation valves, saying that
25 that is testing an active component's function and it's not

1 appropriate because they're not within the scope of license
2 renewal.

3 So we also removed Appendix J testing from Chapter
4 5 of the GALL report as well, however, we left it in Chapter
5 2, Structures, as it pertains to penetration seals and
6 equipment and personnel hatches.

7 DR. SEALE: There is a systemic possibility for
8 difficulty here, it seems to me, especially if you go to an
9 inservice inspection program that is risk-informed, as a lot
10 of people have.

11 They have used these to decrease the number of
12 active inspection that they do by -- to some 25 percent of
13 what they were at one time.

14 And they have a menu that's relatively structured
15 in defining or in deciding what it is that you expect. On
16 the other hand, if you have an aging problem, it's almost
17 implicit that there is, if you will, a kind of -- well, let
18 say, the likelihood of a threshold.

19 And so there may be things which, based on your
20 risk-informed sampling process, or inservice inspection, you
21 might not do, but which, based on concerns about other
22 longer-term aging processes, you might want to look at.

23 The question I have is, if I decided that there
24 was a problem that had to do with a component or system area
25 that was already receiving the tender loving care of an

1 existing inservice inspection program, could I lay on top of
2 that, a one-time inspection requirement to look at this
3 other odd-ball or, let's say, different kind of aging
4 mechanism?

5 MS. FRANOVICH: Aging mechanism, and I feel that
6 that would be acceptable, but I will defer to Dr. Kuo, Dr.
7 Lee, or Chris Grimes.

8 DR. KUO: Yes, I would like to add to it and just
9 give you a little background of why -- how this one-time
10 inspection first came up.

11 When we had our review of the applications in both
12 Calvert Cliffs and Oconee, there was a time that the
13 applicant wanted to say that we don't have any aging effects
14 on certain systems such as water, surface water systems,
15 because we have this effective water chemistry program. So
16 we don't see any corrosion. There is no need to do
17 anything; that there is no need for aging management, and
18 there is no such aging effect.

19 DR. SEALE: And, in fact, you and I know that
20 there well may, in fact, be something that has a 20-year
21 horizon on it where it only looms after that.

22 DR. KUO: Correct. Okay, that's why we say, okay,
23 if that's the case, then we want to have a confirmation, why
24 don't you do a one-time inspection to confirm that? If
25 that's, indeed, the case, yes, we agree, water chemistry

1 program is sufficient.

2 And for that reason, the Calvert Cliffs applicant
3 actually did a one-time inspection for their other water
4 storage tank, and they found no indications whatsoever, any
5 corrosion. We said, okay, we accept that, and that is one
6 example of one-time inspection that really served them well.

7 MR. GRIMES: I'd like to add to that that I'm not
8 concerned about how risk-informed ISI might evolve in the
9 future, because I think that risk-informed decisions on
10 changing frequency or sample sizes are driven by equipment
11 reliability consideration that are on a much shorter
12 frequency than the evolution of aging effects.

13 DR. SEALE: And hopefully equipment and
14 reliability reality.

15 MR. GRIMES: Correct. We would expect that even
16 though the frequencies in sample sizes might change, that if
17 aging effects are occurring which do have long, much longer
18 evolution times that the aging effects will be manifest in
19 time to take corrective action that may result in further
20 changes to the inspection scope and frequency for that
21 purpose, simply because they have now identified a
22 degradation that needs to be managed in a different way, and
23 so we expect that ISI can work in concert with an effective
24 corrective action program to make programmatic changes that
25 will address aging effects.

1 So I still think that even risk informed ISI is an
2 effecting Aging Management Program as it evolves.

3 DR. SEALE: Well, my only concern is once you do
4 get a good ISI, risk informed ISI program you still want to
5 look for wet spots on the floor.

6 [Laughter.]

7 MS. FRANOVICH: And I think, just to add, in our
8 discussions with NEI we heard a lot of "we have never seen
9 aging mechanisms in this system" and when asked, well, have
10 you looked? -- well, no, but we just haven't seen it, so
11 that was another impetus for doing the one-time inspections.

12 DR. SEALE: When I was 55 I didn't think I would
13 ever have a knee problem.

14 [Laughter.]

15 MS. FRANOVICH: Okay. Going on, those were the
16 significant NEI comments on Chapter V, some of which or
17 actually all of which had implications for other chapters in
18 the GALL report.

19 The license renewal issue that is addressed in
20 Chapter V, and my understanding is that the license renewal
21 issues are a list of issues that arose from a 1997 NEI
22 comment period on the GALL report at that time.

23 MR. LEE: The SRP at that time.

24 MS. FRANOVICH: Sorry, the SRP at that time. I
25 don't believe the GALL report existed at that time.

1 The license renewal issue applying to Chapter V
2 was 98-083, stress corrosion cracking of carbon steel.

3 The Staff was asked to develop a position as to
4 whether or not this aging mechanism was viable for this
5 material.

6 The Staff concluded that yes, this is a viable
7 aging mechanism for carbon steel if certain strength
8 characteristics of the material are present.

9 When it came to bolting, we determined that the
10 strength characteristics of bolts would make them
11 susceptible to SCC so we have added an item in Chapter V and
12 other chapters as well, the Bolting Integrity Program, to
13 address stress corrosion cracking of bolts.

14 When it comes to valve bodies, the strength of the
15 material is such that SCC really is not a viable aging
16 mechanism so that is not addressed in the GALL report, so
17 that is how we have handled that license renewal issue.

18 There are several items of interest I want to
19 discuss with regard to Chapter V. A couple of them have
20 generic implications for other chapters and these items of
21 interest are more or less items that were identified by the
22 Staff and contractors as this project has evolved, changes
23 we have made to improve the product.

24 One is at one time general corrosion and loss of
25 material for stainless steel in borated water systems was in

1 GALL in several mechanical system chapters. The Staff
2 determined that that is really not an aging mechanism, a
3 viable aging mechanism in that environment, so multiple
4 items were removed from the GALL report that addressed this
5 general corrosion and loss of material of stainless steel
6 and borated water systems.

7 With regard to Chapter V specifically, when we
8 removed the Aging Mechanism Program reference to Appendix J
9 testing from Chapter 5 for containment isolation valves we
10 discovered that the treatment in GALL of treatment isolation
11 valves was really no different from the treatment of valves
12 in other applications, noncontainment isolation
13 applications.

14 As such, we decided to delete a number of
15 containment isolation valves from Chapter V and address them
16 in the system-specific sections throughout other chapters of
17 the GALL report.

18 We also opted to remove penetration seals and
19 equipment and personnel hatches from Section C, which was
20 the containment isolation barrier section for Chapter V and
21 relocate them to Chapter II on structures, where Appendix J
22 testing was more common to that chapter, so we have no
23 reference to Appendix J testing, leak rate testing, in
24 Chapter V at all anymore.

25 Another item that we added to Chapter V and other

1 mechanical system chapters as well is atmospheric corrosion
2 of carbon steel components, external surfaces, and I touched
3 upon that when I went over the changes that were significant
4 to highlight from the 12-9 Rev. to the current Rev. of the
5 GALL report.

6 MR. SHACK: Is that based on field experience?

7 MS. FRANOVICH: Let me defer to Omesh or -- the
8 question is was atmospheric corrosion of external surfaces
9 of carbon steel components added because of field
10 experience?

11 MR. CHOPRA: These items were covered in Calvert
12 Cliffs application and Oconee application so we decided to
13 add it.

14 MR. SHACK: Oh, so this is a lessons learned from
15 the Calvert Cliffs?

16 MR. CHOPRA: Right.

17 DR. SEALE: Saltwater will do it.

18 MR. DAVIS: This is Jim Davis from the Staff.

19 In addition, the NEI guidance documents discuss
20 the loss of material for carbon steel and they say carbon
21 steel immersed in an aqueous environment with oxygen present
22 causes corrosion when about 90 or 95 percent of the
23 corrosion that we are seeing is in the atmosphere and it is
24 not immersed in a fluid.

25 DR. SEALE: Salt air.

1 MR. DAVIS: Salt air or just humid air.

2 DR. SEALE: The Navy knows about that.

3 MR. DAVIS: That was one reason it was added, to
4 make sure that it is understood that atmospheric corrosion
5 can occur.

6 DR. LEE: That first bullet on your slide there,
7 corrosion and loss of material for stainless and borated
8 systems, was deleted. Could you say again why that was
9 deleted?

10 MR. DAVIS: Because corrosion of borated solutions
11 doesn't corrode stainless steel. There is that code case in
12 616 now that says if you have stainless steel fasteners in a
13 bolted connection you don't have to remove the insulation to
14 do your system leak test because nothing is going to happen.

15 We have a lot of history on that.

16 DR. LEE: Okay, thank you.

17 MS. FRANOVICH: That concludes my presentation on
18 Chapter V. If there are any other questions --

19 [No response.]

20 MS. FRANOVICH: Then I think we can move on to
21 Chapter VI.

22 DR. SEALE: Sometimes it might be nice to hear
23 about your overall impressions of your loan assignment and
24 so on. We are very interested in the opportunities that
25 people from the regions get to have the opportunity to look

1 at other parts of the organization and so on.

2 Some people from the regions have made some
3 extraordinarily helpful contributions to some other tasks
4 that they have had assigned up here.

5 MS. FRANOVICH: Cross-pollination is good.

6 DR. SEALE: Yes, we appreciate your being with us
7 today.

8 MS. FRANOVICH: Thank you. Perhaps at the break I
9 could chat with you.

10 DR. SEALE: Okay.

11 [Pause.]

12 CHAIRMAN BONACA: Okay.

13 MR. MITRA: Good morning again.

14 CHAIRMAN BONACA: Good morning.

15 MR. MITRA: This is Eskay Mitra from License
16 Renewal Branch. I am the technical lead on GALL, Chapter VI
17 and with me are three gentlemen who have significant
18 contribution in Chapter VI writeup.

19 To my immediate left is Paul Shemanski of NRR
20 Staff, Mr. Jit Vora next to him is from Office of Research,
21 and to my right Mr. Bob Lofaro of Brookhaven National Lab.

22 With that, we have had a number of conversations
23 and discussions and meetings with NEI regarding Chapter VI
24 electrical components and I can declare victory that almost
25 99 percent of the comments we have resolved and the one

1 percent we didn't is very insignificant.

2 Most of them are resolved, some of them are partly
3 resolved, so I am not going to even mention those not
4 resolved because they are so insignificant.

5 The first comment is on treatment of inaccessible
6 and buried non-EQ cables. Actually this is two different
7 issues.

8 One is inaccessible cables, which are those cables
9 that are in conduits or in trays or a location which is hard
10 to access. Buried cables are generally medium voltage.

11 When an acceptable condition is identified for a
12 cable or a connection in the inspection sample a
13 determination is made as to whether the same condition is
14 applicable to inaccessible cable in connections.

15 The program also includes inaccessible which is
16 directly buried medium voltage cable within the scope of
17 license renewal that are exposed to significant moisture
18 simultaneously with significant voltage.

19 This topic was not addressed in the original GALL
20 document. We had, as I said, a number of discussions with
21 NEI and then we added these inaccessible buried cable in
22 GALL Chapter XI, Section E-1 and Section E-3, respectively.
23 Section E-1 is treatment of inaccessible cable and Section
24 E-3 is the medium voltage buried cable.

25 Number 2, comments, the bullet we have,

1 elimination --

2 CHAIRMAN BONACA: Before you move on, I
3 misunderstood. You said there were two issues here. One
4 was inaccessible cables --

5 MR. MITRA: Yes.

6 CHAIRMAN BONACA: And the other one was? I missed
7 something.

8 MR. MITRA: The other one is buried medium voltage
9 cable which is --

10 CHAIRMAN BONACA: Okay, but in your bullet it
11 specifically talks about non-environmentally qualified
12 cables.

13 MR. MITRA: Non-EQ cables.

14 CHAIRMAN BONACA: Non-EQ cables, okay, and what
15 was the disagreement with NEI or the comment from NEI?

16 MR. MITRA: The comment was that it was not
17 included in the first original GALL documents.

18 CHAIRMAN BONACA: Okay.

19 MR. MITRA: And we discussed about including it
20 with NEI and we mutually agreed to include it and we
21 included it in Chapter XI, Section E-1 and E-3.

22 CHAIRMAN BONACA: Okay, and there, just to give us
23 a summary, what kind of inspections are suggested in those
24 sections?

25 MR. SHEMANSKI: Paul Shemanski from Electrical

1 Branch.

2 Basically it is -- not a one-time inspection but
3 it is an inspection conducted every 10 years -- once every
4 10 years, so theoretically the first inspection would be,
5 say, Year 41, and the second inspection would be at Year 51,
6 and we feel that is appropriate because in general these are
7 slow-acting aging mechanisms for cables and by having
8 multiple inspections, one every 10 years, that allows the
9 opportunity to develop at least two datapoints and perhaps
10 some trending could be done, so these are primarily 10-year
11 visual inspections.

12 CHAIRMAN BONACA: These are non-environmentally
13 qualified so they are pre-IEEE standards or simply --

14 MR. SHEMANSKI: Basically the same type of cables
15 physically. The main difference is that these cables while
16 they may be exposed to a harsh environment they are not
17 required to perform any mitigating functions during the
18 harsh environment, so these in essence are declared non-EQ
19 cables. For the most part they are essentially the same
20 type of cables that are used on the EQ master list.

21 It doesn't make any sense to buy specialized EQ
22 cables and then a lower grade cable for non-EQ so in essence
23 these are the same type of cables physically as you would
24 find on the EQ master list.

25 CHAIRMAN BONACA: We asked a consultant to review

1 some of the issues on cables and he will provide you with
2 his feedback.

3 One comment he had made was the 10 year inspection
4 as again progresses could be accelerated, I mean to have a
5 more frequent inspection interval, if I understand it.

6 Could you comment on that?

7 MR. SHEMANSKI: Well, as a result of going through
8 the Oconee application, for non-EQ cables Oconee initially
9 did not identify the need for a cable Aging Management
10 Program. However, after an inspection down at Oconee and
11 further discussions with them Oconee agreed with the Staff
12 that a cable Aging Management Program should be developed,
13 so we worked very closely with Oconee on this issue as to
14 what would constitute an acceptable Aging Management
15 Program.

16 Of course, one of the elements was how often do
17 you conduct your inspections, and after many discussions we
18 felt a 10 year interval was an appropriate number, again
19 based on the fact that in general the aging mechanisms tend
20 to act fairly slowly with the exception of cables that might
21 be in hot spots for example but that is one area that they
22 will be looking for to identify any hot spots that would
23 lead to more accelerated degradation, so it was a mutually
24 agreed-upon test interval, 10 years.

25 Again by doing it every 10 years you would

1 experience two of these inspections during the renewal
2 period so perhaps you could do some trending. That second
3 datapoint would perhaps tell you if the aging is
4 accelerating.

5 As experience goes on, perhaps in the future maybe
6 that interval will have to be shortened, but for right now
7 we feel generally comfortable with a 10 year inspection
8 interval for these cable.s

9 CHAIRMAN BONACA: For example, Oconee already then
10 is trending now, starting now or is it going to trend
11 starting at 40 years?

12 MR. SHEMANSKI: Well, basically the way the
13 program is set up they would do their first inspection at
14 Year 40 or Year 41 --

15 CHAIRMAN BONACA: Well, there's isn't much
16 trending you can do with the two.

17 MR. SHEMANSKI: Yes, it's kind of minimal to do
18 trending but it's --

19 CHAIRMAN BONACA: Trending can maybe only tell you
20 something after 50 years.

21 MR. SHEMANSKI: Yes, the first inspection at Year
22 41 would basically give you baseline data and then when you
23 conduct your second inspection 10 years later you might be
24 able to get a little better feel to see if the aging is
25 staying relatively the same or accelerating.

1 DR. SEALE: It is going to be fascinating if you
2 have any hot spots after 40 years that you didn't have
3 before.

4 MR. SHEMANSKI: Yes. That would be quite unusual.
5 However, there are occurrences. Back in the mid-'70s I
6 recall one plant where they went through an outage. They
7 removed some insulation in the upper drywell, didn't realize
8 it until two years later when the cables started to degrade
9 so -- although they are rare, it is conceivable that could
10 happen.

11 Generally you would not expect a plant to all of a
12 sudden develop hot spots.

13 DR. SEALE: I certainly hope you could find a
14 direct cause like that if you had that problem.

15 MR. SHEMANSKI: Right. In that case it was fairly
16 easy.

17 DR. SEALE: Yes.

18 MR. SHEMANSKI: Right.

19 MR. GRIMES: This is Chris Grimes. I would like
20 to add that in addition to the specific inspections provided
21 to look for the condition of inaccessible cables, non-EQ
22 cables, we do expect that operating experiences are going to
23 continue to provide a feedback as events like Davis-Besse
24 provide experience and lessons across the industry.

25 Also, as several renewal licenses come into play

1 then there will be some experience that can be shared across
2 the industry for inaccessible cables.

3 If future experience in the future indicates a
4 need, then we would expect that the program would evolve and
5 change as the need arises.

6 DR. UHRIG: You indicated that these are medium
7 voltage. What do you mean? 440 volts? Are these power
8 cables to pumps and motors?

9 MR. SHEMANSKI: These are -- first of all, the
10 event occurred last October at Davis-Besse, and it was on a
11 4160 medium voltage cable buried -- well, it was underneath
12 the turbine building in a four-inch conduit. I believe it
13 was hooked up to the component cooling water pump and it
14 basically failed.

15 It was a catastrophic failure and the failure
16 mechanism was due primarily to moisture which somehow was
17 trapped inside a four-inch diameter PVC pipe and we don't
18 know exactly how long the moisture was in there, but
19 ultimately it got into the insulation and resulted in cable
20 failure, so that was what got our interest in terms of in
21 that case an inaccessible medium voltage cable subject to
22 significant moisture.

23 DR. UHRIG: And this is a cable that is feeding
24 current to a motor operating continuously or is this one
25 that is called upon as needed?

1 MR. SHEMANSKI: These component cooling water
2 pumps are continuously operated.

3 MR. SIEBER: That is more severe than --

4 MR. SHEMANSKI: Yes, right. Yes, the combination
5 of moisture ingress into a cable which is energized is where
6 you get into trouble.

7 DR. UHRIG: Do you have any different problems
8 with cables carrying sensor measurements, signal cables as
9 opposed to --

10 MR. SHEMANSKI: In terms of moisture?

11 DR. UHRIG: Yes, or the failure mechanism.

12 MR. SHEMANSKI: Well, those primarily for the most
13 part are in a dry environment so the main stressors there
14 are radiation and temperature.

15 However, I think as a result of our work on
16 GSI-168 we generally found that cables which are, I&C cables
17 which are exposed to between 20 to 90 percent moisture are
18 generally not affected.

19 If the moisture is above 90 percent, then we would
20 probably have some concern, but typically those cables are
21 not subject, the I&C cables are generally not subject to
22 moisture conditions, submergence, for example.

23 The Davis-Besse event was unique in that the cable
24 was actually a fairly long run, nearly 200 feet. The cable
25 was buried underneath the turbine building underneath the

1 concrete floor running through conduit. Somehow groundwater
2 perhaps got in, so that was sort of a unique situation.

3 DR. UHRIG: You mentioned GSI-168. This is
4 scheduled to be resolved in the near future.

5 Do you anticipate that the method by which it is
6 resolved will have an impact upon the license renewal
7 activities?

8 MR. VORA: This is Jit Vora from Office of
9 Research.

10 Dr. Uhrig, last Friday the Staff had the
11 opportunity to brief you about the state of the GSI-168 and
12 then qualification of low voltage I&C cables and provide and
13 discuss the test results which involve for the current
14 license term of 40 years and for the renewed license
15 consideration for 60 years.

16 Now with regard to the license renewal, the EQ is
17 considered as a time-limited aging analysis and the time
18 limitation is because the long-lived passive components such
19 as cables is not qualified to a specified life of 40 years.

20 What actually happens with the requirement of 10
21 CFR 54.21(c) it provides the three options to demonstrate
22 the qualification during the new license period and the
23 licensee must comply with one of the requirements and put in
24 place appropriate an Aging Management Program for renewed
25 license consideration.

1 Now since the CLB involving the EQ carries forward
2 during the license renewal term, whatever is the outcome of
3 the resolution of GSI-168 for the current license term will
4 carry forward.

5 One of the important things which you have time to
6 achieve within the next couple of months is that we are
7 evaluating various pros and cons of the various options for
8 the resolution of GSI-168.

9 An important part we need to do is actually
10 disseminate the research results and to hold an open public
11 meeting and dialogue about the research results, publish the
12 technical report and findings and get the feedback from the
13 IEEE, from the industry and the institution, so this is our
14 program for the next couple of months -- the resolution of
15 GSI-168 -- but in the bottom line, in the Part 54.21(c)
16 provides the appropriate method to address any EQ issues for
17 the license renewal consideration.

18 DR. UHRIG: The presentations at these public
19 meetings will be similar to what we received a couple of
20 weeks ago?

21 MR. VORA: Primarily focused on the test results
22 for the six LOCA tests that we accomplished through
23 Brookhaven and Wylie Laboratories and actually provide the
24 results.

25 Now the one portion of the test program which

1 involved cables and some of their experience during the 40
2 year and 60 year have already been discussed and
3 disseminated and the appropriate NRR interactions are taking
4 place with the industry. We also had a meeting with NEI and
5 we are also getting some feedback about experiences from the
6 operating nuclear power plants, so it was a very good
7 dialogue and discussion, and hopefully we will have similar
8 discussions with other test results too.

9 DR. UHRIG: We have a consultant's report here
10 which I just got hold of yesterday addressing some of the
11 issues, and it makes a point about separating the radiation
12 that is induced here sort of before an incident and after
13 the incident, as far as the testing procedure is concerned,
14 whereas, it seems to be, in the work that you alluded to, it
15 was sort of lumped together.

16 Do you think this will have significant -- would
17 give different results than you obtained with the Wiley
18 testing?

19 MR. VORA: From my experience actually, and we are
20 talking about a simultaneous versus the sequential?

21 DR. UHRIG: Yes.

22 MR. VORA: And we actually, when we actually
23 develop and design our test program for this current series
24 of tests, we factor into the results which are obtained by
25 Sandia where they are done actually, the simultaneous

1 pre-aging. And the program which we developed actually was
2 according to what were the original qualifications which
3 actually were conducted by the supplier and the
4 manufacturer. So we tried to stay within those areas and
5 those profits and parameters. And that was the idea, was to
6 see about the value at the original qualifications and did
7 not make any other changes in that regard.

8 Bob, do you have anything else?

9 MR. LOFARO: This is Bob Lofaro from Brookhaven
10 Lab. In regard to the issue of radiation sequencing, as Jit
11 mentioned, there have been some studies done which looked at
12 the differences in variation of sequences. In other words,
13 if you perform radiation aging prior to thermal aging, or
14 simultaneously with it, would that affect the condition of
15 the cables.

16 DR. UHRIG: That is the issue that is being raised
17 here.

18 MR. LOFARO: Right. And some work has been done
19 actually by Sandia some years ago where they actually looked
20 at the difference. And what they found is that for some
21 cables, there could be some difference. For other cables,
22 it made no difference at all. So it really depends on the
23 materials that you are looking at.

24 In the research program that we looked at, we
25 studied the aging techniques that have been used in the past

1 to qualify cables and looked at how adequately they really
2 simulated the aging that these cables see in actual nuclear
3 service. And what we found from the data that we could
4 gather, that the pre-aging techniques where you used
5 sequential thermal and radiation aging did an adequate job
6 of representing the aging on these cables.

7 So from our results, we feel that there is some
8 evidence to show that the sequential aging of the cables is
9 adequate.

10 MR. GRIMES: Dr. Uhrig, this is Chris Grimes. I
11 would like to add that, as a result of the recommendation by
12 Dr. Seale, we contacted the Los Alamos National Laboratory.
13 Jim Koons is the contact that we talked with, and he is
14 working in the polymeric materials aging program for the DOE
15 weapons program. And we found out, we learned a lot
16 actually about work that they are developing to explore
17 silicone chemistry and silica structure that is primarily
18 for sealing materials, but it is also contributing to models
19 that they are sharing with Sandia. And we already have a
20 Sandia contact through the Office of Research that has been
21 contributing to the exploration of the cable aging effects
22 and the implication of the test results and ways to
23 understand what the test results mean from the standpoint of
24 the reliability and uncertainty and cable qualification.

25 I expect that there is probably going to be more

1 in the future in the way of an improved understanding of
2 what the aging mechanisms are. The weapons program is
3 providing information that might improve the modeling and
4 future research. But I think I would go to the bottom line
5 on your question, it was, could the results of this work
6 affect license renewal? And my expectation is it will
7 probably affect the current license requirements as well as
8 license renewal at some point in the future, but right now
9 we don't see any concern about the existing programs that
10 are relied upon for cabling aging effects.

11 DR. UHRIG: Well, virtually, all of the plants
12 that are coming in are the older plants, for the simple
13 reason that they will need licensing sooner, and all of
14 those are the so-called exempted plants under GSI-168. And
15 most of those go back to the old DOR, Division of
16 Operational -- Operating Reactors regulations in effect in
17 the early '80s. And the testing there is minimal, as I
18 recall.

19 This was the genesis of my question here as to
20 whether it would really have an effect upon the licensing.
21 As I recall, in the Oconee, there was a specific testing
22 program that was laid out in respect to cables, if I
23 remember correctly.

24 CHAIRMAN BONACA: Yes, to inspect cables, yes.
25 They agreed to a program, and also for Calvert Cliffs, I

1 believe.

2 MR. GRIMES: But both of those plants also have
3 programs to maintain compliance with 50.49 in terms of the
4 qualification basis for their plant. And, as you mentioned,
5 for the plants that were licensed under the DOR guidelines,
6 I would expect that they would go back and look at the
7 qualification basis for their cables and incorporate the
8 results of the research work in terms of challenging whether
9 or not those qualification tests were sufficient.

10 MR. VORA: This is Jit Vora. I might add
11 something, that is a very good question. And during our
12 research program, when we evaluated some of the older
13 plants, what we have found out, that we believe that most of
14 the plant inventory, it was not required for them to do any
15 pre-aging of the cables. They actually, on their own
16 initiative, have done, first of all, the pre-aging of the
17 cables on their own initiative.

18 The second thing which came out from the research
19 result, we had actually tested some naturally aged cables,
20 one were 10 years old naturally aged cables, and 24 year old
21 naturally aged cables. And in both of the instances, these
22 cables which were actually originally came out from the DOR
23 guideline plants, they performed as good or better than the
24 artificially aged cables, and actually, these cables
25 actually, in the testing program that we implemented, using

1 the latest requirements, more stringent requirements. So I
2 think they gave us a confidence about the vintage of the
3 older cables, and I think they did okay.

4 DR. UHRIG: Thank you very much.

5 CHAIRMAN BONACA: Just one last question. Going
6 back to the Ocone event, when they found that -- when they
7 had a problem with a cable buried under the turbine
8 building, --

9 MR. SHEMANSKI: That was Davis-Besse.

10 CHAIRMAN BONACA: I'm sorry, Davis-Besse. Did
11 they follow with inspections of other cables in the same
12 cable trays?

13 MR. SHEMANSKI: Yes, they did. As a matter of
14 fact, the cable that failed was last October, and it was on
15 component cooling water pump number 2, 4160 volt cable, and,
16 again, there was no indication. It was just a catastrophic
17 failure that failed, the cable basically shorted to ground
18 due to water ingress.

19 In addition, they have component cooling water
20 pumps number 1 and number 3, and what they did shortly
21 thereafter was they removed those cables. They did some
22 preliminary electric measurements to get baseline data, but
23 because of the component cooling water pump number 2 cable
24 that failed, Davis-Besse decided to replace component
25 cooling water pump number 1 and number 3 because all three

1 of these cables are basically in parallel underneath the
2 turbine building, and they were -- they wanted to find out
3 if component cooling water pumps number 1 and 3 also had
4 water in the conduits. They were both dry.

5 So, nevertheless, they did pull out those cables
6 and they were in perfect condition. They replaced them with
7 new cables. In addition, they identified --

8 CHAIRMAN BONACA: And they are still grounding,
9 however, in the same cable tray?

10 MR. SHEMANSKI: Well, not cable tray, these are
11 underneath. They are plastic, four inch diameter PVC tubes.
12 And they identify the potential for that same failure
13 mechanism to occur on other systems, I believe the makeup
14 water system and the service water system. They apparently
15 are designed in a similar manner where perhaps moisture
16 could get in. Nevertheless, they did run electrical tasks
17 on those cables and they appear to be in good condition.
18 They did some partial discharge testing and I believe some
19 power factor testing, enough electrical tests to give them
20 confidence that those cables are good.

21 So it appears to be a -- we had concerns as to
22 whether or not this was a generic problem, because the
23 moisture, through osmosis, got through the insulation, which
24 is not supposed to happen. But, anyway, according to the
25 root cause report they just sent in, it appears to be just

1 an isolated event that occurred at Davis-Besse.

2 MR. VORA: I might add one more item, for about 23
3 year old cable, and actually when the moisture actually got
4 into it, and before the water level going up and down, it
5 will go right through the EPR insulation on it. From the
6 experience, I think one of the things which I feel was very
7 important that they actually were able to use some
8 diagnostic and condition monitoring like the power factor
9 measurements and the partial discharge measurement, and to
10 develop enough confidence about their effectiveness to test
11 different types of cables. So I think that was very
12 beneficial I think to the entire industry to learn from this
13 experience.

14 And we are trying to disseminate that result,
15 discuss with IPEEE standards that this is one way, sometime,
16 if somebody wants to evaluate the medium voltage buried
17 inaccessible cable, the electrical techniques might be one
18 way to go about doing that.

19 MR. SHEMANSKI: Just one more comment. Again,
20 this is another example of where we took recent operating
21 experience and tried to incorporate it into GALL and the
22 SRP.

23 CHAIRMAN BONACA: Thank you.

24 DR. LEITCH: In Chapter XI E-3, the description of
25 non-EQ inaccessible medium voltage cables, it speaks about

1 the cable should be tested once every 10 years. Would some
2 of your experience be factored into that testing? It
3 doesn't particularly describe how that testing would be
4 done, or what type of testing is intended there.

5 MR. SHEMANSKI: At this point we don't know
6 exactly what type of electrical measurements will be made.
7 We discussed this with Oconee, this particular aging
8 management program, although the failure occurred at
9 Davis-Besse. We worked very closely with Oconee to develop
10 this particular aging management program for medium voltage
11 cables. And the commitment we have now basically is that
12 they will test this cable, these 4160 volt cables, medium
13 voltage cables once every 10 years.

14 However, Oconee at this point did not commit to
15 the exact test that will be performed. As they get closer
16 to a testing time requirement, say year 41 roughly, at that
17 point they will make a selection as to which is the most
18 appropriate electrical test. They didn't want to tie
19 themselves into a particular test at this point like partial
20 discharge or power factor. Between now and the time these
21 cables are tested, perhaps better techniques, or newer or
22 additional techniques will be available. So they just -- we
23 just left it at the fact that these cables will be tested,
24 recognizing that the method will be determined shortly
25 before the test is conducted.

1 DR. LEITCH: Okay. Thank you.

2 MR. SHEMANSKI: In addition, they are also looking
3 for moisture. They have moisture monitoring programs trying
4 to see if moisture is getting into these conduits or
5 trenches, wherever the cables are installed. They have
6 moisture detection programs.

7 DR. LEITCH: I guess just one further curiosity
8 question is that the Davis-Besse thing, are they sure that
9 moisture got into cable number 2 and moisture did not get
10 into 1 and 3?

11 MR. SHEMANSKI: Yes. As a matter --

12 DR. LEITCH: I mean is that just hypothesized or
13 is there data?

14 MR. SHEMANSKI: No, that was an actual -- when the
15 failure occurred, that cable was removed from component
16 cooling water pump number 2, and the cable physically was
17 about 1-1/4 inches in diameter. You could actually run your
18 fingers down the cable and water would ooze out.

19 DR. LEITCH: I see.

20 MR. SHEMANSKI: So that cable was essentially
21 saturated. However, the cables in component cooling water
22 pumps number 1 and 3, which were just adjacent to the one
23 that failed, they were just -- they were dry. They were
24 removed, and they came out dry and they tested fine
25 electrically. So, it is sort of a mystery as to how water

1 got in across the conduit seal, somehow it was cracked.
2 Ground water got in.

3 DR. LEITCH: And presumably, that condition still
4 exists, right?

5 MR. SHEMANSKI: Well, the potential still exists,
6 I believe, yes. Yes.

7 MR. VORA: I think with this, because there is no
8 moisture underneath and the cable is removed actually from
9 component cooling water 1 and 3, they almost look like brand
10 new cable after 23 years of experience. So I think that
11 provides a confidence about the continuity for 40 years,
12 even for extended life. And, also, with the development of
13 the new diagnostic techniques, the combination of that
14 experience of the 23 years, and also the diagnostic
15 technique, I think you will see enough insight and tool for
16 the 60 year life if we need to look into it.

17 DR. LEITCH: Okay. Thank you.

18 MR. MITRA: I don't know if we answered Dr.
19 Uhrig's question about medium voltage cable. What about
20 definition? Medium voltage is anything within 2 kv to
21 15 kv, and anything less than 1,000 volt is the low voltage
22 cable, and over 15 kv is the high voltage, which is very
23 unique in a nuclear power plant. We almost don't have it.

24 DR. UHRIG: This is an IPEEE definition, or is
25 this an NRC?

1 MR. MITRA: No, this is IPEEE.

2 DR. UHRIG: IPEEE.

3 MR. MITRA: Yes. Okay. The second comment we had
4 about elimination of certain known EQ long-lead passive
5 electrical components, and we had considerable discussion
6 with the industry and we concurred. And we removed
7 following components from GALL since their aging effects are
8 not determined to be significant in first two applications,
9 which is Calvert Cliffs and Oconee, such that they will
10 result in a loss of component function and no aging
11 management programs are required for this following
12 components. One is -- number 1 is electrical penetration
13 assemblies, electrical busses, electrical insulators,
14 transmission conductors and ground conductors. These are
15 eliminated based on the actual experience, operating
16 experience.

17 CHAIRMAN BONACA: And you feel that that
18 elimination can be generic, irrespective of the environment?

19 MR. MITRA: Well, --

20 CHAIRMAN BONACA: I mean you have two
21 applications, but you feel that this conclusion of
22 eliminating that is applicable to all next applications
23 coming?

24 MR. SHEMANSKI: Not necessarily. The reason that
25 these components were put on the -- or we added them to

1 GALL, they originated primarily from the Oconee application.
2 As you recall, Oconee has the Keowee dam and they use the
3 hydro units for their emergency power.

4 CHAIRMAN BONACA: Yes.

5 MR. SHEMANSKI: So Oconee scoped in the
6 transmission conductors, ground conductors, large electrical
7 busses. And while they were identified in the Oconee
8 application, the aging mechanisms were not -- or aging
9 effects were not determined to be significant. So Oconee
10 concluded that they do not require an aging management
11 program on these components, and we agreed with them in our
12 safety evaluation report.

13 So we decided that there was really -- since there
14 are no current industry aging management programs for these
15 type of components, we decided to remove them from GALL.
16 However, there is a potential on some of these, for example,
17 there may be plants close to the ocean where salt-spray
18 could be a program. We may have corrosion on some of these
19 components that would be in scope, electrical insulators or
20 transmission conductors.

21 So, in general, most plants should not have a
22 problem in terms of requiring an aging management program
23 for these. However, on a plant-specific basis, as we go
24 through, as applications come in, some of these may pop up
25 in scope and perhaps require an aging management program.

1 CHAIRMAN BONACA: Okay.

2 MR. SHEMANSKI: Oconee is located up in a
3 mountainous area.

4 CHAIRMAN BONACA: No, I understand that. Just I
5 thought from the presentation that it was a generic
6 exclusion, which you are telling me it is not.

7 MR. SHEMANSKI: Right.

8 CHAIRMAN BONACA: I mean there will still be
9 operating experience, for example, the particular site and
10 that will point out whether or not there is some activity,
11 some review that has to be done.

12 MR. SHEMANSKI: Right.

13 CHAIRMAN BONACA: Okay. Thank you.

14 MR. MITRA: Number 3 is inclusion and recognition
15 of industry reports useful for aging management. Staff
16 concurred with NEI to add following industry documents to
17 the reference of Chapter XI: Sandia 96-0344, Aging
18 Management Guidelines for Commercial Nuclear Plants.
19 Electrical Cable and Terminations is September 1996, and
20 EPRI PR-109619, The Guidelines for the Management of Adverse
21 Localized Equipment Environments, which is published in June
22 1996.

23 The last comments was separation of discussion of
24 aging management program, non-EQ, and time-limited aging
25 analysis for EQ. It used to be addressed in one place

1 before the staff and NEI mutually agreed to separate EQ and
2 non-EQ components to prevent confusion. EQ electric
3 equipment are addressed as TLAA based on 10 CFR 50.49, the
4 aging management program in Chapter VI-B and X E-1, and
5 non-EQ electrical cables and connections are subject to
6 specific aging management program are addressed in Chapter
7 VI-A and XI E-1, E-2, E-3 and E-4.

8 Any question on industry comments?

9 [No response.]

10 MR. MITRA: We have our three license renewal
11 issues, 98-077, which is table consistent with the rule.
12 There is 89, intended function of regulation, and 97 is
13 system, where it says component level functions. These
14 issues are resolved on the basis that they are obsolete.
15 The NEI comments were that the table is in the previous
16 version of GALL, is taken from IPEEE 1205, Aging Assessment
17 of Class 1-E equipment, and it was mainly focused on aging
18 mechanism, but the license renewal rule not focuses the
19 effect of aging on structures on components. Therefore, the
20 tables are removed, so these issues are resolved.

21 That is all we have.

22 CHAIRMAN BONACA: Any other questions?

23 DR. SEALE: I assume that there is some
24 communication of the utility of these fault detecting
25 measurements that were used at Oconee -- or at Davis-Besse

1 with the rest of the industry. It strikes me that that is
2 pretty cheap, I would think, and something that might be
3 very useful to other people.

4 MR. VORA: I think you are absolutely right, Dr.
5 Seale. Both Paul Shemanski and myself, we are members of
6 the working group of the IPEEE subcommittees and working
7 group, both on the aging management and also with regards to
8 the operations, maintenance and surveillance of the
9 electrical equipment. And through that avenue, we are able
10 to disseminate the discussions and results.

11 And, also, we also had the morning report we
12 issued, we talk about the results of this effect. We also,
13 when we have our telephone conversation with the licensees,
14 that is one thing we didn't create, that once the report is
15 out, it should be widely distributed and available so we all
16 can learn from that experience and move on to the next step.
17 So I think it is a very good comment.

18 DR. SEALE: The only thing now, it would be nice
19 to know how good a predictor it is. That is, how much of an
20 early heads-up you get. Of course, it depends on the size
21 of the leak.

22 MR. VORA: Yes, sir. And I think what they did
23 actually, if I remember right, they used the double power
24 factor which is commercially available equipment, and they
25 did the partial discharge to that, and they are able to make

1 a correlationship in the value of the last factor and the
2 partial discharge. And then when actually they removed it
3 and they took these sets of cables into the laboratory and
4 they did some dissections and post-mortum examination and
5 testing. So I think they have a good collection of data.

6 And during our conversation, they did agree that
7 they would like to discuss this widely through probably the
8 course and standards activities. So it is happening, and I
9 think we are pleased with that result.

10 DR. SEALE: Actually, it has nothing to say here,
11 but INPO publishes some sort of things about -- we get
12 copies of that manual or that publication they put out about
13 every quarter, I guess it is, on things like that,
14 decontamination practices, other things, too. It strikes me
15 this would be the kind of thing that might be very useful in
16 propagating that experience.

17 MR. VORA: I think you are absolutely right. And
18 I think we got a couple of points on it, and we thought we
19 might be able to obtain some more data from the other
20 components. Even if they did not find any anomalies in
21 other two sets of cables, even that data itself was also
22 useful.

23 DR. SEALE: Sure.

24 MR. VORA: To put everything together in a package
25 for the future use.

1 CHAIRMAN BONACA: Okay. Thank you very much.

2 MR. MITRA: Thank you.

3 MR. GRIMES: Would you like to proceed with the
4 auxiliary systems discussion?

5 CHAIRMAN BONACA: I think so. I think we should
6 probably complete this presentation and then take a break at
7 that time.

8 MS. BLOOMER: Chuck.

9 [Pause.]

10 MS. BLOOMER: Hi. I'm Tamara Bloomer. I'm a
11 materials engineer in NMSS, Division of High Level Waste,
12 who for the summer was on rotation to license renewal. I
13 was charged with being the lead for auxiliary systems, which
14 is Chapter VII of GALL and associated section of the SRP.

15 Similarly to what Ronnie went through, I'm just
16 going to give you a brief overview of some of the major
17 changes that occurred between the '99 version and the 2000
18 version of GALL before I get started on the overheads.

19 In Section C(3), the cooling tower structural
20 elements were removed. They are incorporated in Chapter 3
21 of the GALL report. For consistency's sake, we found that
22 we were addressing them, looking from different angles, when
23 we put them in structures and how they're all going to be
24 dealt with the same way.

25 In Section E(4) -- actually, all of Section E(4)

1 was removed. The situation was the refueling water tower --
2 excuse me, the refueling water tank was moved to Chapter 5,
3 and with the removal of stainless steel items and
4 fluoridated water, and the carbon steel items moved to the
5 new additional section that was added, and bolting being
6 moved to that section, which is now Section I as well, there
7 was nothing left in Section E(4), and so that was removed
8 completely. So the E(4) you have now was previously E(5).

9 Liquid waste disposal system, which was the I,
10 Section I of Chapter VII, was removed. Liquid waste
11 disposal is not in scope, and due to the decision on the
12 hatch, 2.206 petition that was brought by the Union of
13 Concerned Scientists and the disposition of that petition,
14 we felt that it was best just to remove it from GALL as a
15 reference. Section I now is, in fact, the carbon steel
16 components section that was universally added in the
17 chapters for GALL.

18 A lot of other items changed that will change the
19 look of Chapter VII. Chapter VII originally was very large.
20 It is still a larger section, but it has decreased by almost
21 half, by moving a lot of the things into Chapter XI,
22 similarly changing a lot of the terminologies and the
23 consistency of terms -- things like the studs and nuts are
24 now closure bolts, so rather than having line items for
25 each, we have a line item that encompasses. That changes

1 the way the chapter looks itself. Also, filter housings
2 were added to Section F(1), F(2) and (3), which came from
3 Chapter V. There were other small changes that you can see,
4 but those are really the major ones.

5 Again, Chapter VII was a very large section. It
6 encompassed easily 45 pages of NEI comments. We had a large
7 number of staff involved in reviewing their comments, as
8 well as GALL itself, Chapter VII. There are four people
9 here, but there were over thirty reviewers from NRC staff.
10 Three of the reviewers here, you have already met, and I
11 will allow --

12 MR. TAM: Shin-Wing Tam from Argonne National
13 Laboratory.

14 MS. BLOOMER: -- were involved. The ones that I
15 have left -- in fact, some have been touched upon earlier
16 today. I'll just go over them briefly, and if you have any
17 questions.

18 The spent fool -- excuse me. Whoa.

19 [Laughter.]

20 MS. BLOOMER: The spent fuel pool cooling and
21 clean-up corrosion. NEI felt that the water chemistry
22 alone, again, would, is used to mitigate corrosion. And
23 therefore, a "no" in the "further evaluation" column and a
24 no need for one-time inspection was required. We have left
25 the water chemistry program that is referenced in Chapter

1 XI, and the use of a one-time inspection as a possible
2 alternative to, to look for corrosion.

3 The buried piping is an aging management program
4 that is now also in Chapter XI. NEI felt that buried piping
5 is treated differently in each plant and should be listed as
6 a plant-specific activity. We have incorporated a buried
7 piping AMP in Chapter XI, based on a NACE program --
8 National Association for Corrosion Engineers -- which uses
9 coating, wrapping, and cathodic protection, and feel that if
10 that is followed, this is something that has been reviewed
11 by the staff and is an appropriate AMP. There are other
12 alternatives, but they would be reviewed on a plant-by-plant
13 basis if they choose not to use this.

14 In the aging mechanisms for bolts, across Chapter
15 VII, it countered wear as one of those aging mechanisms.
16 Wear is not considered an aging mechanism in the internals,
17 and that should be the harshest determination of where aging
18 mechanisms occur. If it's not considered relevant there, we
19 felt that we should remove it from the rest of Chapter VII.

20 Boric acid corrosion parameters monitored. NEI
21 felt that the statement that we originally had in the '99
22 version of, "one or more studs are removed and examined for
23 evidence of boric acid corrosion," was too proscriptive.
24 And we have, in the boric acid corrosion program in Chapter
25 XI, clarified that and request a removal and examination

1 only upon evidence of leaking -- not necessarily evidence of
2 leaking at that bolt, but evidence of leaking in the area
3 for which the bolts would be susceptible.

4 The stand-by liquid control, which is a boiling
5 water reactor system, has sodium pentaborate as one of the
6 elements involved in the water. And we have found that
7 stress corrosion cracking is an issue. NEI felt that the
8 level of sodium pentaborate that is used in most of the
9 plants is insufficient to create this aging mechanism. But
10 we have, in fact, retained reference to that in the
11 evaluation and technical basis column, and say that sodium
12 pentaborate does have a susceptibility or decrease the
13 susceptibility for stainless steels to set up stress
14 corrosion cracking and therefore should be managed.

15 The diesel fuel oil system coating degradation.
16 NEI felt that failure of coatings was, does not result in a
17 lost of component function. Therefore, coatings should not
18 be managed. We have added an outer surface of above-ground
19 carbon steel tanks AMP to Chapter XI, which we require
20 inspection of the paint, coating, sealing, and caulking, and
21 possibly a one-time thickness measurement of the tank
22 bottoms inaccessible areas, so that you can see whether or
23 not any degradation is occurring in fact.

24 CHAIRMAN BONACA: You said there is one-time?

25 MS. BLOOMER: It's not listed specifically as a

1 one-time inspection in that program, but if we do a one-time
2 measurement and find that there is no decrease in thickness,
3 then we're not going to require anything further beyond that
4 point. If they in fact find that there is some corrosion
5 occurring, then of course a whole other set of plans come
6 into requirement.

7 Lastly, stress corrosion cracking of stainless
8 steel below 140^o F -- we have an operating experience
9 associated with an Information Notice 97-019 on safety
10 injection system weld flaw at Sequoia Nuclear Power Plant,
11 in which pipings had through-all cracking due to stress
12 corrosion and were used in environments less than 140^o C.
13 NEI felt that that was a site-specific evaluation, that it
14 is not a generic issue, and for stainless steel, we feel
15 that that may be a correct assumption and have therefore
16 removed that item, currently, from GALL.

17 The only license renewal issue that was relevant
18 to Chapter VII --

19 DR. SHACK: Just --

20 MS. BLOOMER: Yes?

21 DR. SHACK: Are those all controlled water
22 chemistry systems?

23 MS. BLOOMER: Are, which?

24 DR. SHACK: Where you've removed the stress
25 corrosion cracking of the stainless steel?

1 MS. BLOOMER: This is stress corrosion cracking at
2 less than 140^o.

3 DR. SHACK: Right.

4 MS. BLOOMER: Anything above that is still a
5 situation.

6 DR. SHACK: But are those all situations where the
7 water chemistry is controlled?

8 MS. BLOOMER: I'm not sure if that is an
9 exclusionary --

10 MS. PARCZEWSKI: Yes. The water chemistry is
11 controlled in this instance.

12 MS. BLOOMER: In all the systems that we use?

13 MS. PARCZEWSKI: Yes.

14 DR. SHACK: Because you can certainly get stress
15 corrosion cracking with stainless steel at 140^o F in the
16 wrong chemistries.

17 MS. BLOOMER: Again, that would probably be more
18 of a plant-specific basis, if the environment was different
19 than what a generic environment is going to be, and so it
20 wouldn't appear in GALL. It would be evaluated by the staff
21 in an application as plant-specific.

22 DR. SHACK: Well, one always gets concerned in
23 stagnant water systems.

24 MS. BLOOMER: Yes.

25 DR. SHACK: I mean, one has water chemistry and

1 one has water chemistry.

2 MS. BLOOMER: Correct. Correct, and there are
3 some instances of that that we had great debate with NEI
4 over, in GALL, where we felt that the water chemistry, other
5 than the borated water, other water chemistries may not be
6 sufficient in stagnant conditions to alleviate all types of
7 corrosion, including --

8 DR. SHACK: I mean, your borated one was general
9 corrosion, and I'm willing to grant you that the general
10 corrosion of stainless steel is not, not going to concern
11 me.

12 MS. BLOOMER: As well as [inaudible] borated
13 systems, borated water systems.

14 DR. SHACK: But the stress corrosion cracking's a
15 different beast.

16 MS. BLOOMER: And we do have stress corrosion
17 cracking in a number of areas in Chapter VII that have
18 maintained. Okay.

19 The license renewal issue that we find for Chapter
20 VII is failure detection that was brought up for the SRP in
21 '97. And it was based on the BG&E application and the use
22 of failure detection as an AMP. It was an open issue. We
23 felt that the program, the water-based fire protection
24 program in Chapter XI closes this issue -- that and the use
25 of the fire protection program with further evaluation for

1 specific systems is sufficient and removes the failure
2 detection limitation they saw.

3 And again, an item of interest that came up is the
4 water-based fire protection aging management program. The
5 ones that we have seen, we feel need further evaluation. We
6 have proposed possible other alternatives they can look at.
7 They are basing -- "they" being the plants that have come in
8 -- Conee as well as Hatch, and ANO are basing their fire
9 protection programs on guidance by NFPA. The staff feels
10 that NFPA alone is not necessarily sufficient unless they
11 agree to use specifics in NFPA. NFPA 13, NFPA 25 -- 25 is a
12 one-time inspection for sprinkler heads at or before 50
13 years. And that would be applicable to the extended period
14 for license renewal.

15 Similarly, we feel that internal visual
16 inspections are not sufficient for fire protection,
17 especially for wet fire, wet systems, and that you do need
18 interior inspections, either by ultrasonic or radiographic
19 or, in case of removal of a piece to inspect it and make
20 sure that the piping is not being corroding or there is not
21 [inaudible] involved.

22 We have listed -- these are not necessarily new
23 requirements that we've put in GALL. They are requirements
24 that came from the experience of working with the other
25 licenses.

1 DR. SEALE: Well, I'm sure our chairman would
2 point out that fire protection is in the category of "what
3 have you done for me lately?" --

4 MS. BLOOMER: Yes.

5 DR. SEALE: -- kind of thing. And so it deserves
6 some tender loving care from people who are a little bit
7 more objective, if you will, than merely being guided by
8 the, the simple comment. So I think everything you can do
9 to not let the fire protection program sort of slip away.

10 MS. BLOOMER: No.

11 DR. SEALE: That's very important.

12 MS. BLOOMER: GALL being a living document, NFPA
13 has comprised a task force to see what kind of aging
14 programs -- because aging was not something that they were
15 really looking at prior to this, and they're trying to
16 develop some aging programs that may be useful, not only for
17 the nuclear industry, but for a variety of industries. And
18 once that is determined and after the staff has reviewed it
19 and if we find it appropriate, that is something that may in
20 fact find its way into GALL as well.

21 DR. SEALE: Okay.

22 MS. BLOOMER: Are there any other questions at
23 this time?

24 CHAIRMAN BONACA: Thank you very much.

25 SPEAKER: We have one more section on steam and

1 power conversion.

2 CHAIRMAN BONACA: Yeah. I would propose that we
3 just complete that, and then we take a break.

4 MR. STRNISHA: I'm Jim Strnisha. I'm the lead
5 reviewer for steam and power conversion systems, and the
6 reviewers here with me -- you've met a couple of them, but
7 to my far left is George Georgiev, Department of
8 Engineering; Kris Parczewski from Division of Engineering;
9 Jim Davis, Division of Engineering; Omesh Chopra, Argonne
10 National Laboratory.

11 I'd like to start off first with the major changes
12 between GALL, the 12/99 version, and the current August
13 version.

14 The first part would be similar to what was
15 changed in Chapter V and Chapter VII. In there, we added
16 Section VIII, External Surfaces of Carbon Steel Components,
17 and we added Closure Bolting. And for External Surfaces of
18 Carbon Steel Components, Boric Acid Corrosion Program was
19 added. And that is in Chapter XI M-5. And we also added
20 the Coating Program, which is Chapter XI S-8. And for the
21 Closure Bolting, the Bolting Integrity Program in Chapter XI
22 M-12 was also added.

23 And one other re-format change that we made, which
24 is generic for all the other chapters, is the aging
25 management programs that were in the technical evaluation

1 block were moved to Chapter XI. Examples of those were the
2 water chemistry Program, Chapter XI M-11; the Flow
3 Accelerated Corrosion Program, Chapter XI, M-6; and the
4 Bolting Integrity Program. So you'll find those back in
5 Chapter XI. Any questions?

6 [No Response.]

7 MR. STRNISHA: Okay. n my overhead slide here --
8 two of the major issues here that are bulleted, one NEI
9 comment was, "one-time inspections are not needed with the
10 water chemistry program." The staff position on this is,
11 for superheated steam piping where corrosion is negligible,
12 the inspection is not needed. And on piping other than
13 superheated steam, where corrosion is a concern, the
14 inspection is invoked in that section.

15 DR. UHRIG: You're really talking about the B&W
16 plants with the superheat?

17 MR. CHOPRA: Um hmm.

18 DR. UHRIG: Those are the only ones that have
19 superheat.

20 MR. STRNISHA: Okay. Thank you. The other line,
21 the other NEI comment, "flow accelerated corrosion is
22 negligible for superheated steamlines." The staff agrees
23 with that. The reason I'm bringing it up though is, the
24 staff position is to leave superheated steamlines in the FAC
25 program, since the program conducts an analysis to determine

1 which piping is most susceptible to FAC. This approach
2 allows the program to evaluate and select piping to be
3 monitored. And that's the reason we're gonna leave that in.

4 DR. SHACK: I mean, is that true now for operating
5 plants that go -- I mean, they all have flow-assisted
6 corrosion programs. Is that piping in the FAC program now,
7 and they go through the analysis?

8 MR. STRNISHA: I believe it is.

9 MS. PARCZEWSKI: Yes. Actually, if it is
10 superheated steam, there would be no FAC. But however, if
11 all the other pipe, like construction pipe, there might be
12 some moisture present. So obviously, it does [inaudible] to
13 be included in the program. And we don't know exactly which
14 pipe carry pure, in the system pure superheated steam.
15 That's -- some of the include, as I say, safety precautions.

16 DR. SHACK: Okay, but then the plant makes a
17 specific analysis of its piping.

18 MS. PARCZEWSKI: Yeah, that's right.

19 DR. SHACK: As part of the FAC program.

20 MS. PARCZEWSKI: That's right. It's a part of the
21 FAC program.

22 MR. STRNISHA: As far as license renewal issues
23 and items of interest go, in this chapter we have none. So
24 that's the only slide that I have.

25 DR. SEALE: I might suggest to my colleagues that

1 as we look at an entirely different issue -- namely, the
2 consequence of various power upgrade proposals that people
3 are going to be coming forward with -- this is an area where
4 we ought to be very careful. You just reminded us.

5 [Laughter.]

6 CHAIRMAN BONACA: Okay. Any other comments or
7 questions?

8 DR. SHACK: Well, I just noticed in the actual
9 aging management program for FAC, you note that one means of
10 mitigation is to adjust the oxygen concentration. But
11 everybody carefully dances away from specific numbers. Is
12 that all -- it goes into your FAC program, and then it sort
13 of gets screened out at that point?

14 MR. PARCZEWSKI: Usually the FAC's reduced their
15 concentration [inaudible] concentration is about 40 ppb.
16 This is a number from EPRI program.

17 DR. SHACK: No -- I'd certainly buy that.

18 MS. PARCZEWSKI: Obviously, it's very difficult to
19 maintain in some cases. I understand, it's my
20 understanding, he did some of the plant, even they keep
21 adding oxygen, you know, to the -- keep them to the
22 [inaudible].

23 DR. SHACK: Well, and the Germans make a career
24 out of adding oxygen to water, to eliminate flow-assisted
25 corrosion. It's a bit trickier in nuclear reactors.

1 MS. PARCZEWSKI: After removing oxygen by hydrogen
2 you have different chemistry.

3 DR. SHACK: Right. Well, sometimes it's good to
4 remove it; sometimes it's bad.

5 [Laughter.]

6 CHAIRMAN BONACA: Okay. There are no further
7 questions. I thank you for the presentation. And we will
8 take a break, 15 minutes. We will resume the meeting at 25
9 of 11.

10 [Recess.]

11 DR. LEE: I'm going to describe the Reg Guide we
12 issued. Back in 1996, we usually draw up Reg Guide to
13 propose to endorse NEI Guidance document 95-10, Revision 0.
14 Since 1996, we have considerably developed the
15 implementation for license renewal. We have reviewed the
16 applications. We have reviewed topical reports, and then we
17 have to tackle the system program Gall & SRP. So since
18 then, the -- we got additional experience, and NEI has
19 revised 95-10. And the current revision is revision 2. So
20 in the draft Reg Guide, 1104, that we issued in office 2000,
21 we proposed to endorse revision 2.

22 Okay, right now, we are proposing to endorse
23 revision 2 with no exceptions. We realize that there might
24 still be inconsistencies between the Board, the SRP, and
25 95-10 because GALL & SRP were evolving when we were working

1 it through the office. And NEI was working on 95-10
2 separately. But NEI is expected to make conforming changes
3 to make it consistent. Okay. Unless there's other
4 questions, otherwise, I have NEI discuss 95-10.

5 CHAIRMAN BONACA: Any questions from the members?

6 DR. LEE: Yeah, I thought that in the review that
7 GSRP and the NEI document interfaced well. And clearly they
8 have different purposes, but they overlapped. We retrapped
9 all our raw materials from each other.

10 DR. SEALE: Truly complementary.

11 CHAIRMAN BONACA: Alright so we have now the NEI.

12 DR. SHACK: You passed.

13 MR. WALTERS: Good morning. I did, indeed. Well,
14 at least I hope I did. You got the light on. We just had a
15 license renewal workshop in Florida, and one of the benefits
16 is that you get to use presentations from that here. So
17 it's quite a time saver.

18 DR. SEALE: You mean you're telling them the same
19 story you're telling us.

20 MR. WALTERS: Told them the same thing. My name
21 is Doug Walters. I'm with NEI. I have responsibility for
22 renewal. It's a pleasure to be here today and talk to you
23 about NEI 95-10, which is our guidance document for
24 implementing the requirements of Tensia, Part 54.

25 Before I get into the remarks, I will just make a

1 couple of observations. First of all, I -- sitting in the
2 audience and listening to the staff's presentations, I want
3 to compliment them for the hard work that they put in on
4 developing GALL and the SRP, because we believe that if you
5 look at the significant events that have occurred over the
6 last year, certainly the top one is the fact that we had two
7 license renewal applications submitted and approved, and we
8 have three others under review. But second to that would be
9 these documents because they are extremely important to
10 furthering the stability, predictability, and efficiency of
11 the process that we think we need when we look into the out
12 years and the number of applications that are expected to be
13 submitted.

14 Also, I just wanted to make a comment about some
15 of what I heard, maybe to put in perspective our comments.
16 What we are concerned about when it comes to GALL, and I'm
17 at a very high level here, is that we ought to be capturing
18 lessons learned. And what we found acceptable on the first
19 two applications. And our concern is that GALL can become a
20 document that's a wish list. We'd like you to do X, Y, and
21 Z. And we looked very carefully when the GALL said further
22 evaluation required to see if there was a basis for why some
23 addition or enhancement to the program was needed. And
24 that's really what our comments focused on.

25 One-time inspections are not aging management

1 programs, by the way. I know you're aware of that, but the
2 purpose of the rule is to have aging management programs in
3 place to ensure functionality. And one-time inspections, as
4 an example, are not aging management programs. We don't
5 object to those necessarily, but that's where we're coming
6 from when we looked at GALL.

7 But I'm here today to talk about our guidance
8 document. It was actually developed back in '95, hence the
9 95-10 number. We have within NEI a license renewal task
10 force and a working group. They were the principal
11 overseers, if you will, of the document. It was actually
12 written by the task force, and it provides guidance to
13 whoever wants to use it for preparing or implementing the
14 requirements of the rule.

15 I'm going to go through the table of contents real
16 quickly. We start off with an introduction, then an
17 overview of Part 54. Then we get into the scoping process,
18 which is in Chapter 3, and I'm going to go through these in
19 a little more detail in a second. And then Chapter 4
20 provides guidance on preparing the IPA. In Chapter 5, we
21 address time limited aging analyses. And in Chapter 6, the
22 -- we have the -- the title of the chapter is "Renewal
23 Operating License," but this is where -- excuse me -- we
24 have incorporated the -- what we call the standard license
25 renewal application format. We met with the staff, I

1 believe it was earlier this year, and, again, using the --
2 principally the SERs that were written for Calvert and
3 Ocone and came up with a -- what we thought was a standard
4 application format. It's helpful for us because we know
5 where to put the information. After all, the application
6 really is a packaging issue. And it's also, we hope,
7 beneficial for the staff because they know how to parse it
8 out based on that format. And I'll talk a little bit more
9 about that.

10 Appendix A is merely a copy of the rule and the
11 statements of consideration. And then Appendix B is a list
12 that I will show you one page from of some groupings where
13 we've made some determination about whether the grouping or
14 the component group is active or passive.

15 Section One, as I indicated, is an introduction.
16 It merely goes through the other sections of the guidance
17 document. It talks about Section 3.1, et cetera, et cetera.
18 But as an overview, it talks about the guidance as being an
19 acceptable method for implementing the rule. We talk about
20 the basis for the guidance. In other words, we looked at
21 operating experience. We looked at the maintenance rule.
22 In this case, where we are today, we looked at GALL. We
23 looked at SRP. And we believe that, and I should say the
24 objective of the guidance obviously is that if you follow
25 it, you'll be successful. You'll get a renewed license.

1 It's not to say it's the only method. We always have that
2 caveat. But, as you saw, the intention is that this would
3 be endorsed by the Reg Guide.

4 The major elements of this section, again, it
5 outlines the subsequent sections. 3.1 is scoping. 3.2 is
6 identifying functions. We talk about Section 4, which is
7 really the IPA and the others as well.

8 You know, Section 4 is where you really get into
9 the demonstration. You've heard that terminology. How do
10 you demonstrate that the aging is adequately managed. It
11 talks a little bit about Section 5, which is the TLEAs and
12 how you dispose of those. And then it guides you to Chapter
13 6, which is the standard application format.

14 We have some other information in the introduction
15 and that's how you can utilize existing programs. And we
16 provide a little bit of guidance about using the maintenance
17 rule, for example -- well, strike that. It suggests that
18 you look at the scoping you did for the maintenance rule as
19 a starting point perhaps for license renewal. It also
20 recognizes GALL and the SRP and suggests to the user that
21 you need to look at those documents. But there is some
22 other information in there. And there's clarifications,
23 like the two over one issue that I have on the last bullet
24 there. Maintenance rule excludes structures based solely on
25 the seismic two over one. We don't do that. That's not an

1 exclusion that's allowed under renewal.

2 We also talk about resolution of GSIs. We point
3 that there are a number of ways that, if the GSI is
4 applicable, if you will, to renewal, that it can be
5 resolved. One is if you've submitted the application, and
6 you've addressed the GSI, but that GSI gets resolved before
7 your renewed license is issued, you could incorporate that
8 resolution. You can do a plan-specific evaluation to show
9 that the CLB can be extended beyond the end of the current
10 term until some further point in time. You could chose to
11 implement an aging management program to address the issue.
12 And example of that would be fatigue. You know, that's GSI,
13 but you can deal with that through an aging management
14 program or you could amend the CLB and basically take the
15 issue off the table.

16 Chapter 2 is merely a reference back to Appendix
17 A, which has the rule and the statements of consideration.

18 In Chapter 3, we get into scoping. We use --
19 well, the scoping requirements are spelled out in the rule.
20 We use the definition of safety related that's in 5049.
21 You've probably seen that before. Nothing new there. You
22 also have to scope in non-safety related -- SSEs, whose
23 failure could prevent a safety-related SSE, excuse me, from
24 fulfilling its function. And, again, that's I think fairly
25 consistent with what we've seen in the past.

1 The third requirement is regulated events. Fire
2 protection. EQ. PTS. Atlas. Station blackout. And you
3 go back and basically look at your documentation for each of
4 those regulations, if you will, and determine what you need
5 to deal with those events and those become part of the scope
6 of the rule.

7 We provide in the guidance, and this is also in
8 the SRP, a list of potential information sources. We do
9 have a disagreement with the staff on the use of PRA in this
10 area. But to us, this is a list of potential sources, and
11 quite frankly, I don't see that as a big issue from a
12 process standpoint. But we do have this list of information
13 sources that we suggest licensees consult when they do their
14 scoping process.

15 We also talk in Section 3--

16 CHAIRMAN BONACA: With regard to the list. You
17 know, I raised the question yesterday. The corresponding
18 list of the -- in the SRP has the EOPs as a possible source
19 of information. And, as you know, the EOPs also are a basis
20 in the maintenance rule.

21 MR. WALTERS: Right.

22 CHAIRMAN BONACA: And this list doesn't have any
23 reference to the EOPs.

24 MR. WALTERS: Right.

25 CHAIRMAN BONACA: Is it intentional?

1 MR. WALTERS: I'm sorry, is it intentional?

2 CHAIRMAN BONACA: Is it intentional, yeah.

3 MR. WALTERS: I don't know whether we actually
4 considered that when we initially developed the list. I
5 don't believe it belongs on the list, quite frankly. That
6 scoping criterion under the maintenance rule obviously is
7 not in license renewal. That's not to say though that the
8 equipment, and I think we have looked at this, by the way --
9 that's not to say that the equipment that scopes in under
10 the maintenance rule, under that criterion, doesn't get in
11 under license renewal. It just comes in perhaps under one
12 of the other scoping criteria.

13 CHAIRMAN BONACA: Yeah, I just--

14 DR. SEALE: Yeah, but in general, even with PRA,
15 PRA is on the docket, right?

16 MR. WALTERS: That's correct.

17 DR. SEALE: It seems to me that you have to be
18 sensitive to everything that's on the docket when you do a
19 license renewal.

20 MR. WALTERS: Yeah, no question.

21 DR. SEALE: So in essence, anything that's on the
22 document is -- maybe in finer print or fainter print on that
23 list, but it's a candidate.

24 MR. WALTERS: Yeah, it -- you could add. Yes, you
25 could put it on the list as an information source. But

1 whether the equipment would scope in or not would be
2 determined by the other scoping criteria.

3 DR. SEALE: Yes, very definitely.

4 MR. WALTERS: So, yeah, it could be on the list.

5 CHAIRMAN BONACA: I recognize that the license
6 renewal explicitly does not mention the EOPs, explicitly
7 mentions them. It mentions for equipment, which is not
8 safety-related. They say, however, that you will include
9 whatever is in the EOPs. And that's because the EOPs really
10 are a part of the licensing basis, if they're referenced in
11 the FSAR. I was thinking that there may be some peculiar
12 situation where you could have a -- you know, a component
13 for which the active element is being, in fact, under the
14 maintenance rule, monitored under the maintenance rule and
15 the passive components are ignored because the license
16 renewal doesn't look at them, okay. So that -- and I just
17 -- and I don't think it's a major issue. Most likely, most
18 components are -- but it seems to be some inconsistency
19 between the two rules.

20 MR. WALTERS: There is clearly an inconsistency.

21 CHAIRMAN BONACA: And I wanted to ask you your
22 perspective of that.

23 MR. WALTERS: Okay. We -- in Section 3, after you
24 do the scoping on the safety-related non-safety and the
25 regulated events, you look at the intended function, and at

1 this point, you could, according to our guidance, you could
2 look at this at a system level, even though the rule goes to
3 a structure and component level. You're going to see this
4 again when I get into Chapter 4.

5 You need to document the scoping process, and we
6 provide some guidance on how you do that. And, you know, we
7 do get into the information sources, and so I don't want to
8 leave you, based on your comment with the impression that
9 the items on the list are the only things that would be
10 looked at. Dr. Seale is very correct. You would be prudent
11 to look beyond.

12 Okay, the -- Chapter 4 talks about the IPA, and
13 this is where we get down into the -- we take what we
14 learned in Chapter 3, which is the scoping and the -- you
15 know, the big part of the bin, and now we're going to
16 identify what's subject to an aging management review. I
17 apologize that this is not clearer in your handout. That
18 was not intentional. But -- and this is fairly
19 straightforward, and you're familiar with the rule. Again,
20 here is the -- what you did in Chapter 3, then you go into
21 asking yourselves some questions about that bigger bin. You
22 say, well, let me pull out the stuff that's passive. If it
23 is passive, do I replace it periodically. If I do, then it
24 screens out, if you will. If it's not, then do I need an
25 aging management program--yes or no. If I do, then I move

1 over and I look at what programs I might have that manage
2 the aging. This, by the way, is obviously where GALL will
3 play an important role. The box that says demonstrate -- we
4 have guidance that suggests typical attributes of an aging
5 management program. Those have been adopted by the staff,
6 and you'll see those in the GALL report, the ten attributes.
7 I would just caution that, at least our position is, not all
8 ten attributes have to be satisfied in order for the program
9 to adequately manage aging. But that's -- this is where
10 GALL plays an important role, and we intend to rely on it.

11 Again, in Chapter 4, because we're now down at the
12 component and structure level, we've got another table,
13 4.1-1 that identifies typical intended functions for
14 components and structures. And, again, I think this -- you
15 should see the consistency between this and what's in GALL.

16 The next section in our guidance talks about the
17 aging management reviews. Again, you can make a dent --
18 what we provide are I think three methods to manage aging on
19 a -- or -- let me start over with that -- there are three
20 ways to disposition, if you will, the aging of a -- on a
21 structure or a component. One is you can do the
22 demonstration, which is you look at the aging effects and
23 you identify a program and you demonstrate that those aging
24 effects or that aging effect is managed by the program.

25 The other way to deal with aging management is to

1 reference a previous review. So if -- you know, if there's
2 a topical report, for example, that would be a way to make
3 the demonstration required by renewal. We also have a
4 guidance in 95-10 that talks about performance and condition
5 monitoring, which is -- it's discussed in the SOC. But you
6 need to do a plan-specific justification if you want to take
7 credit for performance and condition monitoring. And the
8 point is that -- at least what's concluded in the statements
9 of consideration is that the condition monitoring only looks
10 at the active piece of the component, and so there was no
11 generic conclusion that performance and condition monitoring
12 would necessarily reveal the aging effects on the passive
13 component. And so you've got to make that argument in the
14 application.

15 We recognize that in some cases, you may want to
16 do an inspection and so we provide some guidance in that
17 regard. We talk -- we very briefly provide guidance on what
18 a program, an inspection program should look like. We talk
19 about the fact that it needs to have a purpose that's tied
20 to the aging, if you will. You need to have a -- some
21 statement about the scope of the inspection, the method of
22 the inspection. How you're going to analyze the results,
23 and your corrective and follow-up actions. We also provide
24 guidance on sampling, population, sample size, and the
25 timing of the inspections.

1 Chapter 5 talks about TLAA's. Again, the I think
2 the important thing in this guidance is individuals or
3 licensees that use this to prepare a renewal application
4 need to know that a TLAA needs to satisfy all six criteria
5 that are delineated in the rule. And those are just listed
6 here.

7 We provided a table, 5.1-2, of potential TLAA's.
8 This is going to change I believe because of the GALL and
9 SRP. But these are some things that we came up with. You
10 may have seen a similar in the SRP.

11 Then we talk a little bit about how you can
12 resolve or address TLAA's. These are the options afforded us
13 in the rule. You can certainly verify that the TLAA, as it
14 is today, is valid for the period of extended operation.
15 You can take that TLAA, and project it to the period of
16 extended operation. Actually, I think I and II are pretty
17 similar. You can also address the TLAA through an aging
18 management program. You also, under this -- let me say,
19 under this guidance, we also provide some guidance on how
20 you addressed exemptions that you may have taken over time.

21 Lastly, we have Chapter 6, which, again, is the
22 standard application format. And the -- under the bullet
23 that says application format and content, that is the
24 standard format that we've come to agreement with with the
25 staff. I don't -- I think that's working fairly well. ANO

1 has used it. Turkey Point has used it, and we may have to
2 do some tweaking to it over time based on, you know, changes
3 to the GALL and the SRP. But, for the most part, it works
4 fairly well. We also in this section provide, excuse me,
5 provide guidance on the requirement that you need to update
6 your application and how you can go about doing that--fairly
7 straightforward stuff. I think, do we have copies of this?

8 I wanted to show you -- I mentioned at the outset
9 -- let me just -- this is the table of contents and Appendix
10 B. This is just a sample page from Appendix B. And I
11 apologize. I didn't have it in the package. But what this
12 shows is a listing of -- we call them structure component or
13 commodity groups, and whether the group is passive. And if
14 the answer is yes, like you see on reactor coolant pumps, we
15 say, yes, and it's the casing, then that's in the scope of
16 the rule. Or it requires an aging management review, more
17 precisely. But if the answer is no, and that fact that this
18 -- our document is going to be endorsed by the Reg Guide, we
19 can rely on this list as a tool. And that's very important,
20 and we were glad that we were able to reach agreement on
21 this with the staff.

22 Just in closing, I -- we do need to make some
23 conforming changes to NEI 95-10. I don't have those
24 identified today, but our guidance I believe will probably
25 the last document that gets updated. We need to see what

1 the final GALL and SRP looks like, and we will have some
2 conforming changes to make. But we do intend to do that and
3 in the time frame to support the staff's schedule to
4 finalize those documents.

5 DR. UHRIG: Would that be considered a Rev. 3?

6 MR. WALTERS: Yes. We will update it to Rev. 3.

7 CHAIRMAN BONACA: Yesterday, we posed to the staff
8 a question regarding scoping.

9 MR. WALTERS: Yep.

10 CHAIRMAN BONACA: The feeling at least some
11 members have that is still not very clear process. It's a
12 very -- you know, it's a time consuming process. A lot of
13 sources are being looked at. Is your judgement that
14 anything can be done to make it more -- to facilitate
15 providing additional guidance, or do you think that whatever
16 has been provided by now in the NEI document and the SRP is
17 a much as can be provided?

18 MR. WALTERS: Well, I believe that there are
19 certain areas where it could be streamlined, or less
20 cumbersome, perhaps. And I still don't understand, myself
21 personally, I don't understand why we can't just lift from
22 the maintenance rule scope, the safety related items and put
23 them the license renewal scope. And my comment is not only
24 that I -- that I see a - not a reluctance, but I'm not sure
25 within the staff we've figured that out, but even within the

1 utilities, they don't seem to have figured out how to do
2 that. And I quite frankly am perplexed by that.

3 So I think that's one area where we could, in
4 terms of scoping, we could make some real headway, if we
5 could come to agreement on those two scoping criteria.

6 CHAIRMAN BONACA: That would be a different
7 approach. But, still, you're saying it's an established one
8 and probably will lead to the--

9 MR. WALTERS: And it's inspected. It's -- but,
10 you know, plants have -- you know different vintage plants
11 have different ways of -- some have Q-lists. Some don't, so
12 I'm not sure that we can do much more. We'd certainly be
13 interested in -- you know, in looking at that. But--

14 DR. SEALE: You made a comment earlier about your
15 concern that the GALL report and the other documents didn't
16 become a wish list.

17 MR. WALTERS: Right.

18 DR. SEALE: And I think that's a very valid one.
19 I think the extent to which the staff has been able to work
20 with you and come to the kind of agreement that
21 characterizes the presentation you just made is -- indicates
22 that there isn't a dedication, if you will, to turning this
23 into a wish list. At the same time, I think the staff, very
24 rightly, feels that Calvert Cliffs and Oconee are not
25 everything. And in particular, there are about four

1 versions of different kinds of containments on water
2 boilers, and I think containment is one area for water
3 boilers where aging effects might have some significance
4 over the long haul. They want to look at it and kick the
5 tires for a while before they convince themselves that
6 they've got a complete product. And I think you do, too.

7 MR. WALTERS: I would agree with that.

8 DR. SEALE: And so I think meeting your or getting
9 your desired result of a non-wish list dominated process is
10 a two-way street. And so far, you've been able to do that
11 very well, and I think very efficiently. I think all of us
12 have been impressed with the fact that you got five plants
13 now that have gotten their renewals. And, but there's a lot
14 more work to be done.

15 MR. WALTERS: Yeah, I don't disagree with you, Dr.
16 Seale. It's a -- I think we've minimized the number of
17 wishes that are on that list. What I meant to say, though,
18 in all candor, is that when you talk to the people in the
19 field, and they say, well, but this is the program I've been
20 using for 12 years, and it was implemented specifically to
21 address -- I mean look at 89-13 just as an example. We
22 implement a program in response to generic letter 89-13 to
23 address fouling on heat exchangers. All of sudden, because
24 I want to do a renewal, I have to do something more. I'm
25 not suggesting that's what GALL says. That's an example, a

1 hypothetical example. And when you talk to the people in
2 the field, they say why do I need to do that. Why isn't
3 what I'm doing today good enough? They need that technical
4 understanding that if they're going to implement some new
5 action, there's some resulting benefit. And that's all I
6 was trying to get at. And that's a fine line; that's a very
7 fine line that we need to walk because, as you say, on the
8 other hand, we need to take a hard look at some of these
9 things, like containments. And in some cases, the -- what
10 the staff found, we agree with.

11 DR. SEALE: And there's some lessons learned?

12 MR. WALTERS: Yeah, no question.

13 DR. SEALE: For example, this technique for
14 checking out buried cables is something that everybody needs
15 to know.

16 MR. WALTERS: Sure.

17 DR. SEALE: I mean, it's an arrow in your quiver.
18 Whether you need it or not, you need to know about its
19 availability.

20 MR. WALTERS: We do. And there's no disagreement
21 with that. We just don't want renewal to be the
22 playground--

23 DR. SEALE: Sure.

24 MR. WALTERS: For that kind of, hey, why don't you
25 do this.

1 DR. SEALE: Yeah.

2 CHAIRMAN BONACA: One question we had yesterday to
3 the staff was regarding the fact that the GALL report
4 benefitted a lot from the first two applications. But there
5 are additional applications coming in, and there will be
6 more information that it will be helpful to the reviewers
7 and to the licensees to have somewhere what the experience
8 has brought in. For example, in many cases, we're pointing
9 out that when the guidance is you need more than what is
10 being done today, you go back into GALL and you find that --
11 thus specify what more means. There are not criteria. The
12 answer was, we don't have enough experience yet, because we
13 haven't had. Okay. So one question we asked of the staff
14 was, you know, are you planning to update the GALL report
15 frequently to reflect this additional information. We
16 didn't get any answer to that. I guess we're a little bit
17 ahead of time in asking those questions. Do you have any
18 insights on what -- you know a process by which the future
19 licensees can benefit from this information that I'm sure
20 Hatch will bring and other applications will bring? It will
21 not be documented in GALL.

22 MR. WALTERS: Well, yeah, that's a very good
23 question. I don't know what the staff said in terms of
24 whether GALL was intending, whether they were intending to
25 update GALL or not, but one of the things we're thinking

1 about, for example, is when the further evaluation is a
2 one-time inspection. Well, if five licensees do a one-time
3 inspection of the same thing, and I'll just use an example.
4 Supposed it's some buried commodity, and you could show that
5 your pH in the ground is the same as that utility over there
6 that did the inspection, and you had the same material and
7 the pipe was coated the same way, is there some way to
8 credit that inspection that was done by the first five
9 applicants, if I'm number 10. How are we going to do that?
10 I think we'll probably start some sort of library. We would
11 focus, I would think, on the enhancements or the additional
12 items you need to do. And then maybe at some point, it's
13 appropriate to go back to the staff and say, hey, we ought
14 to get this in GALL and update this.

15 CHAIRMAN BONACA: Well, the fact that the
16 presentation we had from the staff this morning they showed
17 that they, in some cases, they did exactly that. I mean,
18 when you pointed out that, you know, those are some
19 experiences that show that something--

20 MR. WALTERS: Right.

21 CHAIRMAN BONACA: Then they -- so. Yeah, okay.
22 But the important thing here is that -- you know, the
23 experience from this application is going to help out the
24 next people coming in and somehow they had to have open
25 communication of where that information fits.

1 MR. WALTERS: Yeah, one other thing that we might
2 do at NEI is we have a mechanism called an information
3 forum, where we can, and you've seen the charts with, you
4 know, the next 30 applications that are coming in. And
5 those individuals, those licensees are very interested in
6 getting involved in our working group and task force.
7 That's really not the right mechanism at this point. But we
8 might do is get those folks in what we call an information
9 forum, and meet with them maybe two or three times a year.
10 And if we do that, say, next year in the summer, we'll have
11 four applications that we have the benefit of learning from,
12 you know, with Oconee and Calvert, Hatch and ANO, plus we'll
13 have three others that have submitted, but we would be
14 looking more at the -- what was accepted and how did you
15 deal with certain issues. And we think that would be very
16 valuable for that next wave of applicants to have access to.
17 And we can do that through an information forum. So that's
18 another option that we have that we see.

19 CHAIRMAN BONACA: One observation we had when we
20 looked at the Oconee and Calvert Cliffs was that they spent
21 so much time being the first ones through the gate to look
22 at issues and so on as afford. I really concluded that they
23 were better plants because of the effort they made to look
24 at all the aging issues and management programs and so on
25 and so forth. I mean, clearly it was the depth of

1 understanding.

2 I guess the question I have is, you mentioned 30
3 plants coming in.

4 MR. WALTERS: Yep.

5 CHAIRMAN BONACA: There is more and more. You
6 know, looking at what somebody else did, and then somewhat
7 of a cookie-cutter approach, okay. You know, are we going
8 to lose some of the benefit because things are going to be
9 speed up and people are going to just simply copy
10 initiatives from other plants, or do you see still the
11 effort is such that the utility will get deep into these
12 issues rather than just making commitments based on what
13 somebody else did?

14 MR. WALTERS: The latter. We do believe that, and
15 we've had this discussion. Notwithstanding what's in GALL,
16 the obligation the applicant has is to still go look. It
17 just gives them a roadmap of where to go and what things
18 need to be looked at and what things don't. But, as an
19 example, if a -- even if a program is in GALL dispositioned
20 as not requiring further evaluation, if you read the SRP,
21 the application will merely say, I have that program and it
22 meets the attributes that were evaluated in GALL. But the
23 work that the licensee has to do to make that statement is
24 still the same work that -- I would argue is still the same
25 work that Calvert did, that Oconee did in looking at those

1 programs. They've got to make a certification. The benefit
2 to them is in the application they can just say I have the
3 program. But they still have to do this. We -- our
4 assessment is that the same amount of work has to be done,
5 but there are -- having said that there are some benefits.
6 I mean, you can go look at what somebody else did, and say
7 do I have -- you know, did I do it the same way. We have
8 some tools. We talk about tools that were developed by the
9 B&W owners group and we have tools that help us get through
10 that. But the digging you have to do and the assurance that
11 you -- or the demonstration -- let me say it that way that
12 you have to make is the same. The GALL helps us focus and
13 it gives us some benefit in what we put in the application,
14 but the work, at least in our discussions certainly the
15 applicants that will come in through 2002 is the same. And
16 I think they are better plants for that. There's no
17 question.

18 CHAIRMAN BONACA: One additional question we asked
19 yesterday was regarding something that probably we should
20 have asked you rather than the staff, which is the
21 commitment behind voluntary initiatives. As we spoke about
22 EOPs, we also spoke about severe accident management, which
23 is really a voluntary initiative. Now it was a voluntary
24 initiative, with the understanding that if it wasn't
25 voluntary, it would probably become, you know, part of the

1 licensing basis. So what's the perspective, from a
2 perspective of the industry. I mean, there isn't anything
3 in the documents that we have reviewed that says the
4 licensees will still commit to have, you know, committed
5 voluntary initiatives during the period of extended
6 operation. I mean, the question is, will these power plants
7 have a severe accident management in place, and will they be
8 able to implement those steps as they were in the first 40
9 years of operation?

10 MR. WALTERS: Well, certainly, there's no
11 requirement for them to do that, as you point out. But I
12 can't give you an industry position on that. But I would
13 say that I'd be surprised if those things just automatically
14 stopped after 40 years. I don't know what the implication
15 of those -- you mentioned the risk for severe accidents. I
16 don't know what the implications of that is if you go to--

17 DR. SEALE: Doesn't sound like a terribly wise
18 thing to do.

19 MR. WALTERS: Right. I mean, you know, it's--

20 CHAIRMAN BONACA: But what I'm saying, do you
21 think it would be wise to clarify the issue of voluntary
22 initiatives.

23 MR. WALTERS: In license renewal space?

24 CHAIRMAN BONACA: Yeah.

25 MR. WALTERS: No.

1 CHAIRMAN BONACA: Well, wouldn't you leave then a
2 number of issues that were negotiated in a certain way
3 hanging there?

4 MR. WALTERS: Well, let me maybe retract what I
5 just said. I don't think it's appropriate to address that
6 issue specifically in our guidance or in the SRP or in the
7 Reg Guide. I would say though that there may be some
8 voluntary initiatives that you credit in license renewal
9 space. Maybe, I don't know. But there could be it seems to
10 me. In which case those would carry their own kind of
11 commitment because they're credited in license renewal. But
12 if they're not, I don't see a reason that license renewal
13 should be dealing with voluntary initiatives.

14 CHAIRMAN BONACA: No, I'm not saying that you
15 should look at the additional commitments for those --
16 simply a statement that voluntary initiatives that were
17 considered important to safety and implemented over the
18 first 40 years of life should be maintained as we go into
19 the next 20. I mean, you know, there are severe accident
20 management guidelines which are intertwined with the EOPs
21 and the operator is trained on them routinely. And, you
22 know, when the question is hanging there, well, that's not
23 part of the core relicensing basis.

24 MR. WALTERS: Right.

25 CHAIRMAN BONACA: And, well--

1 MR. WALTERS: Well, I can't give you a
2 satisfactory answer. We've not really discussed that. But
3 kind of off the cuff, I would say that if we're concerned
4 about that, there are mechanisms that the staff has to make
5 them part of the CLB.

6 DR. GRIMES: I think -- This is Chris Grimes. I
7 think I'd like to jump in and provide staff perspective. I
8 think that our expectation in this area is relatively clear,
9 because in formulating the scope of license renewal and the
10 process, the statements of consideration for the rule say
11 that we expect the current licensing basis to carry forward
12 to the same extent and in the same manner as it is for the
13 existing license. And so, and we have recently endorsed
14 guidelines that have been developed on commitment
15 management, and we're in the process now of trying to
16 establish a process for crediting industry initiatives and
17 reflecting those in the regulatory framework. And so I
18 think that the Commission's expectation about the regulatory
19 process and how that in concert with a current licensing
20 basis that's going to continue in the same way that it
21 exists today I think that that is the process that we can
22 rely on. To say that if we see some indication of plant
23 performance or we see some safety concern about the plant's
24 readiness and capability to prevent or mitigate accidents
25 that we've got mechanisms to deal with particular questions

1 without having to cobble up something that might constitute
2 some confusion on doing things different after 40. So it's
3 -- we are constantly reminded that there's nothing magic
4 about year 40. You know, at year 39 and twelve months,
5 you're safe, and at year 41 -- or 40 and one month, you
6 suddenly become unsafe. There's no step change that we
7 expect to see.

8 CHAIRMAN BONACA: We heard many times that this is
9 not part of the CLB. This is not part of the CLB. This is
10 not part of the CLB. At times, I believe that clarity, you
11 know, it's a very important point. I mean, if in fact,
12 voluntary initiatives are there, then it doesn't take much
13 to say we'll carry on the voluntary initiatives. And, you
14 know, we will always assume that we will interpret whatever
15 is there in the same way. You know, I can remind you of
16 50-59 that everybody evidently when they wrote that they
17 thought was clear and it took 40 years to clarify. So--

18 DR. GRIMES: 30 years.

19 CHAIRMAN BONACA: 30 years, alright.

20 MR. WALTERS: Okay.

21 CHAIRMAN BONACA: I just wanted to hear about
22 that. Any other questions for Mr. Walters?

23 If not, I thank you very much.

24 MR. WALTERS: Thank you.

25 CHAIRMAN BONACA: I think that also NEI should be

1 commended for the work they did in support of the license
2 renewal.

3 DR. SEALE: So far, it's a win-win.

4 MR. WALTERS: Yep.

5 CHAIRMAN BONACA: Okay. I think with that we end
6 -- this is the end of the presentations. I think that we
7 should complete the discussion among the ACRS members that
8 we initiated yesterday afternoon and see if there are any
9 additional issues we want to raise now. And after that, we
10 will--

11 DR. SHACK: Did we invite the UCS people to see if
12 they wanted to make a presentation?

13 MR. DUDLEY: No, we have not. I did inform Mr.
14 Lochbaum that the issues of incorporation of the Union of
15 Concerned Scientists report would be included in the
16 presentations.

17 CHAIRMAN BONACA: Well, as we go through the --
18 around the table here, we will talk also about what we would
19 like to hear during the May meetings in two weeks. And,
20 Bill, you have a suggestion maybe or should we invite
21 Lochbaum to come and?

22 DR. SHACK: Well, you know, I think if we're going
23 to hear all perspectives, I think--

24 CHAIRMAN BONACA: That would be very much.

25 DR. SHACK: He has a different perspective on GALL

1 than we've probably heard today.

2 CHAIRMAN BONACA: Any other thoughts on that?

3 DR. SHACK: I think that maybe say no.

4 CHAIRMAN BONACA: It may be worthwhile to invite
5 him.

6 DR. KRESS: Certainly.

7 DR. SEALE: Well, I think if he wants to
8 communicate with the ACRS, we ought to give him an
9 opportunity to communicate with the ACRS, going through the
10 filter of commissioners. If he only talks to them, it
11 doesn't do us a whole lot of good.

12 CHAIRMAN BONACA: So that's a--

13 DR. GRIMES: Dr. Bonaca?

14 CHAIRMAN BONACA: Yep.

15 DR. GRIMES: And I will work with Noel to make
16 sure that the UCS comments on SRP and GALL have been
17 submitted so we can share those with you in advance of the
18 full committee meeting as well.

19 CHAIRMAN BONACA: Thank you. Going around the
20 table. Bill, do you have any additional comments than -- in
21 addition to the one you provided yesterday?

22 DR. SHACK: No. You know, it seems to me they've
23 made a lot of progress. You know, I do like the new format.
24 I know when it was initially discussed I was somewhat
25 skeptical, but I believe that the Chapter 11 is a very

1 helpful sort of thing. It -- everything comes together.
2 There is still maybe does to be a little bit of need to, as
3 I say, you had to go a ways to find where the one-time
4 inspections were required. That might be made more
5 transparent in some way.

6 DR. SEALE: Yeah.

7 DR. SHACK: Even if, you know, and even in the --
8 you know, the further evaluation, if, you know, if one-time
9 exams or one time inspections are one of the leading
10 candidates you might call that out in the particular one.
11 But -- and I assume that they will continue to trend
12 everything towards the Chapter 11 format; that is, there is
13 still some sections with large chunks of aging management
14 programs buried in the chapter and that will continue, but
15 to me, I think they've made a great deal of progress here,
16 and it looks good.

17 CHAIRMAN BONACA: Good. Thank you. Bob?

18 MR. UHRIG: I'm looking forward to the outcome of
19 the resolution of GSI-168, and in the light of that seeing
20 what impact it may have. It may have none or it may some
21 impact. We have the consultant's report, and, as you and I
22 discussed in the hall a little bit ago, he comes down very
23 strong on saying that condition monitoring really is not a
24 very good predictor of where things are going in the future.
25 And then at the end says, we don't have anything else. So

1 we're sort of stuck with it. And we were speculating if
2 there were other sources of information and one that
3 occurred to us was -- there's a lot of plants around that
4 are some power plants, some chemical plants, et cetera, that
5 have cables in them; have been operating for 40, 50 years.
6 And it strikes us that some organization, maybe the NRC,
7 maybe somebody else should undertake to look at some of
8 those cables, what they look like after 30, 40, 50 years of
9 operation. I understand there's been some of that already
10 done, but it certainly is not a comprehensive program. The
11 utilities that have older plants would certainly have access
12 to cables that -- when they were shutting those plants down.
13 The problem is that those cables are not the same quality as
14 the cables that we have today. So it's a answer--

15 DR. SEALE: They may be the quality of the ones
16 that were put in when the plant was built, though.

17 MR. UHRIG: Well, that may be. Okay. But it's
18 just a suggestion that this cable issue is a serious
19 concern.

20 CHAIRMAN BONACA: That's -- when we discuss at the
21 end our recommendations to the staff for presentation. That
22 may be a candidate. Just to hear something about that.

23 MR. UHRIG: Okay.

24 CHAIRMAN BONACA: Graham?

25 MR. LEITCH: As far as issues that I'm left with a

1 little bit of concern about there is still the issue of 10
2 to the 17th versus 10 to the 21st neutrons, and exactly
3 where specificity of -- where that applies physically in the
4 vessel, what type of steel we're dealing with there. And
5 I'm still a little unclear about that issue. And I think
6 maybe that would be a candidate for some more discussion at
7 the full meeting.

8 CHAIRMAN BONACA: Yep. Good.

9 MR. LEITCH: I guess thinking about it some more
10 last night, it seemed to me -- I thought I heard that there
11 were areas where effluents of 10 to the 21st had already
12 been experienced in 30 plus years of operation. So I'm just
13 a little confused about where that whole topic is going.

14 CHAIRMAN BONACA: Good.

15 MR. LEITCH: The other thing, in a very general
16 way, is when -- particularly, you know, when you look at the
17 NUREG and elsewhere or the Reg Guide I should say, there are
18 three important parts of the application that we haven't
19 discussed very much at all. One is the FSAR supplement.
20 And one is the changes to the technical specifications.
21 Perhaps those two are almost self-explanatory. But then the
22 third one is the environmental information that also needs
23 to be submitted as part of the application apparently. And
24 I haven't heard, you know, any real discussion of that, and
25 I'm not sure if there's any real guidance that exists as to

1 the depth of that discussion, the format of that -- just
2 what is the expectation there on that environmental
3 information.

4 CHAIRMAN BONACA: Yeah, we have not expressly
5 reviewed the environmental portion.

6 DR. GRIMES: As an organizational matter, we
7 typically don't bring the staff environmental impact
8 statements to the ACRS for review. As a matter of fact, in
9 my description of the process, the whole environmental track
10 is separate, and there's a comparable review to the ACRS
11 review, by the Council on Environmental Quality. So the
12 environmental folks tend to operate in their own little
13 sphere. There is -- it's a well established practice.

14 There is a recently completed, and by recent, I mean
15 September of 2000 regulatory guide on the content of the
16 environmental report from license renewal. But the standard
17 review plan for license renewal is now in final form.

18 That's NUREG 1555 I believe. And at one of the earlier,
19 ACRS meetings, we did do a brief little show on what that
20 guidance consists of. We could run back through that
21 material for you, but, you know, my -- we'll do whatever
22 you'd like, but I'd suggest that you might want to consider
23 whether or not you want to delve into that area at all.

24 There is well-established guidance, and it is -- it's a
25 fairly well running system.

1 MR. LEITCH: I was not familiar with that
2 background. And I appreciate that information. I think I'm
3 just coming up to speed with that.

4 CHAIRMAN BONACA: Sure. And maybe we could just
5 get a brief presentation during one of the next licensing
6 renewal application reviews?

7 DR. GRIMES: We could do that.

8 CHAIRMAN BONACA: I think we could do it during a
9 subcommittee meeting rather than just coming in on the next
10 full committee for the generic documents. Rather than look
11 at the generic documents, so, for that, so--

12 DR. GRIMES: Correct. We could cover it. As a
13 matter of fact, I'll make a point that we would be prepared
14 at the A&O subcommittee--

15 CHAIRMAN BONACA: Right.

16 DR. GRIMES: To specifically cover the FSAR
17 supplement tech specs to the extent that we have -- we
18 haven't seen any yet. I think Hatch may have submitted a
19 tech spec change in conjunction with license renewal. But
20 it's my expectation we're going to see the tech specs work
21 separate so that they're not exposed to the license renewal
22 review. And then, of course, we can put together the
23 material from the environmental impact review that we used
24 for our public meetings. We could share that with the
25 committee. That's all I had.

1 MR. LEITCH: Thank you. That's good.

2 DR. GRIMES: Yeah, okay.

3 DR. SEALE: Well, I would agree with Bill's comment
4 about a little bit more transparency on the identification
5 of where one-time inspections are needed. I -- since I'm
6 supposed to be reviewing the chapter on structural materials
7 -- I mean, reactors and so on, I'm certainly interested in
8 this embrittlement of 10 to the 21st versus 10 to the 19th
9 thing. I have a stupid question to ask, and not being shy
10 in that regard, I thought I'd bring it up. And Bill just
11 mentioned that he would expect over the maturation of this
12 process, as more and more information comes in, that Chapter
13 11 is going to grow and some of the generalities in some of
14 the earlier chapters are going to fade away. Is that a
15 fair?

16 DR. SHACK: No, it's just -- it's mostly going to
17 be moved.

18 DR. SEALE: I'm -- well, that's what I mean.
19 Moved. It -- would it make sense, especially with this
20 format, for GALL to be a looseleaf thing and occasionally be
21 updated in that format rather than being updated in the
22 format of a whole new publication of it?

23 DR. GRIMES: I have a -- for every stupid question,
24 there's an equally good stupid answer. And my immediate
25 reaction is that makes too much sense for us to pursue it.

1 And I -- the reason that I have to sort of make light of it
2 is because every time I get those supplement changes for
3 0933, I just groan at the prospect of sitting there, leafing
4 through that bloody report, sticking in the page changes. I
5 mean, but we used to do that in the good old days when we'd
6 get the ASR supplements.

7 DR. SEALE: Yeah. Yeah.

8 DR. GRIMES: You know, and I think half the
9 professional staff at the NRC spent their time leafing
10 through -- sliding pages.

11 DR. SEALE: Sure. But this is such a dynamic
12 process right now. You know, if it were just doing clerical
13 stuff, that's one thing. But clearly you're on the front
14 edge of the learning curve. And it -- there's a tremendous
15 benefit for everybody to be able to know that by golly when
16 we come to the application of plant XYZ, that the version of
17 the GALL report of such and such a date is the way we're
18 going to do it. Otherwise, you're going to spend all your
19 time asking yourself well do we take into account the
20 results of what we learned in plant UVW? Yeah. Yeah.
21 There is -- you know.

22 DR. GRIMES: Wait, they don't make looseleaf CD
23 ROMS?

24 DR. SEALE: Well, but you know what I mean.

25 DR. GRIMES: Yes, sir. Dr. Seale, I understand

1 completely and I do think that that would be a wise way for
2 us to publish GALL is to make it looseleaf and to clearly
3 identify the updating practice that we would expect to
4 follow. I think -- my hesitation was when Dr. Bonaca
5 referred to frequent updates.

6 DR. SEALE: Uh huh.

7 DR. GRIMES: And I think--

8 DR. SEALE: Well, you know.

9 DR. GRIMES: It's the frequency is the only issue.

10 DR. GRIMES: Yeah, well, the thing is that -- yeah,
11 but frequent in the context of knowing that it's a dynamic
12 document, and being aware of that as you use it could reduce
13 the amount of confusion rather than increasing it. And, you
14 know, the first question I raised when I thought about this
15 was well is that going to be so resource intensive that it's
16 going to kill you. And I'd say normally that might be a
17 very appropriate question. But with these different
18 applications coming in and so forth, hey, it's the name of
19 the game around here. And you got to play it. And so it's
20 -- you might want to look at that real carefully.

21 DR. GRIMES: Well, I intend to. As a matter of
22 fact, before the day is out, I'm going to find out how you
23 go about getting a NUREG published in looseleaf form.

24 DR. SEALE: Yeah, and that's a serious question.

25 MR. SIEBER: You have to give us a charge account

1 to do all the filing.

2 DR. SEALE: He'll send you a new disk.

3 CHAIRMAN BONACA: Okay.

4 DR. SEALE: That's all I had.

5 CHAIRMAN BONACA: That's it? Jack.

6 MR. SIEBER: I have no further comments from those
7 of yesterday other than to say that the -- I think this is a
8 well organized program, well coordinated, and it's -- the
9 successes in NRC and NEI have done.

10 CHAIRMAN BONACA: Good.

11 DR. KRESS: I guess I would second what Jack just
12 said. I think this whole process with the standard review
13 plan and Reg Guide that endorses 95-10 and the GALL report
14 has a high probability of being a successful enterprise. I
15 guess I am glad that the NRC has said that one-time
16 inspections can be part of the aging management program, and
17 I share Bill's view that that ought to be more transparent
18 where that applies.

19 I guess I'm a little disappointed, or not
20 disappointed -- amazed at the lack of PRA input in this
21 process. I guess if George was here, he'd get a little
22 appalled at that. But it seems to be -- it doesn't look
23 like it's going to work without out it, without much of it.
24 So I think it's a successful program. And--

25 DR. GRIMES: Dr. Kress, I would like to say I

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1 expect that we will see more PRA input into the process in
2 the future. My concern about getting PRA involved in
3 license renewal in a more explicit way is getting too far in
4 front of risk-informing regulations.

5 DR. KRESS: I fully understand that, and I agree
6 with you.

7 DR. GRIMES: But I do want to point out that in the
8 inspection process, in the manual chapter, and we didn't
9 share that piece -- you know, which is also an important
10 piece of the whole process as we have manual chapter 2516
11 and the associated inspection procedure. I believe it's
12 71002. In there, we specifically use PRA in order to
13 identify where the inspection process is going to go
14 looking.

15 DR. KRESS: Yeah, I think that's probably the most
16 appropriate use of it, anyway.

17 DR. SEALE: Sure.

18 DR. GRIMES: Thank you, sir.

19 DR. KRESS: I'm glad you pointed that out. Other
20 than that, I don't -- that's all I have to say right now.

21 CHAIRMAN BONACA: Thanks. And I -- really my
22 comments are -- well, you heard them, I mean, I -- you know
23 I raised some similar issues to the IPE on the EOP's issues
24 that there is some confusion to this -- on the voluntary
25 commitments and then on the update frequency. But in

1 general, I feel that this has been a big effort, and I think
2 that we have a body of guidance documents which are very
3 effective. I mean, if I think of a new applicant having to
4 undertake this between the experience of the first two and
5 this body of guidance, there is clarity to the process. So
6 with that, there are seven questions we pose ourselves.
7 There were actually criteria that we set for ourselves in
8 our review. And we will talk it over with the full
9 committee in two weeks. If I look at those questions for
10 all of them I believe the answer is pretty much yes. The
11 document are well integrated. I think we have concluded
12 that they are. Are there sufficient bases for supporting
13 technical decisions? I think there are. In some areas
14 where we said there's more to be done and there is no
15 further criteria, we understand why that is the case. And
16 maybe the GALL report will looseleaf will help speed up the
17 updates.

18 DR. SEALE: Maturate the--

19 CHAIRMAN BONACA: We will -- we asked ourselves if
20 the lessons learned are folded in I believe that we are
21 convinced now that they are, from Calvert Cliffs and Ocone.

22 Is the guidance adequate to support effective
23 scoping screening? Probably yes. I mean, the concern was
24 older plants. It's clear that there is not going to be a
25 cookie-cutter approach to that. But still, the answer seems

1 to be yes.

2 Will the NRC staff develop a comprehensive
3 understanding of the technical issues? I am convinced now
4 that they will have to for each one of the applications. So
5 the answer is yes, they'll be involved. It will not be
6 simply a rubber stamping of the process.

7 Is the review of plant specific operating
8 experience adequately emphasized by the SRP? That's a
9 concern that both Bob and I had. And I think that they are
10 -- it's emphasized, and that's important.

11 Have the SRP and supporting documents taken into
12 proper consideration the issues and concerns raised by the
13 -- all stakeholders? I believe they have. I mean, we had a
14 presentation. It was focused on the issues, and I believe
15 that you will see concerns have been addressed, too.

16 And also the license renewal generate issue
17 resolutions again, again, they're adequately folded in. So
18 I think we have a positive message to bring to the full
19 committee.

20 I would like to go through just some of the
21 arguments I heard from you that we should ask the staff to
22 bring to the full committee.

23 You know, a suggestion I would have is that again
24 at the beginning there could be some explanation that
25 measured differences between the documents we saw before and

1 the one we have now. It doesn't have to be very extensive,
2 just, you know, a measure of observations of that.

3 DR. GRIMES: The sense that I got from the dialogue
4 was that not on a section by section basis, but more
5 globally.

6 CHAIRMAN BONACA: Exactly. Globally understand --
7 you know, there is a significant change to GALL report. We
8 understood that. But I think the issue of formatting those
9 two new chapters and the reasons why that's very important.

10 A second issue I think that would be very useful
11 if you went through an example of how you go from one issue
12 all the way down to the GALL report, the way we did for the
13 one-time inspection. And I would suggest that the same
14 example could be provided, because Dr. Powers had quite an
15 interest in the one-time inspection. And that would allow
16 us also to -- you know, talk about again the philosophy
17 behind those as was discussed during this meeting here.

18 Clearly, we need also a brief summary of
19 disposition of the NEI and the issues. You gave us a very
20 focused presentation on that. I would suggest simply that
21 you highlight the most important points, and give us a head
22 count of whatever is open. And if there is some significant
23 one that is open, then we'll like to hear that -- about
24 that.

25 I think we need to hear something about the

1 cabling issue. There is a significant interest in the part
2 of the committee on cable performance. The presentation on
3 GSI-168 I think sensitized everybody on the committee on
4 this issue. And on that, if there is any sites you have
5 regarding the ability of condition monitoring to predict and
6 what are the ultimates of that that would be useful.

7 The issue of effluents that Graham, Mr. Leitch,
8 brought up I think is very important. I think we'd like to
9 hear about that. He was left hanging. We were a little bit
10 left hanging there with -- on the issue that some areas have
11 already exceeded the 10 to the 21st criterion.

12 When you talk about -- I would suggest when you
13 talk about the GALL report, and you're telling us the
14 reorganization of it, then there is an issue that was raised
15 by a number of members regarding well, yeah, I think Graham
16 raised it regarding the fact that the guidance ends with
17 more is needed. And there are no criteria for that. That
18 is important that one communicates that as experience comes
19 in. Then this experience will be folded in in what more
20 needs to be done. Where the programs in GALL are not
21 sufficient. That could be an opportunity also to talk
22 about, you know, the desire expressed here that there will
23 be some level of updates of the GALL report, with some
24 frequency. Not every three months, but six months.

25 We don't need to talk about frequency, but

1 certainly I mean, there is a valuable information coming in
2 that we need to--

3 DR. KRESS: After every new license renewal review.

4 MR. SIEBER: Or right before.

5 CHAIRMAN BONACA: Right before.

6 DR. GRIMES: That's going to be really messy in
7 2002.

8 CHAIRMAN BONACA: Alright.

9 DR. GRIMES: That's right.

10 CHAIRMAN BONACA: I personally would like to just
11 hear briefly from you a perspective on the fact that, you
12 know, EOPs -- EOP equipment is in the maintenance rule as
13 part of the CLB but is excluded from the license renewal
14 rule. I mean, if it is, it is. And, on the other hand, it
15 just leaves you hanging there. Why this inconsistency?
16 Now, I do believe that it is not -- there was some thought
17 behind that. And so if there is any information, it would
18 be valuable to the committee to hear why it was left out,
19 because it's so obvious that -- you know, you look at one
20 rule and then you look at the other one, and in one case
21 it's very explicitly called for, but the other one it's not.

22 And the last thing would be on voluntary
23 commitments. I mean, severe accident management is one, but
24 there are others and I wasn't left with a good feeling about
25 it. I mean, why leave them hanging there.

1 DR. SHACK: Why make those voluntary commitments
2 voluntary, right?

3 CHAIRMAN BONACA: Right. Like I said, we would
4 like to hear about it.

5 DR. KRESS: I think you're always between a rock
6 and a hard place on those. What the expectation is that
7 those will be committed to and followed up by the plants,
8 and although NRC says they don't have any enforcement, they
9 really do have. And, you know, I wouldn't be too explicit
10 on how you deal with those.

11 CHAIRMAN BONACA: No, I understand that.

12 DR. KRESS: I would just assume they're going to be
13 there, and deal with it when the time comes if they're not.

14 CHAIRMAN BONACA: The reason why I raised it is
15 that there are three issues that we discussed and the one
16 was PRA, which has been excluded. Then you have--

17 DR. KRESS: Virtually excluded.

18 CHAIRMAN BONACA: The issue of EOPs. I'm sorry?

19 DR. KRESS: Almost excluded.

20 CHAIRMAN BONACA: Yeah, almost excluded. And then
21 you have voluntary commitments. The question is, clearly
22 the rule is clear that the staff is not in, but we as a
23 committee I think have a responsibility to also speak about
24 the rule. I mean, if we found something really blaring
25 wrong with the rule, I think it would be our obligation to

1 point it out. And so I don't think that -- you know,
2 looking at it is inappropriate. At least, it would be
3 important to hear.

4 MR. SIEBER: I guess when I think about that,
5 though, it's not in the current licensing basis. It's not
6 required now, and license renewal doesn't change anything.

7 DR. KRESS: Yeah, why should you treat it any
8 differently in NUREG 3.

9 MR. SIEBER: And, you know, whatever the ordinary
10 regulatory process to deal with these things should take
11 place and they -- and I don't think it's a factor in license
12 renewal.

13 DR. KRESS: That was my feeling.

14 CHAIRMAN BONACA: Well, I'm no saying license
15 renewal. I'm saying would the licensee still be committed
16 to these voluntary commitments?

17 DR. SHACK: If they volunteer to commit, they'll
18 volunteer?

19 MR. SIEBER: Yeah, that's -- if it's on the record,
20 it's on the record. But like I said, license renewal is not
21 the issue in my opinion.

22 CHAIRMAN BONACA: Well, I mean, that's one -- I
23 would like to hear about that.

24 DR. GRIMES: We'll be prepared to talk about
25 commitment management.

1 CHAIRMAN BONACA: Were there any other issues that
2 we should--

3 MR. DUDLEY: One question, do you feel it would be
4 worthwhile to have an NEI presentation at the full committee
5 meeting?

6 CHAIRMAN BONACA: I think it would be worthwhile,
7 if nothing else, even if a brief one to, you know, indicate
8 the level of a consensus that the staff and NEI have reached
9 on this. I think that's very important.

10 DR. SHACK: The violent agreement?

11 CHAIRMAN BONACA: Yeah. It doesn't have to be a
12 long presentation, I think it would be very useful and it
13 can be done quickly.

14 Anything else we would like to hear for the full
15 committee?

16 Okay, were there any other comments from the
17 staff? From NEI?

18 DR. GRIMES: Dr. Bonaca?

19 CHAIRMAN BONACA: Yep.

20 DR. GRIMES: I would like to, as I mentioned
21 yesterday, I would like to point out that when we issued the
22 guidance for public comment, we identified four specific
23 questions that we were interested in receiving some feedback
24 on. So far, I haven't seen anybody respond to the four
25 specific questions, but I would like to call to your

1 attention, question number three talks about the treatment
2 of the ASME code and reliance on the 50.55(a) process. And
3 it asks for feedback on whether other national codes and
4 standards that are referenced in GALL, like those published
5 by the ACI and I would add to that or IEEE or other
6 acknowledged standards groups -- whether they should be
7 credited and how should GALL treat them. In the absence of
8 any other guidance, we credit programs that cite specific
9 additions and addenda of particular codes and standards, but
10 we don't, except for the ASME process, we don't give credit
11 for the consensus process to change the practices in the
12 future. And part of that is because we're expected to
13 articulate a safety basis for concluding how particular
14 practices and its aging effects. And it's difficult to do
15 that in a -- and say whatever they decide to change in the
16 future is okay too. So that's sort of our fall back
17 position, but I aks you to think about that in terms of --
18 you have provided us with some very useful feedback on ways
19 that we can improve the guidance and make it more
20 transparent and improve its readability. And we will be
21 struggling with those questions in the future, so if there's
22 anything that you can add, we'd appreciate that.

23 DR. SEALE: I wouldn't advise you, but I would
24 suggest that Dana is extremely concerned, or let's say aware
25 of the legislative or maybe it's administrative urging at

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1 the present time to rely on standards and -- consensus
2 standards where possible.

3 DR. SHACK: If I go to the web site.

4 DR. SEALE: You might want to try to get his input
5 on that question.

6 DR. SHACK: If I go to the web site, will I see
7 your four questions?

8 DR. GRIMES: Yes, if you look at the Federal
9 Register notice. Yes, if you look at the Federal Register
10 notice. Okay.

11 DR. GRIMES: And I'll also -- want to verify. We
12 also made a number of commitments over the past day and
13 half. We're going to provide a sample of the industry
14 comments to you so that you can see the form that they were
15 presented.

16 DR. SHACK: Will you be able to say anything about
17 the public comment by that time or that will be too fresh?

18 DR. GRIMES: Probably too fresh, especially with
19 the letter writing campaign. We're still sorting faxes and
20 e-mails and nuclear power is bad and you folks should be put
21 out of work. But if we find any other -- if we can assemble
22 any of the other public comments that we've got, we'll pass
23 those along.

24 We're going to expand the explanation about dams
25 to address empoundments and earth dams. Yeah, in the table.

1 We're going to provide you with the UCS comments
2 on GALL SRP and we'll make sure that for the subcommittee on
3 the A&O safety evaluation that we describe the other
4 features of the license renewal process.

5 CHAIRMAN BONACA: Yea, we discussed about the FSAR
6 update and the tech specs in the letters that we wrote for
7 Oconee and Calvert Cliffs.

8 DR. GRIMES: And we'll also do a quick review of
9 the environmental review process and illustrate it with the
10 results for Arkansas, so you can see how that process works.

11 CHAIRMAN BONACA: Anything else. If not, I want to
12 thank the staff for the presentation. It was informative,
13 and I adjourn the meeting.

14 [Whereupon, the meeting was adjourned at 11:59
15 a.m.]

REPORTER'S CERTIFICATE

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

NAME OF PROCEEDING: ACRS - PLANT LICENSE RENEWAL
 PUBLIC MEETING

PLACE OF PROCEEDING: ROCKVILLE, MD

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.



John Rankin

Transcriber

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