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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

(ACRS)

PLANT LICENSE RENEWAL SUBCOMMITTEE

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WEDNESDAY,

OCTOBER 30, 2002

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ROCKVILLE, MARYLAND

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The Subcommittee met at the Nuclear Regulatory Commission, Two White Flint North, Room T2B3, 11545 Rockville Pike, at 8:30 a.m., Graham M. Leitch, Chairman, presiding.

COMMITTEE MEMBERS:

GRAHAM M. LEITCH Chairman

JOHN J. BARTON Consultant

MARIO V. BONACA Member

STEPHEN L. ROSEN Member

WILLIAM J. SHACK Member

JOHN D. SIEBER Member

GRAHAM B. WALLIS Member

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1 ACRS STAFF PRESENT:

2 RAMIN ASSA

3 TIMOTHY KOBETZ

4

5 OTHER NRC STAFF PRESENT:

6 PT KUO

7 RAJ ANAND

8 HANS ASHAR

9 STEWART BAILEY

10 WILLIAM (BUTCH) BURTON

11 JOSE CALVO

12 BARRY ELLIOT

13 JOHN FAIR

14 BART FU

15 GEORGE GEORGIEV

16 MARK HARTZMAN

17 GREG HATCHETT

18 MEENA KHANNA

19 SAM LEE

20 RENEE LI

21 JIM MEDOFF

22 MICHAEL MODES

23 CLIFF MUNSON

24 DUC NGUYEN

25 ROBERT PETTIS

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OTHER NRC STAFF PRESENT: (CONT.)

JAI RAJAN

DAVID SOLORIO

JIMI YEROKUN

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

8:36 a.m.

CHAIRMAN LEITCH: On the record. Good morning. This is the meeting of the ACRS Subcommittee on License Renewal. I'm Graham Leitch, Chairman of the Subcommittee. The ACRS members in attendance are Mario Bonaca, William Shack, John Sieber, Graham Wallis and John Barton is with us as a consultant to the ACRS.

The purpose of this meeting is to review the Staff Safety Evaluation Report with open items related to the application for renewal of the operating licenses for Peach Bottom Power Station, Units 1 & 2.

MEMBER ROSEN: Two and three.

CHAIRMAN LEITCH: Two and three it should be. The Subcommittee will gather information, analyze relative issues and facts and formulate the proposed positions and actions as appropriate for deliberation by the full Committee. Ramin Assa is the cognizant ARCS staff engineer for this meeting. The rules for participation in today's meeting have been announced as part of the notice of this meeting previously noticed in The Federal Register on October 22, 2002.

The transcript of the meeting is being

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2 Federal Register notice. It is requested that
3 speakers first identify themselves, use one of the
4 microphones and speak with sufficient clarity and
5 volume so that they can readily heard. I would like
6 to point out that copies of the presentation are in
7 the back of the room and additional copies of Peach
8 Bottom License Renewal Application are also available
9 for reference in the back of the room.

10 We have received no requests for time to
11 make oral statements or written comments from members
12 of the public regarding today's meeting. We will now
13 proceed with the meeting. I'll call on Mr. P.T. Kuo,
14 Program Director for NRC Division of License Renewal
15 and Environmental Impact for his opening remarks.
16 P.T.

17 MR. KUO: Thank you, Dr. Leach. Sitting
18 next to me is Dr. Sam Lee who is the second chief for
19 the License Renewal section. Today the Staff is ready
20 to brief the Committee on the safety review of Peach
21 Bottom License Renewal Application. David Solorio is
22 the Senior Project Manager for the Review. He took
23 over the project in August. Prior to that, Raj Anand
24 was the project manager.

25 Before Dave starts his briefing which will

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1 be supported by Staff sitting on the table and also
2 sitting in the audience, I would like to follow up
3 another item that came up from the last ACRS meeting,
4 McGuire/Catawba. At that time, Dr. Bonaca asked
5 whether the Staff has a system to track the commitment
6 so that years later that we can perform inspections.
7 I told the Committee at that time that yes indeed we
8 would have been developing Inspection Procedure 71003.
9 I promised to come back to the Committee today.

10 I did check and we did have a procedure
11 developed but it is still in the draft stage being
12 reviewed. As soon as it is finalized, I will forward
13 a copy to the Committee. In the meantime, I did check
14 the contents of the procedure. It is certainly very
15 clearly stated that the procedure will have a plant-
16 specific list of all of the commitments that is
17 committed by the licensee and that the Staff will
18 inspect those commitments on a sampling basis. With
19 that, I will turn the briefing over to Dave.

20 MR. SOLORIO: Thank you, P.T.

21 MEMBER BARTON: I thought I heard in an
22 earlier license renewal meeting that all these things
23 are going to captured in the FSAR submittal that the
24 licensee would have to make that talked about the
25 aging programs and the commitments. We were told

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1 earlier that this was all going to be submitted in the
2 FSAR submittal that covered the extended operating
3 period. So now we hear something else.

4 MR. KUO: No, that is correct. This is in
5 addition to that that we have inspection procedures to
6 make sure that the Staff after years before the
7 extended operation we will have something to rely on
8 to do our inspections.

9 MEMBER BARTON: All right, I understand.
10 Thank you.

11 MR. KUO: You're welcome.

12 MEMBER BONACA: The concern really, John,
13 was we realize that so of the many of these plants
14 will reach license zero period roughly at the same
15 time and there is going to be a huge amount of
16 commitment on them that is going to have to be
17 implemented and also verified by the Staff. So the
18 challenge is not going to be necessarily for the
19 licensee but for the Staff to deal with all them in a
20 short time.

21 MEMBER BARTON: Okay, I understand. Thank
22 you, Mario.

23 MR. SOLORIO: Okay, Thanks, P.T. I'll
24 begin. Can everyone hear me okay? I wasn't sure if
25 the mike was working properly. My name is Dave

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1 Solorio. I work in the License Renewal and
2 Environmental Program Office Impacts Program in the
3 Office of NRR. I'm the License Renewal Project
4 Manager for the Peach Bottom Power Station. I want to
5 acknowledge that Mr. Raj Anand has been doing that
6 prior to me for about a year and he's here with us
7 today in case I need his corporate memory.

8 I hope you recognize the format of the
9 slides I have today. We will more or less follow what
10 you saw before for the Catawba/McGuire presentation.
11 To my right, I have Mr. Michael Modes and Jimi Yerokun
12 who are up here because later on a few pages you'll
13 see a slide on inspection results. If you have more
14 detailed questions than what I speak on I have them
15 here to address your questions.

16 The next couple of slides just provide an
17 outline of various staff members along with me who
18 will be making presentations here today. I'm going to
19 ask the Staff members to come up here for
20 transitioning to the presentation to minimize the
21 delay for you.

22 In a way of background, the Licensing
23 Application for the Peach Bottom units came in on July
24 2, 2001. Peach Bottom is a two-unit BWR. It's
25 located in York and Lancaster Counties in Southeastern

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1 Pennsylvania. The plant is about 38 miles north-north
2 east of Baltimore and 63 miles west-southwest of
3 Philadelphia. The reactor buildings are separate for
4 each unit. The turbine building, control room, rad
5 waste building, field generator building house
6 equipment used by both units.

7 Peach Bottom units are BWR/4s, Mark 1
8 design and supplied by GE. Each unit is authorized to
9 operate at a steady reactor core power not in excess
10 of 3,458 megawatts thermal (MWT). The current license
11 for unit two expires August 8, 2013 and unit three
12 expires in July 2, 2014.

13 CHAIRMAN LEITCH: Dave, Peach Bottom has
14 or has not applied for construction period recapture.

15 MR. SOLORIO: I don't know that. I could
16 probably get the answer for you before the end of the
17 day.

18 CHAIRMAN LEITCH: In other words these
19 dates are 40 years from the license.

20 MR. POLASKI: This is Fred Polaski,
21 production. Yes, this 40 years includes we haven't
22 recapture the construction period so that's 40 years
23 from start-up.

24 CHAIRMAN LEITCH: Okay, thank you.

25 MR. SOLORIO: In the way of request for

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1 additional information, we issued 231 by March of this
2 year. In the way of comparison, I looked up how many
3 we issued per Hatch, we issued over 400. It was
4 interesting to note that the RAIs for the aging
5 management review per Hatch were around 170 and for
6 Peach Bottom 40. The scoping RAIs for Hatch were
7 around 200 and around 89 for Peach Bottom.

8 MEMBER WALLIS: Can I ask how many of
9 these were repeats? I mean did you just send out an
10 RAI and get an answer or did you have to go round and
11 round with some of them?

12 MR. SOLORIO: There were a few we had to
13 go round and round on them. I don't want to say round
14 and round. I mean we had to iterate on them. There
15 are three or four and actually there is a subject of
16 some open items which the Staff knows about.

17 MEMBER BARTON: Some of the RAIs end up
18 open items because you couldn't resolve them through
19 the correspondence, right?

20 MR. SOLORIO: Yes, the schedules are very
21 tight. We don't have a lot of time and with the
22 milestones sometimes RAIs become open items. As far
23 as the number of open items to go, we had 15. That
24 was compared to 18 per Hatch. There were 16
25 confirmatory items for the Peach Bottom SER which will

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1 issued September 13 of this year. The responses to
2 the open items and confirmatory items are due in
3 November of this year.

4 You are going to hear throughout the
5 presentations today from a number of Staff members
6 that we received draft information from the Applicant
7 which leads us to believe we can close a majority of
8 this. I provided a summary status last Friday. I'm
9 not sure if you have had time to look at it yet but
10 the majority of them are closed and I provided some
11 information on that.

12 My next two slides are meant to provide a
13 little historical perspective on the license renewal
14 rules which forms the basis of the Staff's review.
15 This slide lists the two license renewal principles
16 which I'm sure all of you perhaps have seen before.
17 The first being the current licensing basis is
18 adequate so with the exception of those instances of
19 the detrimental effects of aging CLB is adequate and
20 provides an acceptable level of safety. Currently
21 licensing basis carries forward so the applicant is
22 expected to meet all the same requirements in the
23 renewal period they will have to meet in the first
24 four years of operation.

25 In performing the Staff's review, we focus

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1 on the following here listed on the slide. We begin
2 with an evaluation of methodology used to identify the
3 structures, systems and components within the scope of
4 an aging management review. As part of the review, we
5 conduct an on-site audit by several headquarters
6 quality assurance staff. At the same time, staff
7 reviews the scope of the structures, systems and
8 components identified in the license renewal
9 application to obtain reasonable assurance that these
10 structures, systems and components have been
11 identified, those within the scope of license renewal.

12 The next step for the staff's review is to
13 obtain reasonable assurance that the passive, long-
14 lived structures, a subset of the structures within
15 the scope of license renewal, are subject to an aging
16 management review. The staff then reaches a
17 reasonable assurance finding that the identification
18 of the aging effects and management of the aging
19 effects can insure relevant equipment and tenant
20 functions in accordance with the current licensee
21 basis are maintained in the period of extended
22 operation.

23 The staff also reviews the identification
24 of the time-limited aging analysis to reach reasonable
25 assurance that the applicant's method to determine how

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1 these analysis with time-limited instructions will be
2 extended or managed for the period of extended
3 operation. During the review process, the staff also
4 conducts planned inspections on the scoping and
5 screening and aging management activities in
6 accordance with NRC Inspection Manual Chapter 2516,
7 "Policy and Guidance for the License Renewal
8 Inspection Program" and Inspection Procedure 71002,
9 "License Renewal Inspections." The inspection is an
10 integral part of the staff's review that provides
11 additional insurance that the methods, processes and
12 results described in the LRA are sound.

13 The first inspection conducts was in April
14 of this year. It was lead by Mr. Jimi Yerokun to my
15 far right. It was a two week inspection. The
16 objection was to confirm that the applicant had
17 identified the structures, systems and components
18 required by the rule. The team determined that the
19 scoping and screening was being implemented as
20 described in the LRA. Notable inspection findings
21 were that during the plant walk down, the inspectors
22 identified that non-safety related systems, the
23 container spray and RHR heat filed systems adjacent to
24 the safety related RHR and container spray systems
25 were not within the scope of license renewal and the

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1 applicant did not scope fuse clips within the scope of
2 license renewal.

3 I'll mention that in a later presentation
4 today we'll be talking more about the fuse clips.
5 Feel free to ask questions now if you have them.
6 Also the scoping of the equipment relied upon for the
7 recovery of off-site power is another inspection --

8 MEMBER BARTON: The fuse clips are not a
9 new issue, is it? The fuse clips have come up on
10 other applications as well, right? It doesn't sound
11 like a new item to me.

12 MR. SOLORIO: Actually, fuse clips was
13 identified during this inspection and as a result of
14 that, staff had developed a draft in terms of staff
15 guidance to discuss this issue. We are currently in
16 the process of working through that in terms of staff
17 guidance with the industry.

18 MEMBER SHACK: I think we did fuses
19 before.

20 MEMBER BARTON: So it was fuses, not fuse
21 clips. We only had half the problem.

22 CHAIRMAN LEITCH: I seem to recall an
23 issue on fuse clips myself. I don't remember which
24 applicant it was but I do remember a fuse clip issue
25 previously.

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1 MR. YEROKUN: I can try to respond to
2 that. I'm Jimi Yerokun, currently Technical
3 Assistant, Division of Regulatory Improvements in NRR.
4 Before that, I was an Inspector in Region One and I
5 led a team inspection in scoping and screening. At
6 the time we came up on the fuse clips issues I had
7 reviews from records of previous inspectors which
8 revealed that this was a for standard fuse clips.

9 The question came up. There were previous
10 records of addressing the fuses, passive or active,
11 and that was found but there was no indication that
12 the issue of addressing fuse clips had been discussed
13 and resolved. So subsequent to that, there were staff
14 guidance that was put out to the industry and that
15 issue I believe is being addressed now generically.

16 DR. LEE: My name is Sam Lee. I'm from
17 the License Renewal section. He's correct that the
18 committee had heard about the fuse clips before. Once
19 we identified this problem, we contacted the Catawba-
20 McGuire, North Anna, Surry, because the applications
21 were going on at the same time so we asked them the
22 same question. Based on that we decided to develop an
23 interim staff guidance. So you hear about it
24 previously.

25 CHAIRMAN LEITCH: Okay, thanks.

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1 MEMBER BARTON: Now we are going to hear
2 it in the future or do you think this is going to
3 resolve it for future applications?

4 MR. KUO: We have developed this internal
5 staff guidance and we have sent this paper to the
6 industry and the public interest group for public
7 comments. We haven't been able to finalize that.

8 MEMBER BARTON: All right. I'm with you.
9 I'm just trying to think about all the issues that you
10 keep hearing over and over again with these
11 applications. You wonder when are you going to
12 resolve some of these. So I'm looking for how do you
13 feel we are with resolving a few slip issues.

14 MR. KUO: We do have that interim staff
15 guidance process. Then we are following the process
16 to resolve this issue.

17 MEMBER BARTON: Thank you.

18 MR. KUO: You're welcome.

19 CHAIRMAN LEITCH: Is this the appropriate
20 time to ask about the inspection activities?

21 MR. SOLORIO: Sure.

22 CHAIRMAN LEITCH: I guess I had a
23 question, Jimi, about your general impression as to
24 the material condition of the plant. I think one of
25 the things that we're interested in is often times the

1 material condition of the plant can convey an
2 impression as to the safety culture that exists at a
3 particular site, the care with which management is
4 treating the plant and so forth. I guess I was
5 wondering if you formed an opinion. Perhaps material
6 condition was not the prime reason for the inspection.
7 But nonetheless as you looked around, did you have
8 some impression as to the material condition of Peach
9 Bottom?

10 MR. YEROKUN: The scoping and screening
11 inspection that I led, the material condition was I
12 think like you said wasn't a real factor into the
13 scope of the inspection. But nevertheless we did have
14 some plant walkdowns, the systems that we were looking
15 at, and the general impression of the material
16 condition as far as the plant being focused on by
17 management or was it being well kept. We left with
18 the impression that in fact that was the case.

19 There appeared to some good focus by the
20 applicant's management on keeping the plant up to date
21 material wise. That was one of the inputs provided to
22 the second team that went out for the aging management
23 review as to the impression that we had just from the
24 walkdowns we did. It wasn't a real active inspection
25 but nevertheless I guess we left with the impression

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1 that things appeared to be being kept well.

2 MEMBER BONACA: I have a question of the
3 same nature, general question. Through the SER, there
4 are a number of occasions where the staff identified
5 some drawings or some elements that were not included
6 in scope and the licensee reviewed them and said oh
7 yes they are in scope and we --

8 MEMBER BARTON: Inadvertently omitted or
9 forgot to put it or something like that.

10 MEMBER BONACA: -- inadvertently omitted,
11 yes. So the licensee accepted an expansion of scope,
12 minor or major or whatever it was, to include those
13 elements here and there. I understand that there is
14 some complexity there as I was reviewing for example
15 this issue of system boundary realignment where you
16 have interfacing components and you have to detect
17 whether they are in scope or not.

18 The question I have is when I read what's
19 the confidence that in fact what should be in scope is
20 in scope. I mean clearly the job of the NRC cannot be
21 the one of identifying components, just identifying if
22 the process is adequate. So if you have one finding,
23 two findings it's not a big deal. If you have more,
24 it would be a bigger deal. Just your impression about
25 that. How do you feel about components in scope?

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1 MR. SOLORIO: Well, I think you've been a
2 part of these license renewal reviews since the
3 beginning of these. If you think back for every
4 review there has been instances where the staff had
5 identified some components which the applicant didn't
6 put in. The majority of the time I think it's been
7 a case of they also have processes in place and
8 actually later today you will hear a gentleman speak
9 to the methodology review, the process by which they
10 identified stuff. We look at that. That's part of
11 what the rule requires.

12 We've always up to Peach Bottom concluded
13 that that was appropriate but unfortunately they're
14 done by humans and things get missed. Also some of it
15 is the applicant's interpretation of a particular
16 requirement which scopes something is different from
17 the staff's and we ferret that through the review
18 process.

19 MEMBER BONACA: So you feel that this is
20 not usual. I mean what you saw here is pretty much
21 consistent with previous applications more of an issue
22 of almost boundary than anything else.

23 MR. SOLORIO: Right, and also I guess as
24 we're learning we're identifying a few more things and
25 it's not always that the next applicant in the

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1 pipeline had time to incorporate some of those lessons
2 so we're identifying some of the same things again.

3 MEMBER BARTON: I had the same concern
4 when I reviewed the application that Mario just
5 brought up. It seemed to me that there were more of
6 those "oops I forgot to put that in" in this
7 application than the other ones I reviewed. So I had
8 the same question Mario did. So there's two guys
9 independently looking at this thing thinking that
10 there's more "oops I forgot" this time.

11 MEMBER BONACA: The reason that I asked
12 the question by the way is because also we have an
13 open item asking the licensee to explain the
14 methodology used to identify components which are in
15 the non-safety category that could in fact be in the
16 safety operation system. That was why I also felt
17 that there was at least two more questions on this
18 page. If you were asking a question and there's an
19 open item of methodology then it opens up the issue of
20 what's there.

21 MR. SOLORIO: Actually to address that one
22 you just brought up, that was the case if you think
23 back to Hatch, it came up during the Hatch's reviews.
24 So prior to that, the staff had always looked at this
25 issue of course but for some reason there were some

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1 special circumstances about Hatch that made it more
2 permitable. In this case, the applicant just didn't
3 have time when they got their application put together
4 to incorporate all the lessons they had to learn
5 because they have been coming to all the meetings for
6 years to try to make sure that they could learn what
7 they could. If I look at the number of RAIs for
8 scoping, there is a significantly less number of RAIs
9 for scoping than Hatch.

10 MEMBER BARTON: You know you mentioned
11 that but I think that the Subcommittee that looked at
12 Hatch at the time all of us came to the conclusion
13 that that was a lousy application. So it was no
14 surprise to us that there were a heck of a lot of open
15 items and RAIs in the Hatch application as compared to
16 this which was a much better submitted application.
17 Comparing numbers of this to Hatch doesn't really tell
18 me too much.

19 MR. HATCHETT: This is Greg Hatchett. I'm
20 in the Plant Systems Branch in the Division of Safety
21 Analysis. We looked at this scoping issue for the
22 Peach Bottom plant. One of the things that you should
23 know is that most applicants come in and provide a
24 "early look at their application prior to submittal."
25 One of the things that was discussed during that

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1 meeting was they had the application put together
2 primarily three months prior to that and that was
3 during the timeframe that we were going through the
4 issue of non-safety related, safety related within the
5 Hatch application. As a result of that, they didn't
6 have an opportunity to clean that within the
7 application.

8 Looking forward, the staff had recently
9 had a series of meetings with the industry and several
10 workshops where this issue has also been discussed
11 with the industries looking at addressing this issue
12 up front so the staff doesn't have to ask the same
13 RAIs that you've seen over the last applications that
14 have been submitted and subsequently approved. So
15 this RAI about safety related and non-safety related
16 continues to be asks but the staff is working with the
17 industry to resolve that issue for the fleet of 2003.

18 Then with respect to Peach Bottom and
19 Hatch and the number of RAIs after the scoping area,
20 we are more focused with the question with regard to
21 the question of scoping to flush out those issues that
22 they did with some of these things that you guys are
23 seeing with respect to systems about the realignment.
24 So the questions were more focused on understanding
25 how the methodology led to the results. Where I think

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1 with the Hatch application, the different reviewers
2 were just asking questions with respect to their areas
3 and particularly with regard to scoping so it led to
4 more questions. With regard to Peach Bottom, the
5 overall number of questions that were asked in the
6 scoping arena were more integrated if you will to
7 reduce the number of questions asked to get at how the
8 results were obtained to come to some sort of finding.

9 MEMBER BONACA: Okay, so the bottomline of
10 your message is that you don't find whatever was there
11 unusual and you still have confidence that scoping has
12 identified components in scope.

13 MR. SOLORIO: Yes, sir. We either process
14 or unprocess. We're confident that it gets the
15 results with reasonable assurance.

16 MEMBER BONACA: Thank you.

17 MR. SOLORIO: The second inspection was
18 for aging management. It was the outside part of the
19 inspection activities which were completed by August
20 9 of this year. It was also a two week inspection.
21 The objective was to confirm that the existing aging
22 management programs were effective to examine the
23 applicant's plans for enhancing existing programs and
24 establishing new ones. Our findings were that during
25 the plant walkdowns, the inspectors identified cable

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1 in vaults were susceptible to cyclic wetting. The
2 applicant actually has replaced a lot of these cables
3 and the staff felt that the aging effect still needed
4 to be managed and that this is a subject and the open
5 item that we'll be talking about later.

6 MEMBER WALLIS: Where does the water come
7 from?

8 MR. SOLORIO: Some of these are in vaults
9 and vaults aren't always waterproof. You have
10 manholes over them.

11 MEMBER WALLIS: It's rain water?

12 MR. SOLORIO: It's rain water, right.
13 Ground water. Then the last inspection will be a
14 close-out inspection to be conducted in December of
15 this year. The purpose for that inspection is to
16 close follow-up items from the previous inspections
17 and I mentioned some today, address any issues related
18 to the annual update and support to the extent
19 necessary the headquarters' staff as we try to close
20 out confirmatory or open items.

21 MEMBER ROSEN: Can you tell me more about
22 the annual update? What are you updating?

23 MR. SOLORIO: There's a requirement and
24 rule that they need to provide an update to the plant
25 configuration for things that are material to a

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1 license renewal review that would have occurred from
2 the time of their application. So it's really
3 adaptive. It's doing plant mods. There are other
4 things that they might end up changing as a result of
5 the review. The rule requires an annual update so
6 that the staff can considers any changes before we
7 make our final decision.

8 MEMBER ROSEN: Good thinking.

9 MR. SOLORIO: Back to the staff's review,
10 the following guidance is relied upon. You can also
11 think of them as the tools we use to conduct a
12 comprehensive, consistent exam of regulatory review.
13 Unless anyone has questions, I wasn't going to plan on
14 reading them to you.

15 CHAIRMAN LEITCH: That's fine.

16 MEMBER BONACA: That's fine.

17 MR. SOLORIO: Sorry. Couldn't see it all.
18 I didn't realize that. The SER format is as you see
19 on this slide. Today we'll be focusing on Chapters 2,
20 3 and 4. On this slide I provided a summary of the
21 open and confirmatory items that are discussed in the
22 SER trying to give you an idea of where they lie. In
23 the scoping and screening, there are eight open items.
24 In aging management review, there are six. In TLAA,
25 there's one.

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1 CHAIRMAN LEITCH: Dave, we're going to
2 maybe get in danger of playing the numbers game here
3 but when you talk about open and confirmatory items,
4 these are the items as described in the SER.

5 MR. SOLORIO: In the SER, yes. I'm not
6 going to --

7 CHAIRMAN LEITCH: Some of these may have
8 been closed in the intervening time or maybe in the
9 process of being closed but for purposes of today's
10 meeting that's the list that we are talking about,
11 right?

12 MR. SOLORIO: Yes, sir. And for those
13 that we think we can close, we are going to say that
14 these are an open item that we think we can close.
15 We're not going to call it a confirmatory item to
16 confuse it with the other confirmatory items.

17 CHAIRMAN LEITCH: Okay, thanks.

18 MR. SOLORIO: As I said earlier, I
19 previously informed the Sub-committee that 14 of the
20 15 open items are most likely going to be closed based
21 on the dialogue that we had with the applicant. We
22 received a number of faxes they have given us to
23 respond to our open items. We've had some conference
24 calls to clarify things. We think we're almost done.
25 Now what they need to do is submit this under oath and

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1 affirmation in writing to us formally. Of course if
2 anything would change between now and then as far as
3 the details of this I would let Ramin know and he
4 could let you all know.

5 CHAIRMAN LEITCH: Now a lot of my
6 questions -- Excuse me. Go ahead, Jack.

7 MEMBER SIEBER: One of the exceptions that
8 you take because it's under review is the use of
9 BWRVIP-76.

10 MR. SOLORIO: Yes, sir.

11 MEMBER SIEBER: Will that be resolved by
12 the time that you're ready to resolve the Peach Bottom
13 Licensure Renewal?

14 MR. SOLORIO: We hope it will. We're told
15 that we're supposed to get some reformation in time to
16 get it done. If you don't what we would probably do
17 is what we are doing for BWRVIP-78 and -86 which is
18 make it a license condition that they need to provide
19 a plant specific approach or commit to implement
20 whatever the results of that BWRVIP are.

21 Later on today, Barry Elliot will present
22 you the results of -76 so we actually will talk to
23 these reports and tell you where we are with our
24 review of them and such. I actually asked him BWRVIP
25 group and we are on track to get the information as

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1 far as I know in time to make a decision before we
2 would renew the license.

3 MEMBER SIEBER: Maybe I didn't read this
4 right but 76 is a core shroud inspection.

5 MR. SOLORIO: Yes.

6 MEMBER SIEBER: So does each one of them
7 have a shroud?

8 MR. SOLORIO: Yes.

9 MEMBER BARTON: They better have.

10 CHAIRMAN LEITCH: I assume, Dave, that
11 we're going to have an opportunity to talk about the
12 specifics of those open items.

13 MR. SOLORIO: Yes, sir.

14 CHAIRMAN LEITCH: But you are just
15 summarizing.

16 MR. SOLORIO: This is just an overview.

17 CHAIRMAN LEITCH: Because I have a lot of
18 questions regarding open and confirmatory items.
19 There will be time for that later.

20 MR. SOLORIO: Yes, sir. Each of the
21 presentations that will follow the majority of which
22 will be done by a certain member of the staff who are
23 the leads. They have on their slide and you will see
24 it something on open items and they are prepared to
25 talk about it.

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1 CHAIRMAN LEITCH: Okay.

2 MEMBER BONACA: I have just a simple
3 question. I think something that relates to the
4 question that Mr. Leitch asked before about physical
5 conditions. That's a judgement you made by looking at
6 components. A couple of things that surprised me when
7 I was reading the application was things that you
8 can't see and yet they speak of physical conditions.
9 One is there is a torus inspection and I'm sure at
10 some point we'll talk about that whereby the licensee
11 says they are committing to one time inspection to
12 determine potential loss of material at the interface
13 between the gas and the liquid. When I was reading
14 that, it was clear that this area has never been
15 inspected and will never be inspected unless you go to
16 license renewal. So I began to wonder about I guess
17 nobody is inspecting it and that surprised me
18 somewhat.

19 The question I have and this is
20 philosophically because there are other issues similar
21 to this, how can we accept one time inspection which
22 should be purely confirmatory that the loss of
23 material is not occurring when we don't even know if
24 in fact there is loss of material taking place because
25 we have never looked at it. We don't have any

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1 experience that tells us anything about it. I'm not
2 saying we should have a failure of power. But the
3 fact is I'm just trying to understand how for example
4 in that case a one time inspection would be
5 appropriate at that time.

6 MEMBER BARTON: I must have missed that in
7 the application but I know at Oyster Creek we used to
8 inspect the torus every refueling outage. You would
9 go in there and look at the thing because you inspect
10 the coating. You have a coating on there which is
11 really preventing loss of material of the torus.

12 MEMBER BONACA: That's what I thought but
13 here when I read this, the problem speaks very clearly
14 one time inspection to be perform at a time before
15 they get into license renewal and then if there is
16 some problem then they will resolve the problem or
17 otherwise they won't. I would like to understand more
18 about this. The other issue is the one of depending
19 on the pressure test to determine the adequacy of the
20 barrier.

21 MEMBER BARTON: That's the internal
22 corrosion of carbon steel issue.

23 MEMBER BONACA: Yes. Again this is stuff
24 you can't see. Yet they will have to wait until I
25 pressure a system and blow it apart before I can say

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1 that there is a bigger issue that's in place
2 internally. So I hope during the meeting we better
3 understand these issues regarding the torus. Maybe
4 licensee can speak about what they have done. If they
5 ever have inspected it.

6 CHAIRMAN LEITCH: Yes.

7 MR. POLASKI: This is Mr. Polaski from
8 Exelon. What I'd like to clarify is the one time
9 inspection we're doing is not for the torus proper.
10 There are on-going inspections of the torus shell.
11 The one time inspection is for system piping like the
12 high pressure coolant injection system piping which
13 comes from outside the torus into the torus and comes
14 into the air space and discharges below the water
15 level. So that piping is not now being inspected.

16 So we imposed a one time inspection to
17 look for degradation of that piping specifically at
18 the air-water interface because that's the area we
19 believe is more susceptible. It is a one time
20 inspection but it will done in accordance to our
21 station procedures and if there are problems found
22 that goes into the corrective action process, generic
23 implications are looked at and very well could if they
24 find something expand to look at other piping or
25 become a routine inspection. It will depend on what

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1 we find so right now there are not requirements at all
2 to look at that. We're proposing one time before 40
3 years. What happens after that depends on what you
4 find.

5 MEMBER BONACA: So this is just a sample
6 location of piping.

7 MR. POLASKI: Yes, it will be a sample
8 location for those pipes that we believe will be the
9 ones that would be the bounding locations, the ones
10 that are more susceptible.

11 MEMBER BONACA: You will have more than
12 one location.

13 MR. POLASKI: Yes.

14 MEMBER BONACA: Because it wasn't clear
15 there.

16 MEMBER ROSEN: Okay, so I think it's a
17 valid concern but I still haven't heard the answer to
18 the question which is what is the condition of the
19 internal of the torus. Is that going to be describe
20 at some point? Not over the piping entering the torus
21 but the torus itself. What has Exelon done at Peach
22 Bottom to look at that torus, its internal condition,
23 what is the extent of the inspection and what was
24 found?

25 MR. SOLORIO: Well, we have a --

1 presentation later and that's covered under the
2 presentation. We'll try to make sure that we can
3 focus on that to the extent that we have information
4 on it. I guess you're also suggesting --

5 MR. KUO: Dr. Bonaca, later on the staff
6 will address your question.

7 MEMBER ROSEN: What about my question?

8 MR. KUO: Yes, also your question.
9 Basically you want to know the internal condition of
10 the torus.

11 MEMBER ROSEN: Yes.

12 MR. KUO: That will be addressed.

13 MR. POLASKI: This is Fred Polaski from
14 Exelon. With respect to the question on inspections
15 of the torus, torus inspections for degradation of the
16 internal surfaces are done every refueling outage.
17 It's part of the ISI program. These examination of
18 particular locations where we have some problems in
19 the past with the coating. So it's an on-going
20 routine inspections that's done.

21 MEMBER ROSEN: That's not the answer to
22 the question. The question is what was found and what
23 was the scope of the investigation. Not whether or
24 not you have done one. You answered the question have
25 you inspected the torus. You said yes it's part of

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1 the ISI program. Thank you. Now I want to know what
2 you looked at and what you found.

3 MR. POLASKI: We have found some
4 degradation of the coatings which has been repaired.
5 We have found degradation of the carbon steel shell
6 and those are the areas that get the inspection again.
7 The inspections have indicated that there are pits.
8 Those are monitored and tracked and the information
9 indicates that there will not be a problem with the
10 life time of those locations based on what we have
11 seen so far. But we will continue to monitor the
12 depth of those pits.

13 MEMBER ROSEN: Is that the whole answer to
14 the question which is that you found some problems
15 including pits or is there going to be some detail as
16 to where you found the problems, how serious it was,
17 how they were repaired.

18 MR. POLASKI: We don't have the
19 information with us today on exact locations or
20 depths.

21 MR. BAILEY: This is Stewart Bailey. I'm
22 with the Mechanical and Civil Engineering branch.
23 This was covered in a series of RAIs about the
24 containment ISI program so the staff did request this
25 information. They did provide details about the

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1 extent of the degradation and the locations of that
2 degradation and their inspections.

3 MEMBER ROSEN: Can somebody pull those
4 RAIs out and read us some of the details? What I'm
5 looking for is some confidence that this particular
6 set of issues has been carefully examined by the staff
7 and the licensee.

8 MR. SOLORIO: Yes. P.T. said we would get
9 you an answer and we will do that. We'll get the
10 answer and get back to you.

11 MR. KUO: Dr. Rosen, we will pull the RAIs
12 later on.

13 MR. SOLORIO: I'll also mention that there
14 are three license conditions that we are more than
15 likely come out with on this review. For those of you
16 who have read Sections 1.6 or 4.3 you will notice that
17 there is another license condition on fatigue
18 management program that we presented in the SER right
19 now. I'll talk to that in a minute. The first
20 license condition is for a requirement to include a
21 summary description of the aging management activities
22 in the LRA and supplemented by the staff's review and
23 the UFSAR in accordance with the 51.71(e) update
24 requirements.

25 The second will be for a requirement date

1 that the applicant will commit the implementation of
2 all aging management program activities before the
3 beginning of the extended period of operation. I
4 think we talked about a little bit about that earlier
5 in terms of a concern that you all have. For some of
6 the first reviews, we actually had tables in the SER
7 listing a lot of these commitments that you could go
8 to. Now what we evolved to is a UFSAR summary
9 description that we have them put in the UFSAR that
10 you can refer to get an idea of what commitments need
11 still to be done.

12 The other license condition that currently
13 is in the SER but will not more than likely end up
14 being a license condition is regarding the fatigue
15 aging management program that's discussed in 4.3.
16 Yesterday our Office of General Counsel informed me
17 that because the applicant can control in their UFSAR
18 this program and if they wanted to change the program
19 they would have to do a 50.59 and if they were to use
20 that approach they would be changing the design basis
21 which would require them to submit a license
22 amendment. So this aging management activity which is
23 one of the three approaches they propose to use for
24 the management's aging effect for some rupture vessel
25 closure studs, it might come to reaching or exceeding

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1 the CUF of 1. They want to use an aging management
2 program as one of the three options. If they do that
3 we are going to need a license amendment because the
4 staff will need to review this program they were
5 proposed to use to manage the aging prior to its
6 implementation.

7 CHAIRMAN LEITCH: So I guess one issue is
8 really the legal issue. That is whether this has to
9 be a license condition. I guess what I hear you
10 saying is that it looks like it may not have to be a
11 license condition because any deviation would have to
12 be approved separately anyway. But there is still a
13 technical issue and isn't this the issue that it seems
14 to be held up pending approval of a fluence model?

15 MR. SOLORIO: I don't know if it's related
16 to that but John Fair is walking up towards the mike.

17 CHAIRMAN LEITCH: If this is not the
18 appropriate time we can talk about that later in the
19 meeting.

20 MR. FAIR: I'll be glad to clear it up.
21 I'm John Fair. I'm the reviewer for the fatigue
22 issue. This is technically what licensee have been
23 proposing for when they are managing fatigue if they
24 predict they may exceed the usage factor of one in a
25 period of extended operation they have three options.

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1 They either reanalyze it to show they are good.
2 Repair or replace. Or a number of them have been
3 asking for an option to do some kind of inspection
4 program in lieu of beating the fatigue usage factor
5 criteria.

6 Our position has been that we haven't
7 reviewed and approved a specific procedure. We're
8 doing that so if a licensee wanted to do that later on
9 in the period of extended operation, we have been
10 requiring them to come in for an explicit review and
11 approval by the staff. So the legal issue was whether
12 that had to be controlled via some more formalize
13 mechanism than the UFSAR supplement. The issue was
14 resolved that as long as it's in the UFSAR supplement
15 they would have to come in for an amendment to make a
16 change to those commitments.

17 CHAIRMAN LEITCH: Is that the way that
18 issue was resolved with previous applications?

19 MR. FAIR: Essentially it was. We didn't
20 put the specific wording in about requiring a license
21 amendment but we did require them to put it into the
22 UFSAR supplement so that the mechanism for doing
23 anything different than what's in the UFSAR supplement
24 would be triggered into a license amendment through
25 the 50.59 process.

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1 CHAIRMAN LEITCH: So this issue was not a
2 license conditions previously?

3 MR. FAIR: No, it was not.

4 MEMBER WALLIS: What mechanism is used to
5 tighten the studs and loosen them?

6 MR. SOLORIO: I'm sorry, Graham. I didn't
7 hear you.

8 MEMBER WALLIS: What kind of mechanism is
9 used to tighten the studs -- This is talking about the
10 right to have the studs, right? The studs that hold
11 the reactor head on. Is that what we are talking
12 about?

13 MR. SOLORIO: Yes.

14 MEMBER WALLIS: What mechanism is used
15 when you take the head off to loosen the studs?

16 MR. SOLORIO: We don't describe that in
17 the SER. I'll have to get back to you with that
18 answer.

19 MR. POLASKI: This is Fred Polaski from
20 Exelon. The reactor heads studs to loosen them or
21 detach them, they are aluminum studs, there's a
22 machine that actually stretch the studs so that the
23 nut is loosen and the nuts are backed off.

24 MEMBER WALLIS: I'm just trying to figure
25 out how much some intermittent loading is involved

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1 during the process? Is it a steady sort of turning or
2 is it an impact that varies.

3 MR. POLASKI: No, It's not an impact.
4 It's a steady stretch.

5 MEMBER WALLIS: It's a stretch and then a
6 steady torque on them.

7 MR. POLASKI: They are not torqued. The
8 studs are stretched.

9 MEMBER WALLIS: Can you pull them so you
10 can take them off with your fingers?

11 MR. POLASKI: Not quite that easy because
12 the nuts are pretty heavy. You stretch them so there
13 is no torque on them and then they can be easily
14 turned loose.

15 MEMBER WALLIS: So it's a pretty benign
16 process. Thank you.

17 MR. SOLORIO: And that concludes my
18 remarks for now. The applicant's here to make a
19 presentation.

20 MEMBER ROSEN: Before Mr. Bohike or his
21 substantives come up, let me bring up one thing more
22 for the staff. This was something, Graham, you
23 brought up some meetings ago and maybe it was already
24 discussed this morning before I got here. That is
25 that many of the time limited aging analyses that are

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1 proposed are deferred until the end of the initial
2 operating period. So that all of that analysis that
3 needs to be done and the likely subsequent
4 interactions with the staff are out there in the
5 future. If you read this application, you find that
6 there's quite a few of those. It's not unique to this
7 application. So the point that you were making about
8 a bow wave of work for the staff comes back again.
9 I'm increasingly concerned about that point you raised
10 that the staff needs to be planning a fairly --

11 Since all of these license renewal
12 applications are coming in the window, all of the work
13 will come in another window 20 years hence or so.
14 It's a major concern to me because none of these
15 analyses and subsequent interactions with the staff
16 that are likely are simple.

17 CHAIRMAN LEITCH: At the very beginning of
18 the meeting, P.T. did address that issue.

19 MR. KUO: I can repeat it.

20 CHAIRMAN LEITCH: Can you quickly
21 summarize for Dr. Rosen?

22 MR. KUO: Right. We did discuss before
23 you arrived, Dr. Rosen. What I said in the last
24 meeting for Catawba/McGuire and I said earlier this
25 morning, we have developed a draft inspection manual

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1 already. This has been reviewed and to be finalized.
2 In this manual we have a detailed list of plant-
3 specific list of what the commitment that each plant
4 has. So prior to the period of extended operation or
5 during that or shortly after that, the staff will
6 start the inspection program such as this to track all
7 the commitments or analysis that you talked about that
8 we reviewed during this review. We will go back to
9 that.

10 MEMBER ROSEN: Good. I think that's a
11 very healthy step. Now with that in hand you can do
12 the manpower planning that that implies.

13 MR. KUO: That is correct.

14 MEMBER ROSEN: My concern is that you will
15 do the manpower planning and there will be a big
16 whoops that there is so much manpower required in such
17 a narrow window that there will be an issue. But
18 that's a staff concern not an applicant concern. But
19 I want to raise it again because I think it's
20 important that the staffing needs to do the planning.

21 MR. KUO: Actually we've been coordinating
22 with our regional offices and that is the reason why
23 it took us so long to develop this because we wanted
24 to make sure that we have a mechanism to get the
25 necessary resources that we need for this.

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1 MEMBER ROSEN: Thank you.

2 MR. KUO: You're welcome.

3 CHAIRMAN LEITCH: Okay. Mr. Polaski.

4 MR. POLASKI: Thank you, Mr. Leitch. My
5 name is Fred Polaski. Can people hear me? I just
6 want to make sure. I'm Exelon's License General
7 Manager. Bill Bohike who is our Senior Vice President
8 of Nuclear Services wanted to be here and sends his
9 apologies but due to an illness in the family he was
10 called out of town just yesterday and he couldn't be
11 here today.

12 I guess to start with on some initial
13 introductory remarks. We would like to acknowledge
14 good cooperation from the NRC staff in review of our
15 application. The project managers, Dave Solorio, Raj
16 Anand and also in the environmental area which I know
17 we're not talking about today, Duke Wheeler, the
18 project manager in that area. They were very
19 cooperative I think and helped us expeditious move
20 through a quality review of the application which
21 resulted in a complete, correct and quality SER.

22 The purpose for today's meeting. We would
23 like to provide an overview of the Peach Bottom
24 license renewal application and report on how the
25 status of the safety evaluation for open items and

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1 configuratory items. We believe that the application
2 that Exelon submitted was a good application, provided
3 the information that was required by 454. There were
4 a couple of areas that we recognize after we submitted
5 were not as good as they could have been and presented
6 difficulty for the staff in doing the reviews. One of
7 them was our discussion of our realignment process
8 which I'll go into in some more detail later.

9 There were also a couple of things that
10 were discovered by the staff and the project team at
11 the same time with the details in the application. It
12 was mentioned earlier about some of the things that
13 were found to be missing in the application. What we
14 discovered was that all of those components had been
15 included in our scoping work. We prepared the aging
16 management reviews and in the translation from the
17 support documents to the application which is an
18 extensive effort dealing with thousands of components.
19 A few of them were missed.

20 We discovered some of those after we
21 submitted at the same time that the staff had. We
22 were able to work through the process and correct all
23 that. So it was not things that we were trying to
24 hide or didn't want in there. It was just a couple
25 little details. A very small percentage were missed

1 as we went through this.

2 The other thing we're going to talk about
3 with a little bit more emphasis today in addition to
4 the realignment is the work we did subsequent to
5 submittal of the application where we brought
6 additional equipment in the scope because of the non-
7 safety related/safety-related interaction and I
8 mentioned briefly equipment that needed to be included
9 under the station blackout regulation requirement to
10 do that.

11 We're also prepared today to discuss time
12 limit aging analyses but we're prepared to provide
13 more support for that later during the NRC
14 discussions. Like Dave mentioned earlier, we have 15
15 open items, 14 of those we have reached agreement
16 within the staff. It's a matter of closing our
17 paperwork. One we are still working on. I believe we
18 will be able to close that very soon.

19 A little bit of background on the Peach
20 Bottom application. We began preparation of the
21 application in March 1999. Prior to that PECO which
22 was one of the companies that was merged into Exelon
23 two years ago had done some work back starting in 1996
24 with the NRC NEI demonstration project. So we've been
25 involved in the work, the industry has been doing

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1 since 1996. We started this project in 1999.

2 Some of the discussion I heard earlier and
3 I know this gets involved is we're the second BWR.
4 Hatch is the first BWR. How does that relate
5 together? Hatch submitted in February 2000 so we were
6 following everything that they did. Then we made some
7 changes in our process and our application format
8 based on lessons learned from Hatch.

9 We submitted in July 2001. Some of the
10 things that we are changing in the industry like
11 different interpretation if you will of the second
12 scope and criteria for non-safety the way that it
13 occurred after we submitted. So we addressed those
14 areas in RAI space because it wasn't clear what was
15 needed in sufficient time for us to include that in
16 the application.

17 The other thing was submitted July 2,
18 2001, the guidance documents for standardization
19 development, NUREG-1800 and -1801. The standard
20 review plan and the GALL were issued in final form in
21 July 2001. They were in development stages so we knew
22 they were there but we didn't prepare the application
23 100 percent in accordance with that because of the
24 timing issue. We weren't just able to do that.

25 What I would like to do now is to

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1 introduce the other people we have here from the
2 project team. On my right is Erach Patel, who is the
3 technical lead for preparation of the 454 application.
4 Erach is going to make some remarks later about time
5 limit aging analyses. To my left is Jerry Phillabaum
6 who is a licensing engineer. Also the rest of the
7 team is Ahmed Onnou who is the civil structural
8 engineer on the project. Kevin Muggleston is the
9 mechanical engineer. Paul Thomas, our electrical
10 engineer. Al Fulvio who is mechanical engineer and
11 who was the site liaison with the station and did all
12 the interfaces with the station.

13 Sitting in the back row Rich Ciemiewicz
14 from Peach Bottom. Rich is in the programs group at
15 Peach Bottom responsible for reactor vessel and
16 internals and he's also the Vice Chairman of the
17 BWRVIP Assessment Committee. There will be a
18 discussion about VIP. The other industry
19 representative we have here today is Robin Dyle from
20 Southern who is also the Chairman of the VIP
21 Assessment Committee. So we have some people here
22 when the questions come up. Just walking back in the
23 room is Dave Honan who is our project manager for the
24 project.

25 The other person who is not here today

1 because we're not talking environment but I'd still
2 like to acknowledge is Mr. Bill Maher who worked very
3 closely. He was the lead on that and worked with the
4 staff and I think contributed to a successful
5 environmental report.

6 The format of the application standard
7 format. I won't read them all to you. You've seen
8 this before from Dave. We're going to discuss
9 Sections 2, 3 and 4, Scoping and Screening Results,
10 Aging Management Review Results, Time Limit Aging
11 Analyses and then Appendix B which is the description
12 of our aging management programs or activities.

13 On scoping and screening there are three
14 criteria in Part 54.4(a) on identified components that
15 are in scope. The first is those systems, structures
16 and components that are safety related. The second
17 being those that are non-safety related which if they
18 fail could prevent completion of safety functions.
19 I'm going to talk about that some more in detail later
20 because some of the issues are on that. The third
21 criteria is regulated events, fire protection,
22 environmental qualification, pressurized thermal shock
23 which is a PWR issue only so it's not addressed for
24 Peach Bottom, anticipated transients without SCRAM and
25 station blackout. So these were all reviewed and

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1 concluded in the scoping process.

2 CHAIRMAN LEITCH: Fred, a general question
3 about scoping. Peach Bottom No. 1, could you talk
4 about the status of that? Is that decommissioned of
5 all radioactive material gone, no interconnecting
6 systems? Is there any dependence on systems
7 associated with Peach Bottom 1?

8 MR. POLASKI: No, there is no dependence
9 on Unit 1. Peach Bottom Unit 1 was a high temperature
10 gas-cooled reactor, 40 megawatt electric prototype
11 plant started up in 1967, shut down in 1974. It's
12 been put in safe storage. The fuel has been removed.
13 I believe all the carbon elements in the reactor
14 vessels have been removed.

15 The vessels have been cut and capped.
16 Steam generators were cut and capped. So inside
17 containment there's still radioactive material,
18 contaminated equipment but it's all sealed up. So of
19 the building has been converted into a training center
20 or simulator as in the building outside containment
21 but there is no connection between Unit 1 and Units 2
22 and 3. No reliance on any systems from Unit 1.

23 CHAIRMAN LEITCH: No common systems like
24 compressed air?

25 MR. POLASKI: No, nothing common at all.

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1 CHAIRMAN LEITCH: Thanks.

1 MR. POLASKI: Totally separate from each
2 other. A little bit of background on the scoping
3 process. I want to discuss the different data sources
4 we used in the scoping process. We did our initial
5 scoping on a system and structural basis.

6 So we identified systems that were in
7 scope and structures that were in scope. To do that,
8 a couple main sources of information, the Plant
9 Information Management System. We called it the PIMS
10 system, is a controlled database which controls
11 information on the components in the plant, the
12 systems in the plant.

13 It's part of a larger system that's our
14 work control process, rad protection and a lot of
15 other functions, but that was a primary source of
16 information. We also used our maintenance rule
17 database.

18 Maintenance rule scoping, two of the
19 criteria for that are identical or very similar to the
20 first and second criteria, scoping criteria for
21 license renewal. So we used that information also in
22 our scoping process.

23 And we used the UFSAR extensively in
24 determining which structures were in scope for license

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1 renewal. After we had determined what structures were
2 in scope, then we had to identify the boundaries for
3 systems and structures.

4 In doing that we used several sources of
5 information: piping and instrument drawings, a
6 component record list, which is part of the PIMS
7 system and identifies components specifically with a
8 lot of detailed information on those components.

9 For structures we used the plan and actual
10 physical drawings of all of the structures. What came
11 out of that part of that process was boundary
12 realignments, and I'm going to discuss that in a
13 little bit more detail.

14 We've got some slides on that. But that
15 resulted from us defining what were the system
16 boundaries we needed. And I know it was an area that
17 caused some difficulty in the staff's understanding of
18 what we were doing.

19 And we finally got to the point it was
20 understood, but I'll discuss that a little bit more in
21 detail. And we also generated boundary drawings which
22 show on marked P&IDs, the exact boundaries of all the
23 mechanical systems. And for structures we developed
24 the --

25 MEMBER ROSEN: Before you get to

1 structures, hold on a minute. It's been a concern of
2 mine and remains a concern that this process you're
3 describing, which has been used by other licensees as
4 applicants, as well, could have in fact missed some
5 equipment in the electrical and in the instruments --
6 piping and the instrument -- set of instruments in the
7 plan.

8 And the reason I think that is because I
9 know that there are extensive electrical single lines,
10 extensive three-line diagrams. There are extensive
11 piping and instrument loop diagrams, so that that
12 support, the drawings, for instance, that you mention
13 here, the P&I.P drawings, if you just look at the P&I
14 drawings and scope what's on those I'm still concerned
15 that you will miss some, perhaps many, subcomponents
16 that are in the electrical and instrument complex that
17 are not specifically culled out on the P&I drawings.
18 Can you address that at all?

19 MR. POLASKI: I'll address it from two
20 areas. One is that piping and instrument drawings
21 show all of the instrumentation that's pressurized
22 with reactor coolant or other fluid systems, and those
23 instruments are shown on the P&IDs.

24 All of the detail on the valving for them
25 on the process side aren't shown, but then our use of

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1 our component record list identifies all of those
2 detailed valve designs, and so those are all -- we
3 picked them up when we used the information out of the
4 component record list.

5 On the electrical side, we took an
6 approach -- used the spaces approach for aging
7 management of electrical components. And so we looked
8 at the plan as one entity and didn't get into
9 specifics about boundaries in between electrical
10 systems, but identified all of the types of components
11 that we have in the plan that are electrical kind of
12 components.

13 So relays, instrumentation were all
14 identified on a generic commodity basis, and we did
15 that by reviewing our component record list, which has
16 in it different component types. So we were allowed
17 to -- like we could go in and identify which kind of
18 instruments we had, reviewed that information against
19 industry information, work that had been done to
20 identify all the different kind of electrical
21 components, and then we performed aging management on
22 those on a commodity basis, not on an individual
23 component basis.

24 So we believe we've identified and
25 captured everything that's in the plant that would be

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1 in scope, and the process actually brings in
2 instrumentation electrical equipment that really
3 doesn't even need to be in scope, because we just
4 assumed it was all in scope. Does that answer your
5 question?

6 MEMBER ROSEN: I'm not sure. But go on.
7 I'll think about it.

8 MR. POLASKI: Okay. So we -- those are
9 the drawings we did, which is marked up P&IDs for
10 mechanical systems, and we used the system plot plan
11 to identify all the buildings that were in scope.

12 The next thing we did was to identify
13 system structure and functions, and from them
14 determine which ones were intended functions. That
15 information was taken out of the UFSAR, and also is a
16 series of documents we have called design baseline
17 documents.

18 These design baseline documents were
19 created ten to 12 years ago where we pooled together
20 in one location all of the current licensing basis
21 information, design-based information in one source.

22 And a lot of the information is identical
23 to what's in the FSAR, but it puts it in a format that
24 was easier for us to use because it listed very
25 clearly system functions, which are all in the FSAR,

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1 but they're not -- you don't go into our FSAR and find
2 a nice, clean system description, and here are the
3 functions.

4 There's a long, lengthy description of
5 systems and we had to extract data from that. The
6 DBDs had done a lot of that for us. These are control
7 documents which are being updated as the plan changes.
8 So we relied on those for a lot of that information,

9 CHAIRMAN LEITCH: Fred, while you're
10 talking about structures, there's an issue in my mind
11 about the Conowingo Dam and how it relates to the
12 operation of Peach Bottom. Could you describe how you
13 dealt with that?

14 MR. POLASKI: Conowingo Dam --

15 CHAIRMAN LEITCH: And maybe we need to
16 understand the situation at the four bay at Peach
17 Bottom and how --

18 MR. POLASKI: Okay.

19 CHAIRMAN LEITCH: -- and how that all
20 relates to the Conowingo Dam.

21 MR. POLASKI: All right. The physical
22 layout of the plan, Peach Bottom is on the Susquehanna
23 River upstream of the Conowingo Dam, which is -- the
24 Conowingo Dam I think was built in late 1920's and
25 formed a large pond above it.

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1 Peach Bottom takes its water supplies from
2 that pond, Conowingo Pond, and we call it a pond, but
3 if you look at it, it's a couple miles wide and rather
4 long. It's not what you'd normally think of as a
5 small pond in the woods someplace.

6 We take our normal water supplies from
7 that. That is not our safety supply of water. We are
8 designed -- the plant design is such that in the event
9 of the loss of Conowingo Dam and the loss of the pond
10 we have on site a self-contained emergency cooling
11 tower, which will provide cooling water through the
12 cooling systems in the plant to take care of any decay
13 heat removal and cooler equipment in a condition where
14 we've lost the pond.

15 We can't operate without the pond being
16 there. So this would be in shut-down conditions, and
17 we isolate our intake structures from the pond and we
18 got essentially a closed loop internal cooling system.
19 We would then take water from what's left of the pond
20 and use it as make-up water to that emergency cooling
21 tower in the event we would lose the pond.

22 CHAIRMAN LEITCH: Oh.

23 MR. POLASKI: So the pond is not in scope
24 from the viewpoint of safety -- however, it is --
25 well, not the pond -- the Conowingo Dam is in scope

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1 from the station blackout viewpoint.

2 Our station blackout, the way we address
3 that is an alternate AC feed, which is a submarine
4 cable which comes from Conowingo, and we take credit
5 for some of the generating units at Conowingo up
6 through a substation, the submarine cable which comes
7 on site into a switch gear and then feeds power into
8 the normal plant emergency AC systems. So the dam's
9 in scope from that viewpoint, station blackout only.

10 CHAIRMAN LEITCH: Is -- does the license
11 for the dam extends beyond the proposed life extension
12 of Peach Bottom?

13 MR. POLASKI: No. The -- I can't
14 remember, I think the current license expires about
15 the same time as the Peach Bottom license does, and it
16 would just have to be renewed, and it's been renewed
17 previously.

18 CHAIRMAN LEITCH: Yes.

19 MR. POLASKI: Which is done with FERC and
20 all the other agencies involved with the dam. So we
21 did not address the, you know, renewal of that license
22 in the Peach Bottom license. It's not under Part 54
23 and we know that if for some reason that dam's license
24 would not be renewed and would be shut down, then
25 we're into a business issue if we would have to be

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1 forced to shut down Peach Bottom, so.

2 CHAIRMAN LEITCH: Right. Okay.

3 MEMBER ROSEN: Well, that's not the only
4 option, is it? I mean, you would have to find an
5 alternate source to replace the submarine cable.

6 MR. POLASKI: Well, I'm not even there --
7 not on -- I'm working -- there has been experience in
8 some dams that were FERC dams that their licenses were
9 not removed and the dams were physically removed.

10 MEMBER ROSEN: That's right.

11 CHAIRMAN LEITCH: Right.

12 MR. POLASKI: Now, this is -- I know of
13 one in Maine and it had a generating unit that was
14 like a three-kilowatt hydro unit. Peach -- or
15 Conowingo was 600, 800 megawatts of generation. So I
16 -- personal opinion, I doubt very much that that
17 license on Conowingo will not be renewed.

18 In fact, I think -- well, I won't get into
19 it anymore. It just -- you know -- it's a separate
20 process we would have to go through and address, if by
21 chance it wouldn't be renewed. We didn't --

22 MEMBER ROSEN: Okay. But I was addressing
23 simply the function of the power.

24 CHAIRMAN LEITCH: Right.

25 MEMBER ROSEN: And that could be --

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1 MR. POLASKI: Yes.

2 MEMBER ROSEN: -- replaced, whether or not
3 Conowingo is renewed.

4 MR. POLASKI: You're right.

5 MEMBER ROSEN: As long as Conowingo is
6 kept as an impondment vehicle and not as a power
7 station.

8 MR. POLASKI: Yes. Then we would have to
9 address it some different way, yes. Scoping and
10 screening on the mechanical, and I'm going to talk
11 mechanical, structural and then electrical separately.

12 We scope our systems on a -- we scoped on
13 a system basis and determined what systems were in
14 scope. For mechanical we then determine what our
15 boundaries are for that system and what's all included
16 within that.

17 And we used our traditional component
18 numbering scheme at the plant to do that. Each
19 component, each valve, each pump, each heat exchanger,
20 each pressure instrument has a unique identifier that
21 fits in their PIMS component record list.

22 And included in that is the system number
23 associated with that system and that component. We
24 use that as our initial first cut, what components
25 were in what systems. Now, the numbering scheme,

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1 including the system, is based a lot from an
2 operational consideration as to which system those
3 components would be considered part of, because you
4 got a lot of components that are interfaces between
5 systems.

6 And those numbers are assigned, like I
7 said, from an operational basis, not from the
8 viewpoint of current licensing basis, design basis,
9 and clearly, not from a license renewal perspective
10 when those component numbers were put on prior to
11 plant startup.

12 After we had identified which components
13 were in which systems we then confirmed interfaces
14 between systems. So we were looking to see -- to make
15 sure we had included all of the components that we
16 needed in those systems.

17 And we resulted in some boundary
18 realignments being required, and I'll get to that a
19 little bit later, but all of these occurred at
20 interfaces where we needed to get components in the
21 correct systems.

22 Once we had identified all the components,
23 then the screening process, which is a determination
24 of whether the components are active or passive, was
25 using our component record list, database and guidance

1 from NEI 95-10, the industry guidance on that.

2 Some components that were a part of the
3 plant are not in the component record list, things
4 like piping segments, some supports, electrical
5 cables. So we did a review on each of these systems
6 to determine what components that we called commodity
7 basis, piping, cables, were on those systems and added
8 to a list that we had generated from a component
9 record list.

10 So we had a complete list of all the
11 components on each system.

12 MEMBER BARTON: Before you go electrical,
13 got a question in mechanical.

14 MR. POLASKI: Sure.

15 MEMBER BARTON: I noted that rad waste and
16 rad waste ventilation systems are not in scope, and I
17 guess it's kind of puzzling and maybe there's a reason
18 for it. To me it's puzzling in the fact that if you
19 have a failure, a leak in rad waste and rad waste
20 ventilation isn't working, don't you have a potential
21 for radioactive -- radiological release from the site?

22 And I don't understand why those systems
23 aren't included in license renewal scope.

24 MR. POLASKI: You could have a potential
25 release. The rad waste system is enclosed in its own

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1 building and if you have tanks leaking it would be --
2 you know -- the leakage would be contained in the
3 building.

4 But the other thing is that the design is
5 such that you would not exceed 10 CFR 100, and the
6 criteria for in scope --

7 MEMBER BARTON: So you can have a leak and
8 release as long as you don't exceed 100? That's your
9 definition of not including it in scope?

10 MR. POLASKI: Yes. And that's the -- Part
11 54 is what we go by. You may exceed Part 20, but you
12 wouldn't exceed Part 100.

13 MEMBER BARTON: Okay.

14 MR. HATCHETT: This is Greg Hatchett of
15 the -- of staff again. With respect to the issue of
16 the rad waste system, the staff had an issue with
17 that, as well, more particularly, the liquid waste
18 portion of the rad waste system.

19 MR. POLASKI: Right.

20 MR. HATCHETT: As part of further
21 discussion with regard to open items, because this was
22 one of them, they went back and looked at their design
23 bases in the UFSAR and information about the plant and
24 came to the conclusion that it's not an issue of 10
25 CFR 100.

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1 MR. POLASKI: Right.

2 MR. HATCHETT: So much so as it's an issue
3 of 10 CFR 20. And so some of those inconsistencies
4 needed to be addressed, and they're addressed in that
5 through -- at least in the initial response that we
6 got -- through a 50/59 analysis, based on the original
7 license issued to the plant and the design-basis
8 documentation that reflects that it's part of 10 CFR
9 20 and not 100, and therefore, it's not within the
10 scope of license renewal.

11 And so the preliminary response that the
12 staff has gotten with respect to that is that they're
13 going to clean that issue up, do the 50/59 analysis,
14 and then from that point it's just an issue of formal
15 documentation with respect to scoping that is not in
16 scope.

17 MEMBER BARTON: All right. So this issue
18 is still open, but you expect it to end up --

19 MR. HATCHETT: It will be closed.

20 MEMBER BARTON: -- end up that they will
21 not be in scope, is the bottom line.

22 MR. HATCHETT: Yes. Yes.

23 MEMBER SHACK: I noticed you replaced your
24 pump suction strainers, then, and used larger ones?

25 MR. POLASKI: Yes, we used these, yes.

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1 MEMBER BARTON: Right.

2 MEMBER SHACK: Are those components in
3 scope? I can't seem to find them anywhere in the
4 aging management program or, you know, somehow I've
5 just missed them?

6 MR. POLASKI: They are in scope.

7 MEMBER SHACK: They're in scope.

8 MR. POLASKI: Yes. We can show you
9 exactly where they're in scope, with the --

10 MEMBER SHACK: Okay.

11 MR. POLASKI: -- we'd pull the application
12 out and show you where they are, but they're there.

13 MEMBER BONACA: Since we're asking
14 questions about scope, is it a good time to ask some
15 questions here or just --

16 MR. POLASKI: Sure.

17 MEMBER BONACA: All right. Well,
18 traveling water screen system, is this part of the
19 service water system? Well, let me go back. The
20 service water system is not in scope.

21 MR. POLASKI: That's correct.

22 MEMBER BONACA: Which surprised me, but
23 probably because you have an emergency?

24 MR. POLASKI: That's correct. The service
25 water system is non-safety-related. Our safety-

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1 related service water system, if you will, is what our
2 emergency service water system --

3 MEMBER BONACA: Is what you call the ESW?

4 MR. POLASKI: Yes.

5 MEMBER BONACA: Now, the traveling
6 screens, you have traveling screens associated also
7 with the ESW?

8 MR. POLASKI: Yes.

9 MEMBER BONACA: Are they in scope?

10 MR. POLASKI: No.

11 MEMBER BONACA: Why?

12 MR. POLASKI: They are not in scope
13 because there's actually two sets of screens, one at
14 our outer intake structure, which is out right at the
15 Conowingo Pond, and then in stream from there you come
16 probably a 100 yards along intake canals and then
17 there's inner -- set of inner screens in the pump
18 house.

19 Remember I said earlier, Conowingo Pond is
20 not a safety-related source of cooling water. All
21 right. And so those screens are there to protect
22 debris from coming in during normal operations. But
23 if you would lose the pond we would go closed loop and
24 those -- we would close all gates, isolate from the
25 pond and go on enclosed loop cooling with our

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1. emergency cooling tower.

2 MEMBER BONACA: So if the --

3 MEMBER SIEBER: You make up to the
4 emergency service water system from the pond.

5 MR. POLASKI: We would -- if we lost -- if
6 we went closed loop we would have to make up to the
7 emergency cooling toward.

8 MEMBER SIEBER: You'd have to make it up,
9 right.

10 MR. POLASKI: Yes.

11 MEMBER BONACA: So let me understand now -
12 -

13 MEMBER SIEBER: So the screens are still
14 functioning.

15 MR. POLASKI: No. The makeup -- if we
16 would go closed loop and lose Conowingo Pond would be
17 through portable pumps that we would actually have to
18 take out and through -- you know -- suction piping
19 into what's left of the river, because if you lose the
20 Conowingo Dam there would be no water at the intake
21 structure anyway.

22 MEMBER SIEBER: Yes, I didn't quite
23 understand that when you said that. Is there some
24 calculation that says if the dam fails that there's
25 still some impounded water there?

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1 MR. POLASKI: Yes.

2 MEMBER SIEBER: Or are you dependent on
3 the Susquehanna River?

4 MR. POLASKI: Well, there would still be
5 water in the Susquehanna River that we would use for
6 makeup to our emergency cooling tower, but we would be
7 isolated from the Conowingo Pond.

8 MEMBER BONACA: Just for logic --

9 MR. POLASKI: Do we have a --

10 MEMBER BONACA: -- okay, just to complete
11 that --

12 MR. POLASKI: Do we have a drawing of the
13 site? Jerry, you got a plot drawing?

14 MEMBER BONACA: I thought the failure of
15 traveling screens would affect the ESW system, which
16 is a septic grade system, which is in scope.

17 MR. POLASKI: No. All of the cooling --
18 all of the screen structures -- the screens are all
19 designated in our design as non-safety-related.

20 Al, can you add some more to that?

21 MR. FULVIO: Yes. This is Al Fulvio, from
22 Exelon. Just as additional information on the loss of
23 the Conowingo Dam, the emergency cooling tower is good
24 for seven days without any makeup at all. The other
25 contingency that we would have for makeup to it is to

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1 truck water in.

2 And in seven days, you know, you could
3 easily get truckloads of water that we could just pump
4 into the tower.

5 MEMBER BONACA: Yes, but I mean, then why
6 do you have the ESW in scope?

7 MR. POLASKI: The ESW provides cooling
8 water to --

9 MEMBER SIEBER: Has to be in scope.

10 MEMBER BONACA: Okay.

11 MR. POLASKI: -- diesel generators, room
12 coolers and --

13 MEMBER BONACA: Now, I'm getting confused
14 between the two sources of water there. What you're
15 saying to me, however, is that the failure of the
16 traveling screens will not affect the performance of
17 the ESW system.

18 MR. POLASKI: That's true. It may affect
19 the performance of the plant.

20 MEMBER BONACA: Understand. Okay. So
21 that's one.

22 MEMBER WALLIS: Can I ask about this ESW?

23 MR. POLASKI: Pardon?

24 MEMBER WALLIS: Can I ask about this ESW
25 system? You said you have to take portable pumps out

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1 into what's left of the river?

2 MR. POLASKI: If we would get in the
3 scenario where there would be a failure of the
4 Conowingo Dam.

5 MEMBER WALLIS: Right.

6 MR. POLASKI: And the pond would --

7 MEMBER WALLIS: The river's out there a
8 mile away somewhere now?

9 MR. POLASKI: The river's a mile away.

10 MEMBER WALLIS: Right.

11 MR. POLASKI: We've got two ways of making
12 up -- and if that occurs we isolate ourselves on what
13 was the Conowingo Pond. So we have two ways to make
14 up water to the emergency cooling tower. And like Al
15 said, that system is good for seven days without
16 makeup.

17 One, there would still be some water out
18 in the river and we would have to pump water from
19 there with a portable pump into the plant, or we would
20 truck water in from wherever else we could --

21 MEMBER WALLIS: So I'm just wondering what
22 the state of the bottom of what used to be the pond is
23 going to be. I mean, are you going to have six feet
24 of silt or something in there? It's going to be --

25 MR. POLASKI: Yes, it's not going to be

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1 good.

2 MEMBER WALLIS: -- one interesting job to
3 take something out there and hitch up to the river.

4 MR. POLASKI: Yes.

5 MEMBER SIEBER: A pair of boots.

6 MEMBER WALLIS: There's going to be more
7 than boots.

8 MEMBER SIEBER: The Conowingo Dam is on
9 the river.

10 MR. POLASKI: Yes.

11 MEMBER SIEBER: We're damming up the
12 river.

13 MR. POLASKI: Yes.

14 MEMBER SIEBER: The river runs right in
15 front of the plant.

16 MR. POLASKI: Yes.

17 MEMBER WALLIS: Right.

18 MEMBER SIEBER: You have an intake pond
19 between the river and the plant main intake structure.

20 MR. POLASKI: Yes.

21 MEMBER SIEBER: And that's where your
22 screens are. To the left of that, which I take it is
23 to the north, is where your emergency service water
24 for the three cooling towers are. They're
25 independent, other than makeup from the river.

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1 MR. POLASKI: Yes. The emergency cooling
2 towers, independent of the river --

3 MEMBER SIEBER: It's not out. It's real
4 close. You see one from the other, according to these
5 drawings.

6 MR. POLASKI: Yes. But the emergency
7 cooling tower is right on site, right next to the
8 plant.

9 MEMBER SIEBER: Right.

10 MEMBER WALLIS: So the old riverbed comes
11 right by the pond.

12 MEMBER SIEBER: Yes, it does.

13 MEMBER WALLIS: It does.

14 MR. POLASKI: Yes.

15 MEMBER SIEBER: Sort of.

16 MR. POLASKI: Sort of.

17 MEMBER BARTON: Not much you can without
18 the license this way, so you know.

19 MR. POLASKI: Yes.

20 MEMBER BARTON: What we are, going to
21 redesign the plant?

22 MEMBER BONACA: Another question I have is
23 about the RWST --

24 MEMBER BARTON: Move the river, or what?

25 MEMBER BONACA: -- the RWST, refueling

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1 water storage, is not in scope.

2 MR. POLASKI: Okay. Which -- could you
3 say it again?

4 MEMBER BONACA: Refueling water storage.

5 MR. POLASKI: Refueling water storage?

6 MEMBER BONACA: Yes.

7 MR. POLASKI: That's not in scope. The
8 refueling water storage tank is there as a tank that
9 we keep with water that when you shut down and take
10 the reactor vessel apart for refueling it's used to
11 flood up the cavity.

12 MEMBER BONACA: Okay. So you don't use
13 that for any emergency --

14 MR. POLASKI: No.

15 MEMBER BONACA: -- injections or --

16 MR. POLASKI: It's non-safety-related.

17 MEMBER BONACA: Non-safety-related.

18 MR. POLASKI: It is non-safety-related.

19 MEMBER SIEBER: You rely on your
20 condensate storage tanks.

21 MR. POLASKI: The condensate storage tank
22 is relied on -- is non-safety-related.

23 MEMBER BONACA: Yes, that is out, too.

24 MR. POLASKI: But it's relied on under
25 some Appendix R fire criteria as a section to the RCIC

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1 system.

2 MEMBER BONACA: And I notice the
3 condensate system and transfer are also out of scope.

4 MR. POLASKI: Yes. The condensate storage
5 tank and the piping from it to the RCIC system are in
6 scope, but in scope for Appendix R reasons, not
7 safety-related. The condensate transfer system is a
8 system that is small piping --

9 MEMBER BONACA: Okay.

10 MR. POLASKI: -- the pump's condensate
11 around the plant to --

12 MEMBER BONACA: I saw some portions.
13 However, you mentioned some portions are in scope. Is
14 it --

15 MR. POLASKI: Not specifically the
16 condensate storage system.

17 MEMBER BONACA: No.

18 MR. POLASKI: Or the condensate system.
19 But the condensate tank and the piping that's
20 associated with it are in scope. So some very small
21 parts that have condensate in it --

22 MEMBER BONACA: And I would find it in --
23 I didn't find it in the application. I would find it
24 through the realignment process?

25 MR. POLASKI: Condensate storage tank I

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1 think is listed in scope.

2 MEMBER SIEBER: Yes, it is.

3 MEMBER BARTON: Yes. The condensate
4 system isn't, but the condensate storage tank is.

5 MR. POLASKI: Yes, the condensate storage
6 tank is, yes.

7 MEMBER SIEBER: There's an inspection at
8 the bottom of the tank.

9 MR. POLASKI: Yes.

10 MEMBER BARTON: No, they're not inspecting
11 that tank. They're inspection the refueling water
12 storage tank --

13 MEMBER SIEBER: Storage tank.

14 MEMBER BARTON: -- and using the results
15 of that --

16 MEMBER SIEBER: To interpolate.

17 MEMBER BARTON: -- to -- yes -- to
18 interpolate condensate.

19 MEMBER SIEBER: To extrapolate.

20 MEMBER BARTON: Yes, extrapolate
21 condensate to start, and I got a question on that.
22 Maybe I can bring it up now; I can bring it later
23 under structures or whatever. What is it about the
24 condensate storage tank that you cannot inspect the
25 bottom there, so you're going to use the results of

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1 refueling water storage tank inspection to bless the
2 condensate storage tank. I don't understand what's
3 going on there.

4 MR. POLASKI: There's two condensate
5 storage tanks, unit two and unit three.

6 MEMBER BARTON: Yep.

7 MR. POLASKI: One refueling water storage
8 tank. To do the inspection you've got to drain and
9 empty the tank. The refueling water storage tanks can
10 be drained and emptied and inspections are done, and
11 those are already scheduled and we do those.

12 In fact, we did one I think -- Al, the
13 last refueling I think we did one?

14 MR. FULVIO: Last summer.

15 MR. POLASKI: Last summer we did one. So
16 you can do those not added. Condensate storage tanks
17 are very difficult to take out of service because they
18 are part of the condensate system when you're running
19 the plant, and when you shut down for refueling you
20 still --

21 MEMBER BARTON: They're water storage for
22 refueling.

23 MR. POLASKI: Yes.

24 MEMBER BARTON: Yes.

25 MR. POLASKI: You still have water in

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1 those. So --

2 MEMBER BARTON: But how can you -- these
3 tanks, as I understand your design, are built on --
4 the base plate of the tank is really on fill.

5 MR. POLASKI: Yes.

6 MEMBER BARTON: So it sits on dirt. So
7 how can you say, I don't have any corrosion going on
8 under these two condensate storage tanks, because I
9 don't have any under the refueling water storage
10 tanks, so I guess these other two tanks are okay.

11 I had a bad experience with condensate
12 storage tanks leaking. So that's why I get kind of,
13 you know, paranoid over this.

14 MR. POLASKI: Our rationale behind that
15 was that we had three tanks that are designed and
16 built the same, similar environments and conditions.
17 We were going to look at a representative sample,
18 which is the refueling water storage tank.

19 If we would find anything when we review
20 that, we do that inspection, I'm sure that -- I know
21 that the corrective action process gets you into
22 looking at -- and should they be looking at the other
23 tanks.

24 And Al, are the results from the summer on
25 the refueling water storage --

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1 MR. FULVIO: They were very good.

2 MR. POLASKI: Very good. No indication of
3 any degradation.

4 MEMBER ROSEN: The refueling water storage
5 tank sits on the same fill that the condensate storage
6 tanks sit on?

7 MR. POLASKI: Yes.

8 MEMBER SIEBER: No.

9 MEMBER ROSEN: Yes or no?

10 MR. POLASKI: Yes.

11 MEMBER SIEBER: I don't think that can
12 happen.

13 MR. POLASKI: Well, it could --

14 MEMBER ROSEN: It does.

15 MEMBER SIEBER: Well, the fill is the fill
16 and wherever you truck it from, that's what it is.

17 MEMBER ROSEN: That's right. It's not
18 guaranteed the same fill.

19 MR. POLASKI: Well, the refueling water
20 storage tank sits right next to the condensate storage
21 tank.

22 MEMBER SIEBER: And the ground potentials
23 that cause corrosion are different all over the site.

24 MEMBER BARTON: Right.

25 MR. POLASKI: Okay.

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1 MEMBER BARTON: So I guess the issue is
2 why don't you do a one-time inspection of the bottom
3 plate of the condensate storage tanks?

4 MEMBER SIEBER: Well, that's a good
5 question, I think.

6 MEMBER BARTON: Then why didn't the staff
7 ask for that?

8 MR. ONNOU: Just some additional
9 information on the sub-face.

10 MR. POLASKI: You want to state your name,
11 please?

12 MR. ONNOU: Ahmed Onnou, Exelon, Seoul.
13 The question on the fill under the tanks is
14 essentially the same. It's a design -- it's an
15 engineered fill consisting of sand and gravel.

16 So whatever we have under the condensate
17 storage tank is represented -- should be the same
18 underneath the other tanks. It's an engineered fill
19 sand brought in, gravel. It's not site ground.

20 MEMBER BARTON: So the staff is happy with
21 the refueling water storage tank being representative
22 of condensate storage tank bottoms. Is that what I'm
23 hearing?

24 MS. KHANNA: Yes, we are. Good morning.
25 My name is Meena Khanna. I'm with the Materials and

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1 Chemical Engineering Branch. We did review that. We
2 asked a question in regards to that, and based on what
3 they had said about the refueling -- I'm sorry -- the
4 RWSTs, we were okay with that.

5 We felt that they could determine if they
6 had corrosion found in the RWSTs, then they would take
7 additional action, and we found that to be acceptable.
8 And they are doing -- and in addition, they are doing
9 an inspection of external surfaces of the CSTs, and
10 they are also inspecting the outdoor condensate piping
11 insulation, as well.

12 So in combination with all that, we felt
13 that we were okay with that, because our concern was
14 with corrosion, and if they did indicate any problems
15 with RWST, we felt that that -- they would take
16 further action to cover the CSTs.

17 MEMBER ROSEN: I think your answer is a
18 complete one with respect to external corrosion. But
19 with respect to internal corrosion can you give me
20 some assurance that the internal conditions in the
21 RWST are representative of the internal conditions in
22 the CST?

23 MR. POLASKI: Let me ask. What's the --
24 my staff. What's the design on the internal surface?
25 Is that -- Al?

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1 MR. FULVIO: It's got a lining coat or a
2 coating for lining. It's not just steel. It is
3 coated, and that's specifically inspected in the RWST
4 inspection. We also do a specific inspection of that
5 liner condition, and that was also in very good
6 condition last summer when we looked at it.

7 MR. POLASKI: I think you're not answering
8 his question.

9 MEMBER ROSEN: How do you --

10 MR. POLASKI: The question was: are the
11 internal conditions -- the internal design of the RWST
12 and the CSTs the same, I think you said.

13 MEMBER ROSEN: Yes.

14 MR. FULVIO: Yes.

15 MR. POLASKI: Now, are the coolant in the
16 tanks the same?

17 MR. FULVIO: Yes. It's condensate water.
18 The chemistry parameters are very close. It's
19 essentially demineralized water, you know, with low
20 conductivity and low impurities.

21 MEMBER ROSEN: In both tanks?

22 MR. POLASKI: Correct.

23 MR. FULVIO: In both tanks, yes.

24 MEMBER SIEBER: You should have a greater
25 throughput and mixing in the condensate tanks.

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1 MR. POLASKI: Yes. Actually, the
2 condensate tank I would expect chemistry would be
3 better --

4 MEMBER SIEBER: It would be better, right.

5 MR. POLASKI: -- because if it gets turned
6 over repeatedly the refueling water storage tanks
7 could have a potential to sit there when it's not in
8 use and not out of storage much, because I know that
9 prior to refueling outages we go on the program to
10 clean that up.

11 So that would be the -- the refueling
12 water storage tank, the chemistry would be the one --
13 would be the limiting condition, I believe.

14 MEMBER BARTON: Is this coating a painted
15 coating or is it rubberized, or what kind of coating
16 you have in the tanks?

17 MS. KHANNA: I can address that. I asked
18 the question. That's actually painted. That's what
19 I was told, that it's painted.

20 MEMBER SIEBER: So it's a dry coating that
21 was painted on there.

22 MEMBER BARTON: And have you ever looked
23 inside the CST to see if the coating is intact?

24 MR. FULVIO: Yes. We have done some
25 inspections over the last ten years, I believe, and

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1 yes, at that time the coating was intact.

2 MEMBER BARTON: But you don't intend to
3 look inside the CST for the next 30 years or whatever?

4 MR. FULVIO: Not for license renewal. For
5 plan operations that may occur. There's nothing
6 specifically planned at this time.

7 MEMBER BARTON: Nothing that triggers you
8 to some kind of routine or periodic inspection of the
9 internal of the CST?

10 MR. FULVIO: That's correct.

11 MEMBER BARTON: Okay.

12 MR. POLASKI: Anymore questions on that
13 or?

14 MEMBER BARTON: No.

15 MR. POLASKI: Okay.

16 MEMBER BARTON: We beat that to death, I
17 guess.

18 MR. POLASKI: Scoping and screening for
19 structures. We scope structures from two viewpoints.
20 One is buildings and the other is structural
21 components. Buildings that support systems with
22 safety-related independent functions were brought into
23 scope, and that was fairly easy part to do, reactor
24 building, diesel generator buildings.

25 Structural commodities where structural

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1 components that have similar design, materials and
2 environments, and we addressed them on a commodity
3 basis, and that included things like component
4 supports, hazard barriers and elastomers,
5 miscellaneous structural steel, electrical and I&C
6 enclosures and raceways, insulations.

7 So there's a lot of things in the plant
8 that are structural in nature that we brought them in
9 as a commodity basis.

10 MEMBER SIEBER: I have a question about
11 that. One of the things that are used a lot in power
12 plants are Hilti bolts, and Hilti bolts are expansion
13 bolts, and you drill a hole in the concrete and you
14 put this sleeve in there and then you tighten it up
15 and it expands the sleeve into the concrete.

16 But over 60 years concrete changes
17 composition. It changes chemistry. It changes
18 strength and my experience in some really old coal-
19 fired power plants is you can pull the Hiltis right
20 out of the wall.

21 Or do you have any kind of a testing
22 program, except that which would have occurred during
23 initial construction, to make sure that the Hiltis
24 stay in place and will stay in place during a seismic
25 event or a water hammer?

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1 MR. POLASKI: Well, there are Hiltis, I'm
2 sure, in stuff. I'm going to ask --

3 MEMBER SIEBER: You must have two million
4 of them.

5 MR. POLASKI: Yes. Ahmed, can you help us
6 on that one?

7 MEMBER SIEBER: They're passive.

8 MR. ONNOU: Again, Ahmed Onnou, with
9 Exelon. We do have Hilti bolts and Maxi bolts, which
10 as you described --

11 MEMBER SIEBER: It's a brand name.

12 MR. ONNOU: -- and during the installation
13 you're required to test them. In fact, there used to
14 be a sample, but you do a 100 percent sample and then
15 you do a tension test or a torque test --

16 MEMBER SIEBER: Right.

17 MR. ONNOU: -- to make sure that you don't
18 -- they don't release. Hilti bolts generally are not
19 used for vibration -- vibratory equipment. You would
20 use Maxi bolts for that because they're a little more
21 positive connection.

22 The -- and if you use Hilti bolts,
23 generally the safety factor is very considerable. I
24 mean, it's in the order of five order -- five times.
25 That's all I can say about Hilti bolts.

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1 MEMBER SIEBER: I guess my concern is the
2 change in the properties of the concrete upon which
3 the Hilti and the Maxi bolts rely. And also, there
4 are instances which I have witnessed where you get a
5 water hammer in a pipe that took the hanger off the
6 wall, okay? It just breaks the baseplate away.

7 MR. ONNOU: Right.

8 MEMBER SIEBER: Pulls the bolts out.

9 MR. ONNOU: Absolutely. If you do have an
10 event such as that you might lose the anchors. You
11 might lose structural steel, as well.

12 MEMBER SIEBER: Yes, a couple pieces here
13 and there.

14 MR. ONNOU: But we do look, as an outpost
15 of that we go look at the bolting during the
16 maintenance rule. However, we do not do a tension
17 test, but you look at the bolts, make sure that
18 they're tight and there's none of those components
19 associated with the supports.

20 MEMBER SIEBER: Actually unless you test
21 it there is no way to inspect or examine a Hilti bolt
22 and determine whether it's going to function or not.
23 Is that -- that's correct, right? You can't look at
24 it and say, boy, that looks good to me.

25 MR. ONNOU: That is correct.

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1 MEMBER SIEBER: Okay. Is that a concern
2 to the staff, or are you relying that the fact that
3 you installed them correctly and tested them 100
4 percent for torque and tension, that they're going to
5 be good for 60 years?

6 MR. KUO: The staff worked at that, too.

7 MEMBER ROSEN: That's not a Peach Bottom
8 concern. That's --

9 MEMBER SIEBER: No, that's generic.

10 MEMBER BONACA: That's a generic concern.

11 MEMBER SIEBER: That applies to anybody
12 that has them, and everybody has them.

13 MR. KUO: And the staff will get back to
14 you on that.

15 MEMBER SIEBER: Okay. Well, I'm curious
16 about that.

17 MR. KUO: Okay. Yes. I don't have the
18 person here right now.

19 MEMBER SIEBER: Thank you.

20 MR. KUO: Thank you.

21 MR. POLASKI: In scoping and screening an
22 electrical area we scoped systems -- all of our
23 systems initially, including electrical systems so the
24 turnover systems were in scope, just like we did in
25 mechanical.

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1 But once we had gone through that step on
2 electrical, then we moved to the stasis approach where
3 we didn't get into specific boundary definition on
4 electrical systems. But what we did was we included
5 all passive electrical and I&C components in scope on
6 a commodity basis.

7 And the commodities that we identified
8 that would be in scope were cables, connectors,
9 splices and terminal blocks, including fuse clips.
10 And then the last bullet is electrical equipment that
11 came in scope when we expanded our scoping for
12 station-wide cap to include the offsite power sources.

13 So that's switch yard bus, high voltage
14 insulators, phase bus and transmission conductors.
15 All of the other electrical equipment was accurate.
16 Most boiler instrumentation was all accurate
17 components and doesn't require aging management.

18 MEMBER BARTON: Let me ask you a question
19 in electrical. You have some electrical heat tracing
20 system. I saw it somewhere in the application.

21 MR. POLASKI: Yes.

22 MEMBER BARTON: But it's not in scope. Is
23 there any way a failure of a heat tracing system could
24 impact the safety-related equipment?

25 MR. POLASKI: The smoke detectors. Yes.

1 Well, if it's an active component.

2 MEMBER BARTON: Heat tracing.

3 MR. POLASKI: Heat tracing.

4 MEMBER BARTON: Electrical heat tracing,
5 because it goes on and off as an electrical component.

6 MR. POLASKI: Yes.

7 MEMBER BARTON: Forgot about that.

8 MEMBER SIEBER: That's different than a
9 PWR where you're worried about boron --

10 MEMBER BARTON: Boron, right.

11 MEMBER SIEBER: -- solidification. Here,
12 you're worried about freezing.

13 MEMBER BARTON: Freezing, that's right.

14 MEMBER SIEBER: And you know, it'd be
15 outdoor tanks with level instruments and things like
16 that where that would be effective. That's --

17 MEMBER BARTON: That's right.

18 MEMBER SIEBER: -- I have not seen that
19 stuff be classified as safety-related.

20 MR. POLASKI: And it's actually
21 components, too. So it's --

22 MEMBER SIEBER: Well, yes. The operator
23 can pick up a frozen line pretty quick, hopefully.

24 CHAIRMAN LEITCH: But the standby liquid
25 control system relies upon heat tracing, but there

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1 again, you're --

2 MR. POLASKI: Right. We've got the
3 enriched boron with the lower concentration.

4 CHAIRMAN LEITCH: Okay.

5 MR. POLASKI: So you've got to get very
6 cold in the building before you have any problems.

7 MEMBER SIEBER: You're what percentage?
8 Nine percent or six percent, something like that?

9 MR. POLASKI: I can't quote the exact
10 number, but when we had to go to the increased
11 capacity the coolant --

12 MEMBER SIEBER: It was like 60 degrees,
13 right?

14 MR. POLASKI: Yes. It's -- yes.

15 MEMBER SIEBER: Okay.

16 MR. POLASKI: All right.

17 MEMBER BARTON: Well, if you lose heating
18 and ventilating in a reactor building in the
19 wintertime could you get there? No?

20 MEMBER SIEBER: Uh --

21 MEMBER BARTON: There's a head behind you
22 going this way. You turn around you'll see it.

23 MEMBER SIEBER: I know I worked at LaSalle
24 and they had no service boiler that worked. And when
25 they shut down both units they had piping systems that

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1 froze. So I think you can get there if you try hard.

2 MEMBER BARTON: I was talking about the
3 boric acid in the reactor building.

4 MEMBER SIEBER: I think -- I think that --

5 MEMBER BARTON: And you lose the heat
6 tracing there.

7 MEMBER SIEBER: -- it would get messed up
8 before the lines would freeze, but you're right. But
9 that would be a situation where both units were shut
10 down because just the ambient heat from the plants
11 running would keep the buildings relatively warm, I
12 would think, in the 50, 60 degree range, as a minimum,
13 and probably up in the 100 degree range.

14 MR. POLASKI: Two areas of special
15 emphasis I'd like to talk about in mechanical scoping.
16 One is boundary realignment and the other was the
17 scoping, the additional scoping we did for 54.4(a)(2),
18 non-safety-related equipment that's impact safety.

19 The interim staff guides on that was
20 issued in March of 2002 with the NRC's interpretation
21 of (a)(2) scoping, which is different than what we
22 used initially. So we did that additional scoping in
23 the RAI response, and I talked a little bit about
24 that.

25 So going on to the next one, on boundary

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1 realignment, talk about it with five different cases
2 and let me go through each of these. I think this is
3 easier to understand looking at a picture than it is
4 trying to talk about it in words.

5 So the first one deals with components
6 with containment penetration. So pictorially here,
7 we've got a picture that shows this is the containment
8 boundary. And we've got a system piping that
9 penetrates containment.

10 There's a valve on either side of
11 containment. Non-safety-related system, not in scope
12 of license renewal for any other reason than this
13 containment penetration. So the question gets into,
14 what do you do with this.

15 When you look at the current licensing
16 basis for Peach Bottom, this non-safety-related system
17 has no system intended functions. The system intended
18 function is a reason you would bring a system into
19 scope of license renewal.

20 For example, this may be a service air
21 system which provides service air inside containment
22 for breathing air or operating fulls when you're doing
23 maintenance in there.

24 These valves in this case normally would
25 be closed when you're at power and operating, but this

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1 also could be something like a reactor building closed
2 cooling water system, which provides cooling to
3 components inside containment, but no safety function.

4 So we get caught in a dichotomy of this
5 system isn't in scope because it has no intended
6 functions, but parts of this system really have a
7 safety rate of function of containment isolation. So
8 how do we address it?

9 We have two choices. Put the whole system
10 in scope and then shrink it down to just this part
11 where we realign this part of the system from the
12 valve, the piping, the valve and any other piping
13 connections in between, to a system that was our
14 containment isolation system and address aging
15 management of these as part of the system, in that
16 system.

17 It was a choice we had to make. We chose
18 the second one because we wanted this to be with a
19 system that had an intended function, which in this
20 case was containment isolation.

21 MEMBER SIEBER: You end up with the same
22 situation, regardless of which way you do it.

23 MR. POLASKI: You're right. You end up
24 with the same components in the scope, with the same
25 material, same environment and we address aging

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1 management only. So it was an issue of how we address
2 it from a scoping basis, from a system basis, not
3 eventually when we get down to the specific
4 components.

5 MEMBER BONACA: Did you compare the
6 approach with the one used by other applicants for --
7 you know -- previous applicants for license renewal?

8 MR. POLASKI: I can't speak for PWRs, but
9 looking at the only other BWR, which was Hatch, they
10 did their scoping on a functional basis. So they
11 said, oh, this -- the function of these valves and
12 plates is containment isolation. So they scoped it
13 into that function. We scoped on a system basis.

14 MEMBER BONACA: A system basis.

15 MR. POLASKI: And we ran into this
16 conflict. And so we realigned it to the system that
17 had the function that we were trying -- that it needed
18 the support there.

19 MEMBER BONACA: Yes.

20 MR. POLASKI: Okay.

21 MEMBER BONACA: The reason why it's
22 interesting to me is that most of the applications
23 that come are on a system basis.

24 MR. POLASKI: Yes.

25 MEMBER BONACA: And we have not discussed

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1 how to handle this.

2 MR. POLASKI: And I'm not sure if a BWR
3 versus PWR influences a lot of that. For this
4 particular example, initially at Peach Bottom we have
5 a lot of systems that came in under this case.

6 After we did the additional scoping for
7 (a) (2), non-safety-related, which I'll talk about in
8 a minute, a lot of these systems, like reactor
9 building closed cooling water, dry well chilled water,
10 which had not been in scope, later came in scope for
11 (a) (2). So these would have been treated with that.

12 Now, the other thing is, when you get this
13 kind of a system design you get a lot of systems with
14 a design like this, core spray, RHR, HPCI, for those,
15 this containment boundary was included right with the
16 safety-related systems.

17 So it was right there. Okay. And this is
18 case number one. Let's go to case two. Case two is
19 an interface between an in scope and an out of scope
20 mechanical systems. So here's a representation of a
21 safety-related system, which may be high pressure
22 service water, which is river water system provides
23 cooling to our RHR heat exchangers.

24 And there is a demin water line which
25 attaches to it for flushing and filling purposes. And

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1 clearly, this part is non-safety-related. That valve
2 forms part of the pressure battery for the high
3 pressure service water system, but under our plant
4 numbering scheme that valve was numbered with the
5 demin water system.

6 Demin water system's landscape has no
7 intended function. So what do we do with that valve?
8 We realigned it with the high pressure service water
9 system and we brought all of this in scope, because
10 it's pressure boundary for high pressure service
11 water, and that's where the system intended functions
12 were.

13 MEMBER SIEBER: A lot of times you end up
14 with the class break where those kinds of valves --

15 MR. POLASKI: Yes, there may be.

16 MEMBER SIEBER: -- or is that in --

17 MR. POLASKI: So the class break would
18 have been here.

19 MEMBER SIEBER: Right. Well, is that
20 consistently applied? Did you look at class breaks to
21 make sure that you didn't have pieces of piping and
22 valves, valve bodies that probably should have been in
23 scope that ended up because of where the class break
24 was, out of scope.

25 MR. POLASKI: That was part of what went

1 into our thought process, but I think the primary
2 driver was, what's the intended function of this
3 system, and we needed to maintain pressure value,
4 which means we needed that value. So that was the
5 primary --

6 MEMBER SIEBER: So the class break was not
7 necessarily the deciding factor. It was the function
8 that was the deciding factor.

9 MR. POLASKI: Yes.

10 MR. PATEL: This is Erach Patel. And what
11 also happens is that besides the class break, that
12 particular valve is safety-related.

13 MR. POLASKI: Sure.

14 MR. PATEL: And when we do the component
15 record list downloading, although it's in the demin
16 system it pops up as safety-related, and you pick it
17 up over there and then you realign it so that the
18 class break and the safety-related function goes
19 together.

20 MEMBER SIEBER: Well, the interesting
21 question is, you know, when you go through this
22 process you're actually auditing the way the plant was
23 built. Did you find any instances where the class
24 break was inappropriate?

25 In other words, you had lower class piping

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1 or values that were inside the pressure boundary? Did
2 you find any of those instances?

3 MR. POLASKI: I don't know. Erach, can
4 you answer that one?

5 MR. PATEL: I don't believe we found any
6 case like that. We did find and we did get result as
7 we were going through the drawings that in some cases
8 on unit two it may be showing up differently on unit
9 three, and we would go back one, you know, and get
10 that resolved and put in the system.

11 So as we went through this process we did
12 find some inconsistencies within the units and we got
13 that resolved and got it done.

14 MEMBER SIEBER: Okay.

15 MR. PATEL: But we didn't really find a
16 case where it was safety-related but the class break
17 was on the wrong side.

18 MEMBER SIEBER: Okay. Well, that's the
19 way you were supposed to build the plant in the first
20 place.

21 MR. POLASKI: Yes. We did not go into
22 this --

23 MEMBER SIEBER: So that's a good thing.

24 MR. POLASKI: -- we did not go into this
25 project with the idea of redesigning the plant. We

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1 were just working with --

2 MEMBER SIEBER: See, you might end up
3 doing that if you found a discrepancy like that.

4 MR. POLASKI: Yes. And any discrepancies
5 we found, like Erach mentioned, we documented them
6 through our process and turned them over to
7 engineering to be resolved and made sure they were all
8 taken care of.

9 MEMBER SIEBER: Okay. Thank you.

10 CHAIRMAN LEITCH: We're getting into just
11 a little bit of schedule trouble, here. Could you try
12 to move the presentation along?

13 MR. POLASKI: All right. Okay. All
14 right.

15 MEMBER WALLIS: That wiggly line goes
16 around the valve. It does in our handout. What's in
17 the record from this meeting will show it properly.

18 MR. POLASKI: Right there.

19 MEMBER WALLIS: It goes round the valve.

20 MR. POLASKI: Mark that. Oh, they didn't
21 get the latest change. Okay. All right.

22 MEMBER WALLIS: Okay.

23 MR. POLASKI: The third case deals with
24 interfaces between in scope electrical and out of
25 scope mechanical systems. What we run into here is

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1 that the numbering convention at Peach Bottom is that
2 the power supply to mechanical component gets numbered
3 with the mechanical component; so a 480-volt breaker
4 that feeds the core spray valve as part of the core
5 spray system.

6 But we also found that there's power feeds
7 which are safety-related which feed non-safety-related
8 components, and this is for reliability of equipment.
9 And so what do we do with those fuses and circuit
10 breakers.

11 So we realigned them into the electrical
12 system, but not included them in the non-safety-
13 related mechanical system. And it turned out all
14 those were active components anyway, because of the
15 fuses and relays.

16 Let's go on to case four and we'll just do
17 it real quick. This is one we got interfaces between
18 systems. The safety-related components would be air
19 supply to main steam relief valve. The normal supply
20 for years was always instrument nitrogen, and that
21 check valve was not there originally in plant design.

22 And then later, we had to add a safety
23 grade backup gas supply. Two check valves were
24 installed. That check valve right there was numbered
25 with the instrument nitrogen system. So we had to

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1 realign it so it's the same thing.

2 So let's go to Case 5. And Case 5 is one,
3 this is MSIV, instrument air supply, check valve and
4 accumulators. From herein it's safety-related. These
5 are numbered instrument air systems. So we realigned
6 them to the main steam system, but we evaluated them
7 with the environment of air inappropriately for that.

8 Otherwise, you bring in an instrument air
9 system, which is a monster system. Gives you all
10 kinds of -- a lot of work you need to do isn't worth
11 valued right there. Okay. So let's go on to the next
12 slide down on 54.4(a)(2).

13 The NRC came out with revised Guidances,
14 a clarification of what (a)(2) meant from a seismic
15 II/I, non-safety-related/safety-related impact
16 initially with a letter in December of 2001, about six
17 months after we'd submitted.

18 We got an RAI in January of '02. There
19 was additional RAI in February, additional
20 clarification in March. And how did all that come --
21 we went back and did a reevaluation of what was in
22 scope based on (a)(2), using the interim staff guides
23 provided by the staff.

24 We submitted that response on May 21st,
25 and our basic criteria was we added into scope any

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1 systems previously not in scope that contained a fluid
2 other than air or gas, irrespective of whatever
3 pressure or temperature that was in some spatial
4 proximity to safety-related equipment and we brought
5 it into scope.

6 MEMBER BARTON: Did that include the
7 piping or just the supports?

8 MR. POLASKI: We brought the piping into
9 scope.

10 MEMBER BARTON: You did bring the piping
11 in.

12 MR. POLASKI: The supports had already
13 been in scope.

14 MEMBER BARTON: I understand that. Okay.

15 MR. POLASKI: It was listed --

16 MEMBER BARTON: I just wanted to make sure
17 I understood what you brought into scope here.

18 MR. POLASKI: Yes.

19 MEMBER BARTON: Which was the piping.

20 MR. PATEL: The piping and components.

21 MR. POLASKI: And components; so valves,
22 pumps, whatever.

23 MEMBER BARTON: Thank you.

24 MR. POLASKI: So basically, anything that
25 could leak or spray and get on safety-related

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1 equipment. We did that by review of plant prints and
2 plant walk-downs and determined all that.

3 CHAIRMAN LEITCH: Go ahead.

4 MR. POLASKI: And this is a list of
5 systems that were already in scope, but we had to
6 expand them to include additional piping, because
7 parts of these systems were not in scope. One
8 example, control rod drive system.

9 The original scoping on a control rod
10 drive system was hydraulic control units into the
11 reactor vessel was in scope. The pumps, the water
12 supply piping for the HCUs was not originally in
13 scope. It was on safety-related.

14 It was added in scope under the safety and
15 scoping criteria, because it could leak and get on
16 safety-related equipment. All right. So we expanded
17 these systems to bring in more parts that had not
18 initially been included in scope.

19 And then on slide 21, these are systems
20 that were added in scope that had not previously been
21 in scope. So that's what we did, brought these in,
22 and we -- as a supplement to this -- have instituted
23 aging management programs for all of them.

24 MEMBER SIEBER: I have a question about
25 that. What is it in the water treatment system that

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1 you called safety-related and why? That's one of the
2 items here. It's the sixth one down, fifth one down.

3 MR. POLASKI: Water -- no. These are non-
4 safety-related systems that we brought into scope
5 because --

6 MEMBER SIEBER: Right. Why.

7 MR. POLASKI: -- because they were
8 spatially close to some safety-related equipment.

9 MEMBER BARTON: If they fail they could
10 impact the safety-related components.

11 MEMBER SIEBER: Okay. Two over one?

12 MR. POLASKI: Right. Two over one or --

13 MEMBER BARTON: Two over one issue.

14 MR. POLASKI: -- they leak and get on the
15 safety-related.

16 MEMBER SIEBER: Right. I withdraw my
17 question.

18 MEMBER BONACA: Okay. Excuse me. Just
19 for clarification, you just told me before, service
20 water system was not in scope.

21 MR. POLASKI: Service water system was not
22 in scope on our original scoping criteria because it
23 was not safety-related.

24 MEMBER BONACA: That's right.

25 MR. POLASKI: It was added in under

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1 (a) (2), yes.

2 MEMBER BONACA: Okay. So you have added
3 it in.

4 MR. POLASKI: We have added it in, yes.

5 MEMBER SIEBER: But in the two over one
6 situation you only add in as much as you need to cover
7 the two over one situation.

8 MEMBER BARTON: Not the whole system area.

9 MEMBER SIEBER: It would be a piece of --

10 MR. POLASKI: Well, what we did was --
11 well, you're right. It could be just particular parts
12 of the system, but when we looked at it from a
13 viewpoint of how much effort it was going to take to
14 go determine that and we looked at how were we going
15 to manage age it.

16 Well, aging management on a lot of these
17 was a preventive program of water chemistry. Water
18 was going to be represented in one-time samples. We
19 did not expend the effort to go and say, this section
20 of pipes and scope, and on that side of the wall it's
21 not.

22 We just said, the system's in scope, and
23 we brought it in and we managed -- if it's water
24 chemistry in a lot of these, like chilled water
25 systems or water treatment systems, cloudy water, that

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1 applies to all the piping in the system.

2 MEMBER BARTON: So it is the whole system,
3 then. Okay.

4 MR. PATEL: What we did was we looked at
5 the buildings, because the reactor building, which is
6 safety-related building, lots of superior components,
7 we took all of the reactor building, closed cooling
8 water in scope. We didn't try to break it up into
9 rooms or anything like that.

10 MEMBER SIEBER: Yes, I knew that.

11 MR. HATCHETT: This is Greg Hatchett with
12 the staff. We went out to the plant and walked
13 through the plant with the guys from Exelon. And
14 basically, anything that -- like Erach said, anything
15 that ran into the plant that was part of these
16 systems, even though some parts of it had no spatial
17 relationship, they decided to bring the entire thing
18 into scope.

19 And we walked through all of the buildings
20 where these systems were and identified those portions
21 that had spatial relationships, as well as identified
22 portions that did not have relationships. But Exelon
23 decided to bring it all into scope as being
24 conservative with respect to this issue.

25 MEMBER BONACA: Yes. I appreciate the --

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1 you know -- the conservative approach. It's just that
2 it's confusing because when I go to the tables in the
3 applications, some of the systems are clearly stated
4 they're not in scope.

5 MR. POLASKI: Yes. And when we did the
6 initial scoping, service water and all of these
7 systems --

8 MEMBER BONACA: Yes.

9 MR. POLASKI: -- that you see listed there
10 were not in scope.

11 MEMBER BONACA: That's right.

12 MR. POLASKI: We added them in, in an RAI
13 response and we brought them into scope.

14 MEMBER BONACA: And that would be
15 somewhere in your FSAR addendum or where would it be,
16 this?

17 MR. POLASKI: The FSAR addendum does not
18 include the list of systems in scope, but the programs
19 that manage the aging of these would be in scope.

20 MEMBER ROSEN: So you'll end up with an
21 inconsistency in your FSAR. It'll say it's not in
22 scope when you really are?

23 MR. POLASKI: No. The FSAR supplement
24 lists the aging management programs that require this
25 relationship.

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1 MEMBER ROSEN: Yes.

2 MR. POLASKI: It doesn't list -- you don't
3 put a list of systems in the FSAR of what's in the
4 scope. That will be included in site documentation.
5 And what we're doing is we're going back and revising
6 all of our documentation to show that service water's
7 in scope and the aging management reviews are being
8 updated.

9 So when we're done with the project there
10 will be a complete package of information that'll show
11 everything that's in scope in the -- book.

12 MR. PATEL: Yes.

13 MEMBER ROSEN: And any references to
14 something as being out of scope that really is in
15 scope will be expunged?

16 MR. POLASKI: Yes.

17 MEMBER BONACA: But the SER does not
18 necessarily define some of this change, nor is the
19 application doing that. I'm just trying to understand
20 -- again, we're talking about 20 years from now before
21 you step into license renewal.

22 Here there is a lot of information that
23 you're telling us is going to go into your
24 documentation of the plant, but --

25 MR. POLASKI: And I'm going to address

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1 that --

2 MEMBER BONACA: But I don't now how the
3 stuff is keeping a memory of this realignment and
4 everything that goes in it. I mean, it is not in the
5 application and is not in the SER.

6 MR. POLASKI: Well, with the complete set
7 of information, though, that we've submitted as the
8 application and our responses, all of that is
9 addressed in the SER. So the SER that the NRC issues
10 will include these non-safety-related systems we're
11 doing now. We're going to take all of that and update
12 all of our documentation to show the final result of
13 what's in scope and everything.

14 MEMBER BONACA: Yes.

15 MR. POLASKI: So that the scoping package
16 that said -- previously said service water's not in
17 scope is being revised. It says, service water's in
18 scope with criteria (a)(2).

19 MEMBER BONACA: Yes, but I'm trying -- I'm
20 -- right now, I actually was more asking myself about
21 what the staff is going to do about --

22 CHAIRMAN LEITCH: Well, the SER has --
23 that we have in front of us is an SER with open items,
24 right? And this is one of the open items.

25 MR. POLASKI: Right.

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1 CHAIRMAN LEITCH: This is 2.3.3.19.2-1,
2 and I assume that when we see the final SER without
3 open items this whole issue will be discussed
4 completely. I mean, this was --

5 MEMBER BONACA: So that this is the open
6 item on methodology.

7 CHAIRMAN LEITCH: Right.

8 MR. KUO: And this -- when the open item
9 is closed, this open item will be described in SER.

10 MEMBER BONACA: But the open item only
11 discusses the methodology, and I hope that you're also
12 including this more than five tables of what is
13 included and what is not.

14 MEMBER SIEBER: Well, let me ask a
15 question about that. When you build a plant you end
16 up with a Q-list, okay, of what's safety-related and
17 what is not.

18 MR. POLASKI: Yes.

19 MEMBER SIEBER: When you finish with the
20 license renewal exercise you end up with another Q-
21 list, which is different than the first one.

22 MR. POLASKI: Well, its Q doesn't change.

23 MEMBER SIEBER: Okay. But you end up with
24 a list that is basically license renewal items.

25 MR. POLASKI: Yes.

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1 MEMBER SIEBER: Because some of them won't
2 be on the original Q-list.

3 MR. POLASKI: And --

4 MEMBER SIEBER: And so you're going to
5 keep that as a quality document.

6 MR. POLASKI: Yes.

7 MEMBER SIEBER: To refer to all these
8 aging management programs and one-time inspections and
9 so forth.

10 MR. POLASKI: In fact, the way we're doing
11 that is in our component record list we've added a
12 field for license renewal, which --

13 MEMBER SIEBER: Yes.

14 MR. POLASKI: -- is populated as part of
15 it, where indicated --

16 MEMBER SIEBER: So you can sort on that if
17 you wanted to.

18 MR. POLASKI: Yes.

19 MEMBER BONACA: So even if it's non-
20 safety-related --

21 MEMBER SIEBER: It's complicated.

22 MEMBER BONACA: Yes. Even the non-safety-
23 related components will have a yes for license renewal
24 in the component record list.

25 MEMBER SIEBER: And if you're like most

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1 plants you don't have part numbers for pipe.

2 MR. POLASKI: That's correct.

3 MEMBER SIEBER: And most of what you're
4 talking about here is pipe.

5 MR. POLASKI: Yes.

6 MEMBER SIEBER: So you have to refer to
7 some isometric bounded by components.

8 MR. POLASKI: Right. Well, we'll have the
9 boundary drawings that show what's in -- you know --
10 what was in scope.

11 MEMBER SIEBER: That's right. And PI&D
12 isn't the world's best way to do that, but -- because
13 it really doesn't tell you where it is, you know,
14 Something on a P&ID this long could be a half a mile.

15 MR. POLASKI: Mile, right.

16 MEMBER SIEBER: Or vice-versa.

17 MEMBER BONACA: Well --

18 MEMBER SIEBER: Okay. Well, that clears
19 up that for me.

20 MEMBER WALLIS: Can I ask the staff
21 something now? This is quite a big list. Does this
22 create a precedent for future license renewals? Are
23 we going to have all these systems now added for other
24 applicants?

25 MEMBER SIEBER: No.

1 MR. POLASKI: I'll tell you --

2 MEMBER WALLIS: Does the staff know?

3 MR. POLASKI: Let me speak to the next BWR
4 that's going to be submitted. January next year
5 you'll get a license renewal application for Dresden
6 and Quad Cities, which is our next Exelon submittal.
7 We are incorporating in the initial scoping the
8 uniform state guidance for (a)(2).

9 So these systems and ones like it won't be
10 exactly the same. Different plant design will be
11 included in the scope initially.

12 MEMBER WALLIS: Well, will this take --

13 MEMBER SIEBER: I think Oconee was done
14 this way because they had two over one systems, and
15 you would see it on a P&ID, but the problem --

16 MEMBER WALLIS: Do it represent a sort of
17 expansion of what's called safety-related?

18 MEMBER SIEBER: They didn't talk about it
19 as much as Exelon was talking about it. I think
20 that's the difference.

21 MR. POLASKI: Well, it won't be an
22 expansion of what's safety-related. It'll be an
23 expansion of what's in scope and --

24 MEMBER BARTON: Of what's in scope, right.

25 MR. POLASKI: -- what's not.

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1 MEMBER BARTON: Right. Right.

2 MEMBER BONACA: What we have raised
3 before, however, is the issue of the connotation
4 (phonetic). By the time this process is finished and
5 the contract is written between the staff and the
6 licensee we have an application that is incomplete by
7 the finishers because some of these tables have been
8 added later on, some additional one-time inspections
9 are negotiated or whatever is going to happen.

10 MR. KUO: Well, the application --

11 MEMBER BONACA: Some of this information
12 will go in the FSA out of date. Okay. That will
13 solve some of the problem. Some of it will go in the
14 SER, in the final SER and some of it, like tables like
15 which have multiplied, which we normally would see in
16 the application; okay, where are they going to go?

17 MR. KUO: It will be documented in the RIs
18 and the responses. That's part of the application.
19 So in that sense, the application would be completed.

20 MR. SOLORIO: And I'd just like to add --
21 this is Dave --

22 MEMBER BONACA: So you consider the
23 application, the original application, plus all the
24 RAI responses.

25 MR. SOLORIO: Correspondence, that's

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1 correct. And in this particular case we've got an RAI
2 -- or an open-item response that's pages and pages
3 because it includes additional tables.

4 MEMBER BONACA: I'm still, you know,
5 talking about an issue of a member of the public who
6 would like to be followed by some component there and
7 goes to an application and doesn't find it. And then
8 he finds it somewhere else and so.

9 MR. KUO: Well, yes. I don't think the --
10 anybody, including the public, will find that, you
11 know, that pieces are separate, they're in different
12 laces. That actually, it will be a document that is
13 the application, plus the RAIs. Okay.

14 MEMBER BONACA: So really, the information
15 you got, as opposed to an RAI.

16 MR. KUO: Yes.

17 MEMBER BONACA: Actually an open item.

18 MR. KUO: Yes.

19 MEMBER BONACA: Okay. So in addition to
20 giving you the methodology that they asked for, they
21 also gave you the results of the application that
22 they're involved (phonetic) in.

23 MR. SOLORIO: That's correct, right.

24 MEMBER WALLIS: Did you answer my
25 question?

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1 MEMBER BONACA: No, I think they did.

2 MEMBER WALLIS: Well, the question was:
3 does this represent a sort of step up in the number of
4 systems which are going to be considered in scope over
5 what happened in the past? Is this a change, is this
6 a substantial change in their relicensing process now,
7 with all these new systems that are considered in
8 scope?

9 MR. KUO: Mr. Butch Williams -- Butch
10 Burton. His first name is William. So I'm sorry.

11 MR. BURTON: That's all right.

12 MR. KUO: Mr. Burton will explain the
13 process.

14 MR. BURTON: Yes. Good morning. This
15 issue of seismic two over one and the treatment of
16 SSCs that meet the 54.4(a)(2) criterion, if you all
17 remember that first came up with Hatch, which was my
18 plan.

19 In direct answer to your question, I think
20 for perhaps the next couple of plants you may see
21 something similar to this. And it makes sense because
22 as we develop that position, the plants that were in
23 the Q undergoing review at that point or even in
24 preparation of their application, they hadn't -- they
25 were too far gone -- to far along in the process to

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1 really address it in the application.

2 We have to sort these things out through
3 the RAI process, and so we still have a couple of
4 plants that were caught up in that cross-current. So
5 you may see this again. But I think in the longer
6 term, the plants that are a little bit further out,
7 they are incorporating this position into their
8 application right up front.

9 So what you're going to see is these types
10 of systems are going to be identified in that Table
11 2.2-1 that lays out what things are in scope and what
12 aren't. So I think in the longer term you're going to
13 see this list shrink.

14 Does that answer your question? It's --
15 those are going to be part of the application right up
16 front as plants start to deal with the position.

17 MR. KUO: The direct answer really is, it
18 is not an expansion.

19 MEMBER BONACA: No, I understand. But
20 still you understand our difficulty as the committee
21 really views this material, whatever is given to us,
22 you know, I've been -- I'd asked the question of our
23 service water, it really is not in scope.

24 We discussed it before. Emergency service
25 water is. Now, we discover it is in scope. So

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1 becomes very confusing. I mean, you know, we just
2 hang there, depending on --

3 MR. BURTON: Right.

4 MEMBER BONACA: -- what step of the
5 process we are discussing at a given time, and we
6 discover different things. And so it's --

7 MR. BURTON: Yes. And let me speak to
8 that. You're absolutely right. You know, any member
9 of the public who's going to look strictly at the
10 application and then sees this is -- can be -- very
11 easily be confused.

12 And I think particularly with these what
13 I will call transition applications -- and it applies
14 not just to the seismic two over one and 54.4(a)(2).
15 It also applies to any emerging issue that comes up.
16 There's always going to be a transition time amongst
17 the plans.

18 And for those issues the best place for
19 any stakeholder to really try to get the entire
20 picture is ultimately in the SER, because that is
21 what's going to reflect what was in the initial
22 application, any changes that came about as a result
23 of the response to RAIs, all of that is ultimately
24 going to get documented in the SER.

25 So ultimately, for any stakeholder, that

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1 is the single best place to try and get the entire
2 picture.

3 MEMBER BONACA: I understand.

4 CHAIRMAN LEITCH: I'm still a little
5 confused. If the -- are all of these systems now
6 included in scope?

7 MR. POLASKI: Yes.

8 CHAIRMAN LEITCH: Or is it some sub-set of
9 some --

10 MEMBER SIEBER: Pieces of it.

11 CHAIRMAN LEITCH: -- portion of this?

12 MR. POLASKI: These are the systems we
13 added in scope when we did the additional scoping for
14 the -- based on the interim staff guidance related to.

15 CHAIRMAN LEITCH: Not just those areas
16 where two over one is an issue.

17 MEMBER BONACA: Yes, they will help in
18 simplicity.

19 MR. FULVIO: Yes. This is Al Fulvio
20 again, from Exelon. What we did was we identified the
21 structures that contain safety-related components like
22 the reactor building, for instance, and the pump
23 structure, things of that nature.

24 And we were talking a little bit earlier
25 about service water. Well, service water goes into

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1 other spaces that do not contain safety-related
2 components, like for instance, the turbine building
3 areas. So no, those portions would not be in scope.

4 MEMBER BARTON: Right.

5 MR. FULVIO: Where there are no safety-
6 related components where they can interact with, okay.

7 CHAIRMAN LEITCH: Okay.

8 MR. FULVIO: However, what Greg was
9 talking about earlier was that if you take a building
10 like the reactor building, for instance, it has many,
11 many safety-related components in it, we did not cut
12 and paste, if you will, within that structure.

13 We said, okay, if that system is in the
14 reactor building then the entire portion of that
15 system in the reactor building will be in scope for
16 license renewal for this issue, and we're not going
17 to, you know, nit-pick about, you know, whether it has
18 the spatial proximity or not.

19 But for those spaces -- structures where
20 there are no safety-related components, then we just
21 said, okay, there's no credit -- there's no
22 interaction.

23 MR. BURTON: Right, Mario. So it's not
24 the whole system. It's only in those areas where --

25 MEMBER BONACA: Within the definition of

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1 the realignment they were talking about before.

2 MR. BURTON: Right.

3 CHAIRMAN LEITCH: Okay.

4 MR. SOLORIO: Does that answer your
5 question, Greg?

6 CHAIRMAN LEITCH: Yes, it does, yes.

7 MR. SOLORIO: Okay. Thank you.

8 MR. POLASKI: Aging management review
9 results. We did our aging management -- the primary
10 part of it was the determination of aging effects, and
11 we did that based on the component materials, the
12 environment, operating experience, both industry
13 operating experience and the Peach Bottom plant
14 specific operating experience, and we used a set of
15 what we call industry tools that are available from
16 EPRI.

17 There's mechanical tools, civil structural
18 tools and more recently been developed, electrical
19 tools, and so what was used at the time was the Sandia
20 report, which addressed aging management of electrical
21 components.

22 All this information was used and
23 accumulated to determine aging effects we had in the
24 plant that we needed to address, and then the next
25 step was determine what programs we were going to use.

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1 This slide is an example, a very, very
2 limited example of what Chapter 3 looks like, with a
3 core spray system where we have identified where each
4 of the components that were identified in Chapter 2,
5 the component group, the component's intended
6 function, the environment in which it existed.

7 In this case, sheltered is the external
8 environment, torus grade water reactor coolant -- the
9 thorough construction, the aging effects, if any, were
10 applicable, and for some like stainless steel, for
11 carbon steel, with a sheltered environment was none,
12 and any aging management activity or program that was
13 in place or managing it.

14 So this was the presentation of everything
15 that we did as the result of all the work. And just
16 to mention something, it doesn't show on the slide,
17 but in your handout there's references at the bottom
18 to SER sections.

19 We added those in strictly for discussion
20 purposes today; they relate to those programs. So
21 this is how the aging management review results were
22 presented in the application.

23 In Appendix B where we list all of our
24 programs -- you'd call them the programs. We call
25 them activities because they range from what I call

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1 "big P" programs like ISI programs, to some other
2 extensive programs that are accumulation of a lot of
3 smaller maintenance tasks and surveillance tasks.

4 Some of them may be very small in scope.
5 Twenty-nine already existed. Some of them did require
6 some enhancements, by they were already existing.
7 There was five new activities, two activities dealing
8 with time limited aging analyses, and of those we've
9 listed here, one-time inspection activities work, the
10 systems we're going to do one-time inspections on.

11 And these are being done to confirm that
12 the aging effects are already being managed by
13 preventive programs that are in place.

14 MEMBER BONACA: I was kind of confused a
15 little bit by, what is up with the wooden pole
16 program.

17 MR. POLASKI: The wooden pole is -- I
18 believe is a new program. Or is it just --

19 MEMBER BONACA: But you call it an
20 enhanced program.

21 MR. POLASKI: Well, it is enhanced.

22 MEMBER BONACA: Because you're committing
23 to performing the inspection during the extended
24 period of operation.

25 MR. POLASKI: Right.

1 MEMBER BONACA: That's not an enhancement.
2 It just simply is carrying out the same program during
3 the period of -- is it? Why is it an enhanced
4 program? I don't understand that.

5 MR. POLASKI: Okay.

6 MR. PATEL: Well, it's enhanced because
7 the inspection of that is carried out by our
8 transmission and distribution people. So from a Peach
9 Bottom perspective, we're going to enhance it and
10 provide a work order which will come into effect
11 during the license renewal phase, to inform the T&D to
12 make sure the inspections are done.

13 So it's like -- it's an existing program,
14 but not within Peach Bottom itself.

15 CHAIRMAN LEITCH: So the enhancement is in
16 the documentation and the formality of it, not so much
17 of the programming site.

18 MEMBER BONACA: Because in reality, all
19 you're going to do, you're going to exactly what
20 you're going to do now.

21 MR. POLASKI: Yes.

22 MEMBER BONACA: And do it in --

23 MR. PATEL: That is correct.

24 MR. POLASKI: Yes. I mean, we're not
25 doing anything more than we're just making sure that

1 it gets done on the required frequency that it should
2 be done, because in the T&D world, they schedule them,
3 but budgetary reasons can mean they don't even do them
4 when scheduled. We have to make sure it's getting
5 done.

6 MEMBER BONACA: I don't see why it's
7 enhanced, but anyway.

8 MEMBER BARTON: What is the severe weather
9 that's associated with a station blackout event? I
10 didn't know you had to have severe weather to have a
11 station blackout event.

12 MEMBER SIEBER: Don't have to.

13 MEMBER ROSEN: You don't have to.

14 MEMBER BARTON: Well, your application
15 says that this wooden pole has been analyzed to be
16 able to withstand severe weather associated with a
17 station blackout event, and I don't know what that
18 means.

19 MR. POLASKI: What that deals with is that
20 if -- that was an issue that came up during the design
21 in the NRC review and approval of our station blackout
22 only with AC power source.

23 MEMBER BARTON: Okay.

24 MR. POLASKI: And what was reviewed was
25 whether that -- the equipment would be able to supply

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1 on an AC during severe weather conditions. It doesn't
2 say that the station blackout is a result of severe
3 weather, but it could be.

4 So they were -- the NRC was -- staff was
5 concerned. Now, this is not license renewal. This is
6 station blackout.

7 MEMBER BARTON: I understand that.

8 MR. POLASKI: With how well that one
9 wooden pole that is part of that system would do under
10 severe weather.

11 MEMBER BARTON: So you analyze this for
12 blizzards and tornadoes.

13 MR. POLASKI: Yes.

14 MEMBER BARTON: And hurricanes and all
15 that stuff? Is that what that means?

16 MR. POLASKI: From what I understand, that
17 is the most finely analyzed --

18 MEMBER BARTON: Okay.

19 MR. POLASKI: -- power pole you ever will
20 see.

21 MEMBER BARTON: Okay. Well, that's what
22 I figured, why you do a big analysis on a green pole,
23 you know. Okay -- a wooden pole. Now, I understand
24 what the pole is.

25 MR. POLASKI: I won't even get into that

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1 one.

2 MEMBER BARTON: All right.

3 MR. POLASKI: Well, we are going to make
4 sure that for license renewal, the aging of it is
5 properly done.

6 MEMBER BARTON: I understand.

7 MEMBER SIEBER: It's a cedar pole.

8 MEMBER BARTON: No, it's white -- it's
9 yellow pine.

10 MEMBER SIEBER: Yellow pine?

11 MEMBER BARTON: Yellow pine.

12 MEMBER SIEBER: Oh, it's got a bend in it,
13 then.

14 (Laughter)

15 MEMBER SHACK: Your FAC program, I noticed
16 that you must have had some failures recently that you
17 had pipe wall thinning that went below ASME minimum or
18 you had leakage. That's what I imply from the DSCR,
19 and I was just --

20 MR. POLASKI: Yes. I don't know off the
21 top of my head. I can't answer it. But I assume that
22 we had that thing.

23 MEMBER SHACK: FAC programs are of
24 interest for a variety of reasons.

25 MR. FULVIO: Yes, we have, you know. One

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1 of those failures that occurred, though, were in non-
2 safety-related portion pipings. However, yes, we have
3 had wall thinning to the --

4 MEMBER SHACK: Well, the wall thinning is
5 one thing. You expect to have wall thinning.

6 MR. FULVIO: Right.

7 MEMBER SHACK: The question is, did you
8 have a failure of the program. Did the wall thinning
9 go below the ASME minimum or did you have leakage,
10 which you're not supposed to have.

11 MR. FULVIO: Yes, we have had leakage.
12 Like I'll give you an example. On the HPSI/RCSC steam
13 line drains that go to the condenser. They're
14 relatively small pipes, but it's a non-safety-related
15 portion of the piping.

16 But yes, and they have leaked and we found
17 the leaks and we had to replace that piping. We
18 replaced it with less susceptible --

19 MEMBER SHACK: Even though your FAC
20 program said you would have been able to get that
21 established without replacing it?

22 MR. FULVIO: I would say that these
23 degradations occurred before the FAC program stated,
24 and you know, remember now, we've been operating for
25 25 to 30 years.

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1 MEMBER SHACK: I know. So this is ancient
2 history we're talking about here?

3 MR. FULVIO: Well, it's old. It's not
4 ancient, but it's old. But currently, yes, we do also
5 find, you know, other degradations.

6 MEMBER SHACK: Okay. Well, I guess
7 there's another way. Have you had any failures of
8 your FAC program since you've implemented a modern
9 version of it?

10 MR. FULVIO: Not that I'm aware of.

11 MR. POLASKI: Well, I'm not aware of any,
12 no.

13 MEMBER SIEBER: Well, but you don't model
14 everything --

15 MR. POLASKI: Right.

16 MEMBER SIEBER: -- down to the, you know,
17 half-inch line in your FAC --

18 MEMBER SHACK: No, but the question is
19 when you have a failure.

20 MEMBER SIEBER: Yes.' Well, I wouldn't be
21 surprised if some little drip or --

22 MR. FULVIO: I don't remember any failures
23 in the last five years, but -- I guess not in our
24 memory.

25 MR. POLASKI: All right. Implementation

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1 of aging management activities. Break this into two
2 sections. All of the activities programs that were
3 identified in the application when we submitted it
4 were incorporated in existing procedures programs, and
5 those commitments were identified in those by
6 September of 2001, about two months after we
7 submitted.

8 So all of the programs that were
9 identified initially that we did, you know, prior to
10 getting RAIs and expansion, we built those right into
11 our existing programs right up front.

12 Any additional activities that were
13 identified as a result of increased scope and RAI
14 responses, those have all been identified and the plan
15 is to have all those implemented in the plant by the
16 end of 2003.

17 MR. PATEL: Incorporated.

18 MR. POLASKI: Incorporated in the plan in
19 those procedures. One exception to that is that one-
20 time inspections have been identified, what equipment
21 needs to be inspected, what the criteria that we're
22 looking for, those procedures will not be developed
23 until closer to the time of actually doing the
24 inspection so that we're using latest state of the art
25 techniques at that time.

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1 We don't want to go writing a procedure
2 now that won't be implemented for ten years and have
3 to go back and redo it because techniques have
4 changed.

5 We did this very purposefully because I
6 wanted all this built in. It was a way of getting
7 stations making sure they knew exactly what we were
8 committing to, build it into the process so we weren't
9 going to leave a bunch of work to do for future
10 generations at the plant.

11 All of this is in our processes. It's on
12 our commitment tracking processes, the changes, the
13 commitments are all annotated. So if somebody picks
14 up a procedure that we had credited part of it for
15 license renewal and wants to change it, it'll be
16 clearly identified in there with those commitments and
17 what part of it is, and they will have to go back
18 through our commitment change process to make those
19 changes.

20 And it's the same we do on any other
21 commitments, commitments we make on LESS in response
22 to generic correspondence. It's all going into that
23 process, and I think Dr. Bonaca, that was a question
24 you raised before, is we built this in right up front.
25 I didn't want to walk away from the project.

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1 In fact, I told the project team that six
2 months after we get the new license we're all done and
3 out of the Peach Bottom business, we're going to leave
4 a complete package of information for people there,
5 the basis for the application, our scoping packages,
6 or aging management reviews, our boundary drawings.

7 But all the commitments will be built into
8 the existing systems that we use every day and you can
9 walk away knowing it's all there.

10 MEMBER BONACA: I had a question regarding
11 the ESW system. On portion of stagnant portions of
12 the ESW, because you had experience of corrosion and
13 leaking, you're going to have biocide treatment, too.
14 That's an enhancement you're making.

15 MR. POLASKI: Yes.

16 MEMBER BONACA: Are you going to have it
17 in the period of extended operation or are you having
18 it now already?

19 MR. POLASKI: Biocide treatment of ESW
20 systems is in existence now. We put those in place --
21 we had a problem in Peach Bottom 1980 time frame, I
22 believe --

23 MEMBER BONACA: Yes.

24 MR. POLASKI: -- significant degradation
25 among the service water system, most of the piping was

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1 all replaced and we have treatment of that. We have
2 biocide periodically to keep --

3 MEMBER BONACA: So that's all right. That
4 has been already in place.

5 MR. POLASKI: Yes, that's already been in
6 place. We changed the operation system so there's
7 flow through the system now. It's not a dead lake
8 system like it used to be, but --

9 MEMBER BONACA: So the only enhancement in
10 the problem is really the expanded scope.

11 MR. POLASKI: Yes. And all that -- and
12 everything -- we monitor the ESW system through our
13 89/13 program.

14 MEMBER BONACA: Yes. Okay.

15 MR. POLASKI: Through the history since
16 we've done the modifications and changed operation,
17 and so we don't have any problems with that system
18 right now. TLAAs, I'm going to let Erach briefly
19 discuss the TLAAs.

20 MR. PATEL: In the case of TLAAs, we had
21 some generic TLA which normally are considered for all
22 plants at the RPV embrittlement. And in answer to the
23 question that Dr. Rosen had, in the original
24 application, yes, we had not done our upper shelf
25 energy analysis, et cetera, because the methodology

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1 wasn't a question from a "G" (phonetic) perspective.

2 Methodology for the fluence was approved
3 in September 2001. We did the complete calculations
4 and the RAI responded. We sent out -- revised the
5 upper shelf energy information, revised the
6 information for the circumferential valves and the
7 actual probability, et cetera.

8 So all of that information has been
9 provided to D&S, and the SER reflects that.

10 MEMBER SIEBER: This is a calculation of
11 the fluence to the wall.

12 MR. PATEL: Right.

13 MEMBER SIEBER: The inside of the wall.

14 MR. PATEL: Inside of the wall, quarter
15 deep.

16 MEMBER SIEBER: And this is -- I now
17 remember where I got the idea about the shroud. When
18 you do that calculation, General Electric I think
19 ignored the shroud as though it didn't exist, as far
20 as an attenuating factor for the vessel wall. Is that
21 correct? Don't know?

22 MR. POLASKI: Well, I don't know. That's
23 -- I guess what we can say is that when we initially
24 submitted the application there was no approved --

25 MEMBER SIEBER: Methodology.

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1 MR. POLASKI: -- there was -- methodology
2 for neutron fluence calculation for the vessel. When
3 that was approved then we had General Electric perform
4 those calculations to do the -- you know -- what's the
5 total fluence at 60 years, upper shelf energy, the
6 T&DT.

7 And there was also -- part of that was the
8 fluence on the shroud also needed to be considered.

9 MEMBER SIEBER: Well, the fluence absorbed
10 by the shroud affects the structural properties of the
11 shroud. In other words, will it stay in place? But
12 when you ignore that and say, well, it's really all
13 water there, then you end up with a different number
14 to the vessel wall --

15 MR. POLASKI: I won't --

16 MEMBER SIEBER: -- than you do if you
17 modeled it exactly.

18 MR. POLASKI: Maybe Robin Dyle can discuss
19 that, but --

20 MR. DYLE: It's Robin Dyle from Southern
21 Nuclear, representing the VIP. I guess what I would
22 like to clarify is the fluence model that Peach Bottom
23 would have used is the new generic fluence model that
24 G.E. developed.

25 It not only accounted for the shroud. It

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1 accounted for the jet pumps and things of that nature.

2 MEMBER SIEBER: Okay.

3 MR. DYLE: And it was approved based on
4 the NRC's latest red guide for what criteria it had to
5 meet. So that's what the SE for that fluence model
6 would have been. So it did account for --

7 MEMBER SIEBER: Okay. So it does include.

8 MR. DYLE: -- the shroud and the jet pump.

9 MEMBER SIEBER: It does include the shroud
10 and the jet pumps as they physically exist.

11 MR. DYLE: Yes, sir.

12 MEMBER SIEBER: Okay. Thank you.

13 MR. PATEL: The other DLE's we had were
14 metal fatigue, the environmental qualifications of
15 electrical equipment, containment fatigue. And then
16 we had some specific -- plant specific TLAs. We found
17 the reactor vessel corrosion allowance had a 40-year
18 life associated with that.

19 So we got that reevaluated for 60 years.
20 We also had the generic letter 81-11 feed water nozzle
21 cracking. That originally was valid for 40 years. We
22 had to reevaluate it for 60 years. Initial, we looked
23 at all of our ISI and PSI work that was done and we
24 found one unit three main steam elbow in the original
25 construction tank.

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1 We had -- that was evaluated for 40 years.
2 We went back and looked at that to make sure it was
3 okay for 60 years, and then the high-energy line break
4 and the crane load cycle limits. So those were the
5 plant specific PLAs that we considered.

6 MEMBER BARTON: Where are you addressing
7 the upper -- was it upper grid, upper core grid
8 cracking? You -- is that a TLAA or is that somewhere
9 else being looked at?

10 A PARTICIPANT: Surveillance, vessel
11 surveillance program.

12 MR. POLASKI: Well, it's not a TLAA.

13 MEMBER BARTON: But it is an issue, right?

14 MR. POLASKI: Yes. Barry, you want to
15 speak to that?

16 MR. KUO: Yes, top guide --

17 MR. PATEL: The top --

18 MR. KUO: The top guide cracks.

19 MR. PATEL: The top guide is a TLA. We
20 considered that as a TLA.

21 MEMBER BARTON: That is a TLA. Okay.

22 MR. PATEL: Yes. And the issue there is,
23 we are following the BWRVIP requirement for the top
24 guide.

25 MEMBER BARTON: Okay. All right.

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1 MR. PATEL: And at ths particular time
2 it's an open issue that is being discussed.

3 MEMBER BARTON: Okay. Thank you.

4 MR. POLASKI: Other questions on TLAAs.
5 Now, the last line on future actions, we'll be
6 formally responding to 15 open items by November 29th.
7 Fourteen or 15, we believe, were simply closed and one
8 to go, and that's the top guy we're talking to.

9 We'll be responding to the 18th
10 informatory items, also by November, and we'll be
11 issuing our update to reflect current licensing dates
12 as changes that affect the application by December.
13 I think Dave had already mentioned that earlier.

14 CHAIRMAN LEITCH:: We have two clocks
15 here, so we'll start by that one and finish by that
16 one. They're not precisely the same time.

17 Just before we resume with the agenda,
18 there was a question regarding Hilti bolts, and the
19 Staff has some additional information in that regard.
20 PT, can we ask you to respond to that now, please.

21 MR. KUO: Yes. Certainly, Dr. Leitch. I
22 have the Senior Staff Hans Ashar here from Mechanical
23 and Civil Engineering Branch. He will address Dr.
24 Sieber's question on the Hilti bolts, extension bolts
25 in general, but is not the specific for Peach Bottom.

1 It's in general.

2 MR. ASHAR: All right. I'm Hans Ashar.
3 I'm with the Mechanical and Civil Engineering Branch,
4 and as far as the expansion bolts in general, the
5 Staff's concern has been there since 1979. In 1979,
6 we issued a Generic Bulletin, Bulletin 7902, regarding
7 the expansion bolts. It included not only Hilti, but
8 all types of expansion bolts being used in industry.

9 All the licensees went through quite a bit
10 of repair and renovation to make sure that they meet
11 the requirements of 7902, though at that time they
12 were made like requirements. And there are safety
13 technos associated with them to take care of certain
14 uncertainty in their function to perform during
15 certain seismic events, et cetera.

16 Later on, as a part of the USIA-46
17 Program, which was for the older plants, various
18 equipment being anchored by expansion bolt was one of
19 the big item that most of the licensees addressed at
20 that time, and Staff reviewed in detail what they had
21 done with older plants, because the problem was with
22 the equipment being qualified for the older plants.
23 So expansion bolt, or any kind of bolting was an issue
24 in the USIA-46 resolution. That was completed in
25 around 1992 or so.

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1 During that time, most of the expansion
2 bolts that licensees have installed were being
3 reviewed thoroughly by all the licensees. Our
4 regional inspectors had gone to various plants to make
5 sure that there were adequate programs to make sure
6 that all kinds of bolts have been addressed, including
7 not only expansion bolts, but the cast-in-place bolts,
8 and expansion bolts, all kinds of bolts.

9 Since that time, a maintenance rule came
10 through, and in maintenance rule, a couple of plants
11 that I, myself, have visited as a part of the baseline
12 inspection, and they had included expansion bolt as
13 part of their maintenance rule, to look at those bolts
14 at periodic intervals. And I would believe during the
15 extended period of operation, all the applicants will
16 be continuing that maintenance rule commitment.

17 MEMBER SIEBER: Okay. My question really
18 dealt with the aging of the concrete in which the bolt
19 was set, and had that been taken into account. And I
20 guess what you're telling me is that under the
21 maintenance rule, they're going to be inspected or
22 tested somehow or other during this extended period of
23 operation, beyond the 40 calendar years. Is my
24 understanding correct?

25 MR. ASHAR: That is correct. Now testing

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1 part, I want to address the testing part. Inspection,
2 yes. Testing, only if it is needed. I mean, if they
3 find that there's a problem with
4 particular pipe support connection where there are
5 expansion bolts being used, in that case they might do
6 some testing, or they might pull out something. But
7 testing is not a part of the maintenance rule
8 inspection at this time, because of the extensive
9 program that all the licensees went through during the
10 Generic Resolution of 7902, Bulletin 7902.

11 MR. KUO And to address your specific
12 concern on the concrete aging, I believe that is
13 really why some of the extension bolts have such high
14 factors there. The safety factor for some of the
15 bolts as high as eight.

16 MEMBER SIEBER: Yeah. I remember doing a
17 lot of the testing and the safety factor, as I
18 understood it was there because there was some
19 uncertainty about what the seismic response would be,
20 what the forces on the bolting would be, particularly
21 since you test them pulling them, and the seismic
22 forces are lateral, which is a different proposition.

23 MR. KUO: Yeah.

24 MEMBER SIEBER: But the answer is you
25 aren't going to test them, and you believe that there

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1 is enough margin to take care of concrete aging. And
2 I guess I have to think about that a little bit.

3 MR. ASHAR: Yeah. I mean, there are a lot
4 of
5 uncertainties regarding the ability of expansion
6 bolts. That's the reason we put safety factors to be
7 required. It was a four or five minimum required, and
8 most of the licensees that had been reviewed later on
9 had much larger than that.

10 MEMBER SIEBER: Uh-huh. Okay. Well,
11 thank you very much.

12 CHAIRMAN LEITCH:: Okay. Thanks. We'll
13 turn it back to you then, David.

14 MR. SOLORIO: Okay. I just want to kind
15 of orient everybody. We're on page 14 in the
16 handouts. With me here to my right is Mr. Bob Pettis
17 and Greg Hatchett. Bob will be presenting the results
18 of the Scoping Methodology Review, and Greg will be
19 doing the scoping review described in Chapter 2 of the
20 SER, following Bob.

21 MR. PETTIS: Good morning. My name is Bob
22 Pettis, and I'm the Senior Reactor Engineer in the
23 Equipment Instrument Performance Branch of the
24 Division of Inspection Program
25 Management. This morning I will briefly discuss a

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1 review of the Staff's input to Section 2 of the draft
2 SER regarding scoping and screening methodology at
3 Peach Bottom Units 2 and 3.

4 The Staff's input to the draft SER was
5 based primarily on information obtained from the
6 Staff's desktop review of the application, an on-site
7 audit of the applicant's program ,
8 documentation and implementation, Staff generated
9 requests for additional information, and our findings
10 and conclusions. The Staff's review and subsequent
11 SER input was performed in accordance with 10 CFR 54.4
12 and the guidance contained in NUREG 1800. This
13 morning I'll provide the Committee with an overview of
14 the Staff's results in these areas.

15 During the desktop review which was
16 performed at
17 headquarters, the Staff reviewed the applicant's
18 scoping and screening methodology used to identify
19 system structures and components that are within the
20 scope of license renewal, and structures and
21 components that are subject to aging management
22 review. This methodology is described in Section 2.1
23 of the Peach Bottom license renewal application.

24 Staff review of the applicant's scoping
25 and screening methodology was to determine if it met

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1 the scoping requirements set forth in 54(a)(1) through
2 (3), and the screening requirements set forth in 10
3 CFR 5421. In developing the scoping and screening
4 methodology, the applicant considered the requirements
5 of the rule, statements of consideration of the rule,
6 and general guidance provided in NEI 95-10. The
7 applicant also considered the Staff's correspondence
8 with other applicants and NEI regarding the
9 development of the methodology.

10 The team reviewed the license renewal
11 application and supporting information, such as the
12 updated final safety analysis report, existing license
13 renewal program guidance, and system design baseline
14 documents or DBDs. The DBDs are a comprehensive
15 system-level document that provides the system design
16 basis, and addresses system functions, controlling
17 parameters, and design features. The DBDs also
18 identify and discuss regulatory
19 requirements, commitments, codes and standards, and
20 system
21 configuration changes that had an impact on the design
22 baseline of the system for normal and accident
23 conditions.

24 Based on the Staff's desktop review of the
25 application, the Staff prepared a detailed summary or

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1 relevant documentation referenced in the application.
2 The Staff requested the applicant to provide this
3 information to the team during the pre-audit
4 documentation meeting which was held at Exelon's
5 Corporate Office in Kennett Square, Pennsylvania.

6 During this meeting, the applicant
7 provided copies of the requested documentation, and
8 also provided the team with an overview of the scoping
9 and screening process described in the application.
10 The Staff then reviewed the information in
11 preparation for the upcoming scoping and screening
12 audit which was conducted in December of 2001.

13 Following the Staff's desktop review of
14 the information obtained during the pre-audit meeting,
15 four Engineering Staff from headquarters performed a
16 week-long audit at the Exelon Corporate Office.
17 During the audit, the team reviewed the implementation
18 process described in the application, which included
19 the review of Exelon reports, procedures, position
20 papers, discussions with the applicant's staff,
21 selected training records, discussions relative to NRC
22 Interim Staff positions, future requests for
23 additional information, applicable design
24 documentation, system DBDs,
25 component record list or cue list, maintenance rule

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1 basis
2 documents, and selected system and scoping and
3 screening reports for RCIC system, feedwater and
4 drywall ventilation.

5 The team selected these systems based on
6 experience gained from previous license renewal
7 audits, and also input from the Division of System
8 Safety Analysis Staff responsible for the review of
9 the scoping and screening results section of the
10 application, which will be discussed following this
11 presentation.

12 CHAIRMAN LEITCH:: A question here
13 regarding the chronology. This scoping and screening
14 review, was that done prior to the applicant's
15 response to this open item where a number of systems
16 were included in scope based on the II/I issues?

17 MR. PETTIS: Yes.

18 CHAIRMAN LEITCH:: It was prior to that.

19 MR. PETTIS: Yes. The chronology was the
20 application was received by the Staff. We performed
21 a desktop review which is how we refer to it, which is
22 basically an in-house review of the application to try
23 to come up with a feel for what the methodology
24 describes, try to capture any relevant documentation
25 that may be referenced in the application, such as

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1 procedures by number, and also gain just a general
2 understanding of the applicant's program.

3 Following the desktop review, then we send
4 out a request for information and have discussions
5 with the applicant over the phone, and have that
6 information assembled at, in this case the Exelon
7 Corporate Office. A team of one or two people would
8 go up there to gather the information, sit down for
9 about a day. The licensee provided an overview of the
10 methodology process and the relevant documentation.
11 That information was then taken back to headquarters
12 in preparation for the audit, which was conducted in
13 December of 2001. This way, we have an opportunity to
14 review the procedures, understand their methodology,
15 and be able to perform the audit in a much more
16 effective manner.

17 CHAIRMAN LEITCH:: All right. My question
18 really was whether these systems that were added as a
19 result of this open item, was that work reviewed with
20 the same rigor or thoroughness as the initial work?

21 MR. PETTIS: Well, the answer to that
22 would be yes, but that review came after, as a result
23 of the seismic II/I RAI that was issued after the on-
24 site inspection in December of 2001. Since that issue
25 was an evolving issue between the Staff and Industry,

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1 that RAI or the response to that RAI indicated this
2 additional review, and the additional systems, and the
3 additional boundary expansion.

4 Actually, that's kind of in the process of
5 being reviewed really at this point. I mean, I think
6 it came in probably about maybe a month or so ago, or
7 two months ago, so we're getting our hands around that
8 response. And I believe in the result section, Greg
9 is going to talk a little bit about the openness of
10 that open item.

11 CHAIRMAN LEITCH:: Okay.

12 MR. PETTIS: And I believe it's only item,
13 not because of the methodology, but because of just
14 the docketed correspondence that needs to be obtained
15 by the Staff.

16 CHAIRMAN LEITCH:: Okay. Thank you.

17 MR. PETTIS: As a result of the Staff's
18 desktop review of the application and discussions with
19 the applicant's staff during both the pre-
20 documentation meeting and on-site audit, several RAIs
21 were submitted to the applicant in the scoping and
22 screening methodology area. In general, the RAIs
23 requested additional information in the area of
24 scoping and screening, realignment, aging management
25 program attributes, which are discussed in Appendices

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1 A and B of the application, and further clarification
2 as to the extent of the applicant's scoping of non-
3 safety related piping in accordance with (a) (2), or
4 the Seismic II/I issue.

5 In general, the Staff found the
6 applicant's responses to the RAIs to be acceptable,
7 and consistent with other applications reviewed. The
8 Staff determined that the applicant's approach to this
9 scoping and screening process was generally consistent
10 with the scoping criteria established in 54-4(a) (1)
11 through (3) for both safety and non-safety related
12 system structures and
13 components, and the Commission's regulated events.

14 The team identified that the applicant's
15 evaluation of the Seismic II/I issue required some
16 additional effort, which was eventually resolved
17 through the RAI process, and the use of the Staff's
18 Interim Staff Guidance provided in this area.

19 For Seismic II/I considerations, the
20 applicant provided information in the application
21 which discussed the use of an area-based approach to
22 scoping structures and components, and placing them
23 under the scope of license renewal. The applicant
24 also performed a supplemental review of potential
25 (a) (2) structures and components, which resulted in

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1 the expansion of the applicant's initial scope. The
2 applicant's evaluation reviewed non-safety related
3 piping which was not connected to safety-related
4 piping but could adversely impact the performance of
5 an intended safety function due to a spatial
6 relationship. This issue will be further discussed in
7 the results section, which will follow this
8 presentation. This, by the way, was the response to
9 the RAI.

10 The Staff concluded that the applicant's
11 methodology and its implementation were adequate. The
12 scoping process is defined and proceduralized, and the
13 applicant's license renewal team was trained on the
14 implementation process. The Staff's audit of the
15 applicant's scoping and screening methodology provided
16 confirmation of the process and its implementation.
17 As a result, the Staff finds that there is reasonable
18 assurance that the applicant's methodology for
19 identifying system structures and components that are
20 within the scope of license renewal, and structures
21 and components subject to aging management review is
22 consistent with the requirements of 54-4 and 54-21,
23 and therefore, is acceptable. Are there any
24 questions?

25 CHAIRMAN LEITCH:: Apparently, no

1 questions.

2 MR. PETTIS: All right. Thank you.

3 MEMBER WALLIS: Is that the end, or you
4 are going to move on?

5 MR. HATCHETT: Good morning. My name is
6 Greg Hatchett, and I work in the Plant Systems Branch
7 as a Reactor Systems Engineer in the Division of
8 System Safety and Analysis. And I believe Bob left
9 all the questions to me, so I'll --

10 MEMBER ROSEN: He told us the bottom line,
11 but he didn't tell us how you got there.

12 MR. HATCHETT: How we got there, yeah.
13 The Staff in the Division of System Safety and
14 Analysis, with the assistance of a contractor, was
15 responsible for doing the scoping and screening
16 evaluation for the Peach Bottom plant.

17 To verify that the applicant had properly
18 implemented the methodology, the Staff focused its
19 review on the implementation results to confirm that
20 there were no emissions of the plant level systems and
21 structures within the scope of license renewal.

22 As indicated in the slide, the Staff
23 reviewed the applicant's updated final safety analysis
24 report, piping and instrumentation diagrams, license
25 conditions, and its own interim staff guides which

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1 reflects emerging issues. One of those emerging
2 issues that we've already talked about to some degree
3 today has to do with 10 CFR 54.4(a)(2), which is the
4 non-safety related system affecting safety-related
5 systems, so we've already discussed that at some
6 length today. So the Staff uses this Interim Staff
7 Guidance to try to ensure that all structures and
8 components requiring an aging management review have
9 been captured.

10 In the beginning of its review, the Staff
11 focused on the out-of-scope systems in Table 2.2-1 of
12 the application. Several systems identified within
13 the table were considered to be out-of-scope, but had
14 structures and components that were within the scope,
15 and were subsequently included within the boundary of
16 other in-scope systems. Again, today we've talked
17 about that to some degree, and that's known infamously
18 as system boundary realignment.

19 As described in the SER with open items,
20 systems such as the reactor building, ventilation
21 system, reactor water clean-up system, instrument
22 nitrogen system and instrument air system were not
23 included within the scope of license renewal.
24 However, they were subsequently included as a result
25 of NSR versus SR in some cases. However, specific SCs

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1 of the systems were realigned within the boundary of
2 other instrument systems.

3 CHAIRMAN LEITCH:: Greg, I guess I don't
4 understand why this issue didn't come up previously,
5 or did it, and I just didn't recognize it? I mean,
6 this realignment issue.

7 MR. HATCHETT: Why didn't it come up
8 previously?

9 CHAIRMAN LEITCH:: Why did it not come up
10 in other
11 applications?

12 MR. HATCHETT: Well, again, this is the
13 second boiler that the Staff has reviewed. If you go
14 back and you remember, and reflect on the Hatch
15 application, that was the first boiler. Although I
16 wasn't involved in that review, Butch Burton was the
17 PM for that one. What you'll see is with respect to
18 trying to do system scoping, it may be a little bit
19 challenging for a boiler as opposed to a PWR, so with
20 that in mind, Hatch did functional boundaries. And
21 just as a caveat, they had a primary system in which
22 the primary system represented all those other
23 intended functions that were the reason for bringing
24 the primary system into scope. But there may have
25 been other systems that had the same intended

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1 function, that was subsequently considered to be
2 underneath, if you will, the primary system, but it
3 was not listed that way in the application, in the
4 scoping and screening table up front in the
5 application.

6 Again, what this was, was a methodology
7 again to simplify scoping and screening with respect
8 to a boiler, so Peach Bottom decided to avoid that and
9 try to do more system boundary
10 realignment. And what ended up happening is the Staff
11 in its understanding during the review would come to
12 a point and say well, you know what, we believe the
13 instrument air system should be in-scope because it
14 supports other safety-related functions. So we on the
15 Staff believe that it's a 54.4(a)(2) issue, but they
16 realigned it within the boundary of the supporting
17 system, making it then a 54.4(a)(1) issue. Having
18 said that, those Scs that needed to be captured, were
19 then captured, as a result of the realignment process.

20 MEMBER BARTON: I think you'll find in the
21 Hatch application that instrument air was in-scope, as
22 I remember.

23 MR. HATCHETT: But the components for
24 instrument air for the Peach Bottom application that
25 you needed to be in-scope were captured. It was just

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1 how it was done.

2 MEMBER ROSEN: So you're saying the Hatch
3 instrument air system, for example, and the Peach
4 Bottom instrument air system end up at the same point.
5 The components within the instrument air systems for
6 both plants that need to be in-scope are both in-
7 scope, but they arrived at the answer differently.

8 MR. HATCHETT: Differently. One did
9 functional boundary, and one did realignment.

10 MR. SOLORIO: Can I just add, Graham, that
11 for Calvert Cliffs, there was a similar situation in
12 terms of realignment. That was a first license
13 renewal application. However, they spent a little
14 more time explaining how they moved components from
15 one system to another for whatever reasons they did,
16 and it wasn't as significant as an issue as it was for
17 these later reviews, so it is an issue that's been
18 identified before with all the previous applicants to
19 a degree. And it really was dependent upon how
20 information they provided in the application, as to
21 whether or not the Staff needed to ask, you know, what
22 number of questions.

23 MEMBER ROSEN: Does the Staff have a
24 preference now that you've had both ways shown to you?

25 MR. HATCHETT: Well, what we discussed is

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1 that industry has decided not to do this functional
2 boundary thing anymore. I'll say with respect to
3 system boundary realignment, to draw the analogy, if
4 you had to give me directions from NRC to your house
5 using the criteria given to you by the Staff and I got
6 lost, then you probably didn't do a good job in the
7 results and RAIs that you see on the document. So
8 with respect to system boundary
9 realignment, there's nothing wrong with realigning
10 components, because in the end, Staff is trying to
11 determine what systems, what structures and components
12 require an aging management review. So how you get
13 there is not that important with respect to
14 methodology, if you explain it enough so the Staff can
15 have assurance that you did capture all those things
16 necessary, or requiring a review.

17 MEMBER BONACA: Although we expressed as
18 a Committee, I mean, the preference for the system
19 approach than the functional approach, because we were
20 very confused by the functional approach. For
21 example, one example was typical was ECCS system, I
22 certainly was looking for to be, you know, all the
23 pumps and equipment in the ECCS train, and yet some
24 equipment of that was, since it's used also for core
25 spray, it was under containment equipment or

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1 something like that, and so it was very hard to figure
2 out what it was. Depending on the function they had
3 chosen to identify a piece of equipment under, you
4 know, you would be looking in areas where you were not
5 used to look at.

6 MEMBER ROSEN: I don't think it should be
7 a preference for the licensee in the long run. We're
8 going to do a lot of these with LRAs. If not for
9 every plant, nearly every plant, I suspect, and it
10 seems to me that Staff has a burden under the NRC
11 Commissioner's strategic goals to have a more
12 efficient and effective process. It shouldn't be
13 entirely up to the licensee in the long run for how
14 this is done. I really think the Staff ought to
15 weigh-in, and kind of give through NEI perhaps, but
16 give guidance as to what works best for you guys too,
17 and for us.

18 MR. HATCHETT: But I think this issue only
19 shows up, or probably only shows up with respect to
20 boilers in terms of trying to fit it into nice neat
21 system boundaries.

22 MEMBER ROSEN: Yeah. Well, only saying
23 only boilers is saying only a third of the plants, and
24 that's a lot of plants.

25 MR. HATCHETT: Yeah, I'm just -- but the

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1 idea here is that those are the plants that would have
2 to be addressed
3 particularly.

4 MEMBER ROSEN: Right. Sure. But I think
5 what I'm trying to give you the message, is that you
6 don't have to stand there and wait for whatever steam
7 comes across the threshold. You could say up front I
8 think through NEI, we prefer you to do this, because
9 it's clearer for us, it's clearer for the ACRS, and
10 it's clearer for public consumptions, other
11 stakeholders.

12 MEMBER BONACA: The NEI, however, the NEI
13 format is system-based, isn't it?

14 MR. HATCHETT: That's the format of the
15 standard review plan. It's system-based.

16 MEMBER BONACA: That's right.

17 MR. HATCHETT: It's a system-based
18 approach, which is also reflected in the guidance in
19 NEI 95-10.

20 MEMBER SIEBER: So the message has already
21 been given.

22 MR. HATCHETT: It is a system-based thing.

23 MEMBER SIEBER: Right.

24 DR. LEE: Yeah. We just had a workshop
25 last week, and NEI was a big participant. And then

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1 we've gone through -- well, the biggest topic is how
2 to package the application to improve the efficiency
3 of the Staff review. And this topic, the realignment
4 topic, was actually discussed, so we'll continue the
5 dialogue with NEI to address it.

6 MR. HATCHETT: So again, the Staff met
7 with
8 representatives of Exelon on September 24th, 2001 in
9 Kennett Square to clarify certain aspects of the Peach
10 Bottom LRA, particularly system boundary realignment.
11 The focus of the meeting were problems encountered
12 with Peach Bottom's specific nomenclature and system
13 realignments, which make the scoping and screening of
14 systems structures and components a bit difficult to
15 navigate. Again, system boundary realignment was used
16 to simplify the scoping and screening process.

17 During that meeting on September 24th,
18 Exelon explained to the Staff that SSCs were divided
19 into four groups. What I'd like to stress here is
20 that what you see before you on the slide behind me,
21 the five cases, were not necessarily clarified at this
22 particular point in the review process.

23 On September 24th when we met in the
24 Kennett Square offices, the explanation that the Staff
25 received at that time was that the systems were either

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1 entirely in-scope, systems entirely out-of-scope,
2 systems that are in-scope with some portions of out-
3 of-scope, and systems that are out-of-scope with some
4 in-scope components are realigned to other in-scope
5 systems, so I think the folks at Peach Bottom
6 understood what they were doing, but in terms of
7 making it clear and understandable for the Staff and
8 for the public in terms of looking at system boundary
9 realignment, it wasn't on the docket yet. And that
10 then made it confusing in trying to understand how
11 they obtained the results they did, and for the Staff
12 to come to some sort of reasonable assurance finding.
13 So during that meeting, the Staff asked Exelon for an
14 explanation of the scoping decisions for systems that
15 were within the scope, but had out-of-scope portions,
16 and some out-of-scope system with in-scope components.

17 With respect to out-of-scope systems,
18 boundary
19 realignment made it difficult to trace the in-scope
20 components, because the information given for out-of-
21 scope systems was not provided. Again, we go to Table
22 2.2-1, if the system is out-of-scope, there's no
23 further information for that system in the
24 application.

25 Having said that, the Staff then looked to

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1 the system where those components were subsequently
2 realigned, and looked to see if they could find some
3 connection. And in the portions of the system that
4 were realigned to include those components, there was
5 no explanation, so Exelon acknowledged that this
6 realignment made it difficult to review scoping
7 results starting from a system scoping perspective.
8 So again at that time, the Staff had an understanding
9 with Exelon that it was somewhat difficult to scope
10 the plant components on a system basis.

11 MEMBER ROSEN: Now this is not the --
12 Peach Bottom is not the only boiling water reactor
13 that the Exelon Corporation owns and manages.

14 MR. HATCHETT: Dresden and Quad is coming
15 in '03.

16 MEMBER ROSEN: How are they doing those?

17 MR. HATCHETT: PT, do you want to --

18 MR. KUO: I was going to direct to Fred
19 because he's going to also be responsible for that
20 application.

21 MR. POLASKI: This is Fred Polaski with
22 Exelon. The Dresden and Quad Cities application in
23 Chapter 2 will present the information again on a
24 system basis. And we did realign components to get
25 them in the right intended function, but part of the

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1 methodology will elaborate more fully on how we did
2 that, and how the process was implemented. And in
3 Table 2.2-1, which lists all the systems, where there
4 are systems that are identified as not-in-scope, the
5 components were realigned and will be identified in
6 that table, that a component from System X was
7 realigned in System Y. And the description on System
8 Y will include information about what was realigned
9 into that component.

10 In that application, you will not see the
11 word
12 "realigned", but it will -- but essentially it's
13 there, and it will discuss those components that are
14 included in the scope of that system.

15 MEMBER ROSEN: Yeah, but I understand the
16 Staff's comment and concern is that for systems that
17 are not safety-related, but have components that would
18 "be realigned", they can see what you realigned, but
19 they can't see what you don't, because there's no
20 information about those systems. Is that --

21 MR. HATCHETT: Yeah, that would be
22 correct.

23 MEMBER ROSEN: That would be correct so,
24 you know, it creates sort of an impenetrable wall for
25 the Staff with regard to certain systems. And to me,

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1 it needs some thought to how you can help the Staff
2 more for those systems', so they can assure us that
3 they have -- that there's some completeness dimension
4 to their review.

5 MR. POLASKI: I understand.

6 MR. HATCHETT: Again, the Staff held a
7 public meeting on October 22nd, 2001 to provide Exelon
8 an opportunity on the record to clarify the scoping
9 and screening methodology, particularly as it related
10 to system boundary realignment. The Staff
11 expectations during that meeting were to understand
12 how this process fulfilled the requirements of 10 CFR
13 54.4 in sufficient detail to complete the review of
14 system scoping results and the methodology.

15 It was during this meeting that Exelon
16 presented then the five cases that you see behind me,
17 for the realignment and its rationale. However,
18 Exelon did not explain how this translated into the
19 results presented within the Peach Bottom application,
20 and how they were going to clarify that all components
21 requiring an aging management review had been
22 captured.

23 As a result, the Staff issued a request
24 for additional information on October 30, 2001, and
25 Exelon provided its response on November 16th, 2001.

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1 The RAIs were issued by the Staff as another attempt
2 to flesh out how the results were obtained, and how
3 they could be understood with respect to system
4 boundary
5 realignment.

6 Again, the Staff had several -- in
7 addition to these meetings, Staff had several
8 telephone conferences with the
9 applicant to again try to understand. What came
10 through very clearly is that the applicant did
11 understand how they attempted to capture all
12 structures and components requiring an aging
13 management review. But as the Staff dealt with this
14 issue in a generic sense, and we issued RAIs that were
15 generic, we got a generic response back. So what
16 ended up happening is the Staff during the scoping
17 audit of December 4th through 7th, Exelon agreed with
18 the Staff that the description contained in Chapter
19 2.1 of the license renewal application did not contain
20 sufficient information for the NRC Staff to review the
21 actual methodology and procedures used by the Exelon
22 staff. This made it difficult to understand the
23 results of SBR, or system boundary realignment.

24 Again looking back, Exelon provided the
25 reasons for system boundary realignment, and Staff had

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1 already discussed this issue again generically on
2 numerous occasions. As a result, the Staff issued
3 more specific RAIs on January 23rd and March 12th,
4 2002. As a result, Staff concerns with the LR
5 application, which
6 included, you know, SBR, so those RAIs were not
7 specific to system boundary realignment, but they were
8 the RAIs for the application itself, which included
9 our concerns with system boundary
10 realignment.

11 The responses provided by the applicant
12 provided
13 additional clarity as a document of how the results
14 were obtained. Again, the responses that we got back
15 then gave us the link between the out-of-scope system,
16 the function of that system, and why the system itself
17 wasn't brought into the scope because it didn't meet
18 the criteria, and then it provided additional tables
19 to show how those components requiring aging
20 management, if there were
21 additional components that were inadvertently omitted
22 in the original application were subsequently modified
23 as a result of the RAI response. So having said that,
24 that then allowed the Staff to complete a scoping
25 evaluation, and making its finding in accordance with

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1 10 CFR 54.4 and 54.21(a)(1).

2 As spoken to earlier, we had on Dave's
3 early slide in the introduction, we had eight open
4 items. Those open items involve ventilation systems,
5 cranes, and of course the non-safety related SSC
6 interacted with safety-related.

7 What I'd like to say about that in
8 particular is that the RAI that the Staff sent out on
9 March 12th, and the subsequent response on May 21st of
10 2002, and then the Staff actually visited the site
11 during the AMR inspection to verify what had been
12 provided to the Staff as part of the May 21st RAI
13 response.

14 The RAI response, at that time, only gave
15 conclusions. It did not provide details of the
16 methodology itself, so during the site visit on July
17 10th of 2002, the Exelon representatives provided the
18 methodology. It was broken down into two specific
19 areas. There were fluid-containing systems and non-
20 fluid containing systems, and so the method by which
21 they did the evaluation on a desktop-type thing using
22 the plant CRL database, and then
23 subsequently looking at the plant drawings, and doing
24 a plant walkdown to determine how those non-safety
25 related systems would be included within the scope.

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1 And I was present at that meeting, and I walked down
2 the plant with Al Fulvio, and got an understanding of
3 how they did that, and then verified that, in fact,
4 those non-safety related systems that had special
5 interactions with safety-related components were
6 indeed brought into scope properly.

7 MEMBER BARTON: Before you move off of the
8 mechanical, are you through with mechanical, the first
9 Bulletin? I had a question, which crops up on
10 several, if not all, the applications as the
11 instrument ventilation systems, and it has to do with
12 HEPA filter housings, fan housings, heating coils
13 within fan housings, that whole subset of issues with
14 ventilation systems keeps coming up. And it seems to
15 me that it's an issue like, you know, II/I, if it's
16 going to keep coming up, isn't there some way to kind
17 of handle this on a generic issue?

18 DR. LEE: This is Sam Lee. I'm from the
19 license renewal section. Yeah, the housing that you
20 just talk about is actually the interim staff guidance
21 we're trying to develop. We prepare a draft interim
22 staff guidance we issue for comment, and now we're
23 trying to finalize it.

24 MEMBER BARTON: Okay. I just think it --
25 you know, instead of fighting this battle at every

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1 application, we ought to be able to somehow solve this
2 one across the board, because it keeps coming up.

3 MR. HATCHETT: Well, the staff guidance
4 was how we, I guess ultimately decided to handle this
5 issue, and it's still out for comment, the way I
6 understand it.

7 MEMBER BARTON: All right. But you're
8 trying to handle this more as a generic issue?

9 MR. HATCHETT: Right.

10 MEMBER BARTON: Thank you. That was my
11 only point. It would help the review process, I
12 think.

13 MR. HATCHETT: So the Staff has been
14 involved with telephone conferences and fax
15 transmissions back and forth on a preliminary basis to
16 close these open items. And to date, with respect to
17 mechanical systems and structures, we closed
18 preliminarily all the open items, pending formal
19 documentation of those. And as a result, the Staff
20 believes that there's reasonable assurance that the
21 applicant has identified all the Scs requiring an
22 aging management review in accordance with 10 CFR 54.4
23 and 54.21(a)(1). It there aren't any more questions,
24 I'll turn it back over to Dave Solorio.

25 MEMBER ROSEN: Well, yeah. I didn't hear

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1 any discussion of those water-tight dike issues.

2 MR. HATCHETT: Well, we talked about that
3 earlier with respect to the RAD waste system when Mr.
4 Barton brought it up, and I gave the explanation as to
5 the difference between them doing some reflecting on
6 the UFSAR They're going to do a 50-59 evaluation and
7 clear up the inconsistencies in the FSAR to deal with
8 whether it's a 10 CFR 20 issue, or 10 CFR 100 issue.
9 The reason why it was an open item was the Staff saw
10 it as a 10 CFR 100 issue, based on the safety
11 evaluation in Section 9 of the UFSAR. And the
12 licensee dealt with that issue in terms of why it
13 should be in-scope, using other parts of the USFAR and
14 other design-basis documentation. They provided
15 preliminary response to the Staff which the Staff
16 finds to be acceptable, pending a formal submission to
17 the Staff on the docket.

18 MEMBER ROSEN: Basically a dose argument.
19 Right? That doesn't rise to a Part 100 level of
20 doses.

21 MR. HATCHETT: No.

22 MEMBER ROSEN: Is that what I --

23 MR. HATCHETT: No, it does not.

24 MEMBER ROSEN: And that's the substance of
25 their argument.

1 MR. HATCHETT: Yes.

2 MEMBER ROSEN: Has the Staff reviewed the
3 calculations? Comfortable with that, worst case?
4 It's a Part 20, but it's not a Part 100.

5 MR. SOLORIO: The response doesn't contain
6 calculations. The response just references design
7 documentation that provides those results.

8 MR. HATCHETT: Yeah. And that's in the
9 existing SER.

10 MR. SOLORIO: Yes, sir. And I think the
11 response also points to other design-basis
12 documentation at the plant. And when the open item is
13 closed, the SER will reflect all that information so
14 that you could see it. If you wanted it, we could
15 provide it to your preliminarily also before then.

16 MEMBER ROSEN: Well, I'm just trying to
17 understand the process to resolve the one remaining
18 structural open item. Okay.

19 MEMBER BONACA: If it leaks, we just give
20 everybody a little bit of dose. That's all.

21 MEMBER ROSEN: What's that?

22 MEMBER BONACA: The leaks would just five
23 everybody a little dose. We don't exceed 100.

24 MEMBER ROSEN: Right.

25 MR. SOLORIO: Well, that concludes the

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1 scoping and screening results. Now we're ready to
2 start aging management review part of the
3 presentations. I'm going to thank Greg and Bob for
4 speaking, and ask Meena and Stew to come on up.

5 MR. BAILEY: Good morning. My name is
6 Stewart Bailey. I guess it's still morning for a
7 little while here. I'm here to discuss the review of
8 the aging management programs. The aging management
9 program review is found in Section 3 of the SER, but
10 aging management programs are found in Appendix B of
11 the LRA.

12 To review the aging management programs,
13 the Staff relied on the guidance in the standard
14 review plan for license renewal, NUREG 1800 The Staff
15 focus was on the ten attributes of each AMP. These
16 ten attributes are as described in the standard review
17 plan. I won't list them all here. Three of the ten
18 attributes, the corrective actions, confirmatory
19 process and administrative controls were really
20 covered separately from the Division of Engineering
21 Review, and those are reviewed as the administrative
22 controls for the plant, and that review appears in
23 Section 304 of the SER.

24 The Staff review was really to make sure
25 that the aging management programs presented would

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1 provide reasonable assurance that the aging effects
2 would be adequately managed during the period of
3 extended operation, and we had contractors assist us
4 in the review of some of those aging management
5 programs.

6 Next slide, please. Now in terms of the
7 aging management programs, in the LRA, the applicant
8 had 17 existing programs. These are programs where
9 the applicant decided that their existing plant
10 practices were sufficient to adequately manage aging.
11 One of those programs was deleted during the course of
12 the review, and we'll get to that one later. They had
13 12 enhanced programs where they determined that some
14 sort of enhancement was needed to their current plant
15 practices. I think as we discussed with the pole, in
16 certain cases that was more of an administrative
17 enhancement, and then there were four new programs.
18 There were two new programs in the LRA, and two
19 programs were added later as a result of staff
20 positioning during the Staff's review.

21 To clarify the last bullet there, of the
22 two AMPs that were added, one of those was a one-time
23 inspection, and one one-time inspection was included
24 in the LRA. The review was conducted by a number of
25 different branches in the Division of Engineering, and

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1 I will now go into ones that were reviewed by the
2 Mechanical and Civil Engineering Branch.

3 As you can see, these are the existing
4 programs that were reviewed by the Mechanical and
5 Civil Engineering Branch. Do you want to go to the
6 next slide?

7 MEMBER SIEBER: Before you leave that
8 area, you rely on the five-year inspection by, I
9 believe it's FERC or the Army Corps of Engineers?

10 MR. BAILEY: We did rely on FERC for the
11 Conowingo inspections.

12 MEMBER SIEBER: Did you review the
13 inspection requirements?

14 MR. BAILEY: Well, what I did in looking
15 at --

16 MEMBER SIEBER: Or did you just say it's
17 okay with me?

18 MR. BAILEY: Well, it is the Staff
19 position that we accept the FERC's expertise for the
20 dams that are licensed by FERC. But I did look into
21 that. I did look into their operating manual. It's
22 generally consistent with Reg Guide 1.127. The
23 inspection reports are no longer public documents
24 since 9/11, but I did contact FERC. This particular
25 dam is inspected by a team of consultants every year,

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1 as opposed to every five years, and that's because it
2 is one of the first dams that had a certain
3 construction technique, that I won't get into right
4 now. And they have no concerns over the dam at this
5 time, based on their most recent inspection.

6 MEMBER SIEBER: Okay. I guess I asked the
7 question because you want some certainty that the dam
8 will function, and you trust your fellow agencies or
9 have the --

10 MR. BAILEY: Well, in fact, when the NRC
11 does dam inspections, we typically contract out to
12 FERC to do those
13 inspections, so I think we have quite a bit of
14 reliance on FERC for their expertise in this area.

15 MEMBER SIEBER: That's true. I keep
16 looking at dam
17 inspection reports over the years that say, you know,
18 this dam is in bad shape, but maybe it'll last another
19 year, and that makes me uncomfortable.

20 MR. BAILEY: Well, the couple that I've
21 looked at, which were Catawba, McGuire and this one,
22 I did not get that impression.

23 MEMBER SIEBER: Okay.

24 CHAIRMAN LEITCH:: Concerning the ISI of
25 certain safety-related systems, there's an open item.

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1 It's 3.0.3.6.2-1, and it says that the applicant
2 should perform inspections either via the ISI program,
3 or one -time inspections to verify the effectiveness
4 of the chemistry control program. Has that open item
5 been resolved?

6 MR. BAILEY: I believe that Meena is going
7 to talk about that.

8 MS. KHANNA: I'll address that actually if
9 you want to wait, but yes, actually it has. They have
10 decided to include it in their ISI program.

11 CHAIRMAN LEITCH:: The ISI.

12 MS. KHANNA: Such activity will be
13 addressed through their ISI program, but I'll cover
14 that in a few minutes.

15 CHAIRMAN LEITCH:: Okay. Good. Thank
16 you.

17 MR. BAILEY: We might have been going back
18 and forth on a few semantics there. They had -- in
19 the chemistry program they had stated that their ISI
20 program demonstrates that the chemistry program is
21 functioning, and yet in the ISI program, they said we
22 don't credit the ISI for verifying the chemistry
23 program, so we needed to get straightened up in the
24 paper trail whether the ISI is credited as a back-up,
25 or if something else is credited as a back-up for the

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1 chemistry program, so I don't know that this is as
2 much a technical issue as a dotting Is issue.

3 CHAIRMAN LEITCH:: Okay. Thanks.

4 MR. BAILEY: On the enhanced programs, you
5 could see these are the ones that EMEB was responsible
6 for. And I think as we discussed earlier on the
7 Susquehanna Station Wood Pole, the enhancement was
8 more administrative. Under the new programs, the EMEB
9 was only responsible for the torus piping inspection
10 activities. That is a one-time inspection activity
11 that is a back-up to the chemistry programs for the
12 torus. Again, we discussed that earlier also.

13 MEMBER BARTON: Before you leave that
14 slide, on the
15 emergency diesel generator inspection activities.

16 MR. BAILEY: Yes.

17 MEMBER BARTON: In the table under the
18 component -- for diesel generator under component
19 group of vessel, they talk about the fuel oil storage
20 tank.

21 MR. BAILEY: Okay.

22 MEMBER BARTON: It's a buried carbon steel
23 tank. The only aging management activity proposed in
24 the table is chemistry control. Now my question is,
25 you know, 60 years, carbon steel buried tank, and you

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1 don't even do a one-time inspection before extended
2 operation? And you're just relying on sampling of the
3 fuel oil? You don't do a volumetric once in sixty
4 years on a buried carbon steel tank? I have a problem
5 with that.

6 MR. BAILEY: Okay. Can I -- let me let
7 the reviewer answer that. That's getting a little
8 beyond my level.

9 MEMBER SIEBER: It seems to me all these
10 buried tanks are EPA limits as to how much they can
11 leak and where they go. And that may be the
12 overriding authority on it.

13 MEMBER BARTON: It may be but, you know,
14 if you worry about either water getting into the tank
15 or diesel -- thousands of gallons of diesel oil
16 getting into the --

17 MEMBER SIEBER: You know that the water
18 gets in there and goes to the bottom of th tank, which
19 is where the corrosion occurs.

20 MEMBER BARTON: Yeah. Right.

21 MEMBER SIEBER: And so the bottom is
22 perpetually covered with water in a diesel tank.

23 MEMBER BARTON: Yeah. That's no problem
24 for 60 years?

25 MEMBER SIEBER: I never liked it.

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1 MEMBER BARTON: I don't like it either.
2 Okay. Let's listen to the real answer.

3 MR. RAJAN: Jai Rajan, Mechanical
4 Engineering Branch. There was an inspection of this
5 tank during the '95/96 time frame, and the lowest
6 level of the tank where sediments and sand, et cetera,
7 and water would be expected to collect. And that
8 location was determined through UT examinations and it
9 was found to be .375 inches, which is the original
10 thickness of the tank. And this was after many years
11 of usage, and so we do have a data point that the tank
12 is in good shape, and on that basis the Staff accepted
13 the licensee's evaluations.

14 MEMBER BARTON: Go ahead. I don't have to
15 like it, but you know.

16 MEMBER SIEBER: Well, they're actually
17 using mitigating circumstance. If you take a layer of
18 water and then put, you know, 10 or 15 feet of fuel
19 oil on top it, effectively what you've done is
20 eliminated oxygen from that interface, and so
21 corrosion really --

22 MEMBER BARTON: Is minimal.

23 MEMBER SIEBER: -- is not likely to occur.

24 MEMBER BARTON: But I also worry about
25 stuff coming from the outside. You look at the

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1 thickness of the tank from anything that's attacking
2 the tank from underneath.

3 MEMBER SIEBER: Well, underneath the tank
4 is a different ball game. It's the same as --

5 MEMBER BARTON: As a CST.

6 MEMBER SIEBER: -- a refueling --

7 MEMBER BARTON: Refueling water tank.
8 That's right.

9 MEMBER SIEBER: All those tanks are --

10 MEMBER BARTON: Because they've got such
11 good soil up there, I guess we don't worry about it.

12 MR. BAILEY: Well, you're talking about
13 the fuel oil storage tanks. There are tech spec
14 requirements to do the periodic drain-down of the
15 water and whatnot of the tanks, and to do the periodic
16 testing with the quality of the oil for its aging.

17 MEMBER BARTON: No, I understand that.

18 MR. BAILEY: Okay. I think our applicants
19 would like to add --

20 MEMBER BARTON: And there's some
21 experience with this. If you remember the Hatch
22 application, they had a fuel oil, a diesel fuel oil
23 storage tank buried that leaked, you know, so that's
24 why I raised the question. You guys don't want --

25 MR. FULVIO: This is Al Fulvio from

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1 Exelon. We do have tech spec requirements for --
2 monthly we check the tank bottom for water
3 accumulation. Okay? And we also have a requirement
4 for a ten year inspection of each of the tanks, so
5 every ten years we empty the tank, we go in, do an
6 inspection. And the data the gentleman was referring
7 to earlier, that was a result of one of those ten-year
8 inspections.

9 MEMBER BARTON: Okay. I'm satisfied then.
10 Thank you.

11 MR. FULVIO: They're tech spec
12 requirements. They were always there.

13 MEMBER BARTON: Okay. Thank you.

14 CHAIRMAN LEITCH:: I had a question on the
15 previous slide about crane inspection activities. It
16 seems as though some of the rationale for saying the
17 cranes are okay is that many of the loads that are
18 lifted are well below the design capacity of the
19 crane, and I guess my question is, aren't some of the
20 aging activities associated with just the cycles of
21 the crane, rather than the load applied?

22 MR. SOLORIO: Yes. That's a time limited
23 aging analysis that the Staff identified, that we were
24 going to present briefly later on today.

25 CHAIRMAN LEITCH:: Okay.

1 MR. SOLORIO: Section 4.1 of the SER, we
2 talk about ---we asked an RAI about crane load cycles,
3 and whether or not it was TLAA and the applicant
4 agreed. It's now ---

5 CHAIRMAN LEITCH:: So you'll get into that
6 later.

7 MR. SOLORIO: Yes.

8 CHAIRMAN LEITCH:: Okay. Thanks.

9 MEMBER BARTON: Also, I don't see a
10 request on aging management. In the same area of the
11 LRA, they talk about the main condenser itself, and I
12 can understand the logic on the main condenser. But
13 my issue here is, there's no discussion on the
14 internals of the condenser like baffle plates and
15 things like this where during transients you get, you
16 know, stresses on certain internal components of the
17 condenser, and I don't see that
18 addressed any place. The condenser is just written
19 off as, the way it's built, it's built like any other
20 condenser in the country, and so there's no problem.
21 Nothing addresses internal parts of the condenser.

22 MEMBER SIEBER: Yeah. What it should say
23 is it has the same problems as every other condenser.

24 MEMBER BARTON: But it doesn't. It just
25 says, you know, it kind of -- it's like every other

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1 condenser so there's no aging program required here.

2 DR. LEE: George Georgiev from the
3 Materials and Chemical Engineering Branch will address
4 the issue.

5 MR. GEORGIEV: I was the reviewer for
6 steam and power conversion systems where the main
7 condenser is actually addressed. And the reason the
8 Staff accepted the applicant's arguments that the main
9 condenser doesn't need any problems, and as such, no
10 aging effects were identified, is because the main
11 condenser was pulled into the license renewal because
12 it served two post-accident functions. And other than
13 that, that is really non-safety related item. It's
14 very important but, you know, that's the reason why we
15 went along with the licensee evaluation.

16 MR. SOLORIO: Can I also add, George, that
17 it's
18 consistent with our GALL aging management review
19 results, so we're using your guidance here, which
20 provides higher operating
21 experience reviews.

22 MR. GEORGIEV: For the same reason we
23 didn't include it into the GALL report, and on the
24 Hatch application they also had for the Unit 2 listed
25 main condenser for the same post-accident sample, so

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1 we have been consistent in our review in this area.

2 DR. LEE: This is Sam Lee. I don't think
3 the GALL report include the condenser.

4 MR. BAILEY: All right. Next slide. On
5 the open items where there is -- the safety evaluation
6 report has an open item on the maintenance rule
7 structural monitoring program for detection of aging
8 effects and acceptance criteria for structures and
9 components that were brought into scope. The next
10 bullet says it's resolved, which I means I think we
11 can close that. We are going to get into this in a
12 little bit more detail when we cover structures, so
13 we'll get to that this afternoon.

14 On the fire protection activities, the
15 open item was related to the aging management of a
16 diesel-driven fire pump fuel oil flexible hose. This
17 one I believe we can also resolve once we see final
18 documentation from the applicant. The applicant had
19 proposed to inspect this hose every five years. That
20 is the frequency where they do major maintenance on
21 that diesel generator.

22 Staff was questioning whether that was
23 adequate aging management. The applicant decided to
24 credit an annual inspection of this hose, which they
25 do anyway under, I believe it is vendor-recommended

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1 maintenance on this diesel, so inspecting that hose on
2 an annual basis, that satisfies the Staff on that.

3 Next slide, please. Confirmatory items.
4 Again, there's a confirmatory item related to items
5 brought into scope on the maintenance rule structural
6 monitoring program. We will discuss that later. On
7 the HPCI and RCIC inspection activities, the
8 confirmatory item again relates to a flexible hose.
9 The applicant had identified that there was a flexible
10 hose for the HPCI lube oil system. For this, they had
11 recommended an eight-year inspection, which was
12 consistent with when they did a tear-down of the
13 turbines. Again, when the Staff was questioning that,
14 the
15 applicant went back and discovered that there is no
16 flexible hose for fuel oil. This had been one of the
17 pieces of information that was erroneously transcribed
18 into their LRA. That's actually a stainless steel
19 hose for a gland-sealed lead-off with no identified
20 effects, so we're just waiting for that RAI response
21 there.

22 Other items of interest were the door
23 inspection
24 activities program. They did bring -- as a result of
25 Staff's questioning, they did bring into scope

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1 internal doors. In their RAI response, they had
2 stated that the range of humidity and temperature is
3 such that you could have sufficient corrosion of these
4 doors. Brought those into scope.

5 MEMBER ROSEN: Is this all doors, or just
6 fire protection credited doors?

7 MR. BAILEY: These are more of the hazard
8 barrier doors, the flood protection doors. I believe
9 these are not the doors --there may be some overlap,
10 but I don't believe that these are all the doors that
11 are credited for fire protection alone.

12 MEMBER ROSEN: I guess I don't understand
13 which doors they are.

14 MR. BAILEY: I'd have to get back to you
15 with more detail on exactly which ones they are. My
16 recollection is that these are the flood barrier
17 doors, internal flood barrier doors. Is that correct?

18 MR. ONNOU: Ahmed Onnou again, with
19 Exelon. In addition to flood barrier doors, we have
20 some doors that are credited for vents, venting as a
21 result of a steam break. We do have some fire doors,
22 and originally this addresses the doors in a sheltered
23 environment. Our original application stated if it's
24 in sheltered environment inside the building, the
25 humidity is such that you're not going to get

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1 significant corrosion on the door metal. Staff
2 disagreed with this, and we decided to bring them in
3 scope. But in general, the fire doors are included in
4 fire protection activities, and those are inspected
5 whether they're inside or outside, they're inspected
6 as part of the fire protection activities. But the
7 doors, to answer your question, is flood. There are
8 some outdoor doors basically for secondary
9 containment, such that you don't leak fissional
10 products to the environment. And then there are some
11 doors that we use credit for venting.

12 MEMBER ROSEN: And all fire doors. Is
13 that what I take from your response?

14 MR. ONNOU: All fire doors, all of them
15 are inspected.

16 MR. BAILEY: But under the fire protection
17 program.

18 MEMBER ROSEN: But that's a program that's
19 credit for aging management.

20 MR. BAILEY: Yes. The other item of
21 interest would be for the fire protection activities
22 program that the applicant has adopted for volumetric
23 examination of the stagnant piping for wall
24 thicknesses, and this is in accordance with our
25 Interim Staff Guide number 4.

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1 MR. KUO: Meena, just hold on a minute.
2 Stew, is this a good time for you to discuss your RAIs
3 about the containment inspection program in response
4 to Dr. Rosen's question?

5 MR. BAILEY: Well, we could do that now.
6 That would probably be best left until we discuss some
7 structures.

8 MR. KUO: Okay.

9 MS. KHANNA: Okay. My name is Meena
10 Khanna. I'm the Materials and Chemical Engineering
11 Branch Technical Lead for aging management programs.
12 I'll be discussing the remaining aging management
13 programs that the Materials and Chemical Engineering
14 Branch were responsible for.

15 As Stew had indicated, they were grouped
16 into existing, enhanced and one-time inspections. You
17 can see that these are the existing programs, many of
18 which include chemistry programs. I won't go through
19 the list, but you can look at those. Then there's a
20 list of enhanced programs, and then there's a new
21 program, which is a one-time piping inspection
22 activities program.

23 Just to make a note, you'll notice in the
24 original LRA, there was a stand-by liquid control
25 system surveillance program, and that was deleted

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1 based on questions that the Staff had in regards to
2 demin water and piping inspections that weren't
3 addressed in their original SLC system surveillance
4 program activities. They decided to do similar to
5 what Hatch did, and got rid of the SLC system
6 surveillance program, and included the one-time piping
7 inspections program, and also added the demin water
8 chemistry to the condensate storage tank chemistry
9 activities.

10 MEMBER ROSEN: We had a discussion the
11 last time, we looked at submerged structures that are
12 subject to attack at the embedded rebar concrete, and
13 the Staff's position was as long as the PH stayed
14 within a given range or a below a certain range, that
15 that was acceptable. Have we got a comparable
16 discussion on this application?

17 MR. SOLORIO: Later on in the Staff's
18 presentation we will be actually presenting the
19 results of the structures, and we talk about the
20 corrosive -- the soil sampling they've done in this
21 non-corrosive environment, so that's part of your
22 answer. I guess if you -- another part of your
23 question is about just buried piping in general?

24 MEMBER ROSEN: This question is about
25 buried structures.

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1 MR. SOLORIO: Okay. It's definitely
2 covered later on in a couple of more presentations in
3 3.5. And if you don't mind, we'll --

4 MEMBER ROSEN: No.

5 MS. KHANNA: Okay. I'll discuss the open
6 items and the confirmatory items. We briefly
7 discussed the open item in regards to the verification
8 of the chemistry programs, the verification of the
9 effectiveness of the chemistry programs. Basically as
10 Stew stated, it's more of a semantics. They have
11 definitely got inspection through their ISI program
12 where they're using to verify the effectiveness of the
13 chemistry program. It's basically a linkage problem,
14 but we have conference calls scheduled, and we'll
15 address that. But those are concerns for the reactor
16 coolant system chemistry activities, the condensate
17 storage tank, and the torus water and fuel pool
18 chemistry activities that we wanted to make sure that
19 they do have an inspection activity to verify the
20 effectiveness of the chemistry programs.

21 MEMBER BONACA: And they do?

22 MS. KHANNA: They do. In the ISI -- it's
23 hard to explain. In the ISI program, they don't take
24 credit for these activities, so that's the linkage
25 that we're waiting for. But they do have -- in their

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1 RAI response, they indicated that they do have routine
2 inspections for each of these chemistry activities, so
3 it's more like a linkage thing that needs to be taken
4 care of.

5 MEMBER BONACA: Because it seems to me
6 there is an issue --I mean, the chemistry program is
7 the aging management program.

8 MS. KHANNA: Right. Exactly.

9 MEMBER BONACA: But then the inspections
10 are something else. I mean, you're inspecting to see
11 whether or not it's working, so you want to see if
12 there is material loss.

13 MS. KHANNA: Right.

14 MEMBER BONACA: Okay. And so you have
15 them where? I mean, I didn't find them --

16 MS. KHANNA: In the ISI program, what
17 they're doing --actually, we had an open item. I'm
18 sorry, we had several requests for additional
19 information where we asked them, you know, verify the
20 effectiveness of these chemistry programs, do an
21 inspection activity or one-time inspection. They came
22 back and they said that they do routine inspections,
23 and they also did say that they're using their ISI,
24 that these inspections are done through their ISI
25 program. But when you go into the application and you

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1 read on the ISI program, they're not taking credit for
2 these. They don't actually indicate.

3 MEMBER BONACA: That's right.

4 MS. KHANNA: So that's what we're looking
5 for, is for them to go ahead and, you know, take
6 credit for these through their ISI program.

7 MEMBER BONACA: So they do it, but it's
8 not described in the program.

9 MS. KHANNA: Exactly.

10 MR. BAILEY: Right. They did it, but the
11 program said that we don't credit it. We need
12 something credited to back-up chemistry, so we're
13 dotting that I.

14 MS. KHANNA: That's the issue that we're
15 dealing with right now.

16 MEMBER BONACA: So it's not clear to me,
17 so the current ISI program already includes these
18 initiatives. It just simply is not documented in the
19 programs?

20 MS. KHANNA: Right.

21 MEMBER BONACA: So we don't need a one-
22 time inspection. I mean, this is going to be done
23 periodically.

24 MS. KHANNA: Right.

25 MEMBER BONACA: All right.

1 MS. KHANNA: And that's Staff's position
2 that's okay for them to do. Okay?

3 MEMBER SHACK: I mean, they're a sort of
4 noble hydrogen water chemistry plant.

5 MS. KHANNA: Right.

6 MEMBER SHACK: You haven't got a generic
7 approval for that. How do you handle crediting that
8 in this particular case? I mean, that's their water
9 chemistry coolant. Right?

10 MR. POLASKI: This is Fred Polaski from
11 Exelon. For licensure purposes, we did not credit
12 hydrogen water chemistry or noble chemistry.

13 MR. ELLIOT: Wait a minute. This is Barry
14 Elliot. We're going to talk about when I get up
15 there, about water chemistry, and we're going to talk
16 a little bit more about the BWRVIP program, which
17 there is an impact on when you inspect depending on
18 your chemistry. We'll get to that soon.

19 MS. KHANNA: Thank you, Barry. I'll go
20 on. There are four confirmatory action items that we
21 have. These were actually based on questions that the
22 Staff had of the applicant during discussions, and
23 they provided answers through those conference calls
24 so, you know, we need them to be docketed. So one had
25 to do with the acceptance criterion parameters for the

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1 closed cooling water chemistry activities. Basically,
2 we just asked them what are the parameters for the
3 fluorides and chlorides, and they indicated that's
4 less than 10 ppm. They'll document that for us.

5 For the outdoor buried and submerged
6 component inspection activities, we asked in regards
7 to the frequency of inspections for the ECW pumps.
8 They indicated that they do that every ten years. And
9 for the refueling, RWST pumps they indicated that
10 they'll be doing those inspections every four years.

11 For the heat exchanger inspection
12 activities, there was also a question in regards to
13 acceptance criteria. We asked how many of the heat
14 exchangers will be inspected, visually inspected.
15 They indicated that they do all 100 percent of heat
16 exchangers to be visually inspected.

17 And finally, the last one had to do with
18 the one-time piping inspection activity. The Staff
19 had a concern in regards to when they were going to be
20 actually doing the one-time inspection, and they
21 indicated that they'll be doing it between years 30
22 and 40 before end-of-life, and those were all found to
23 be satisfactory.

24 Item of interest, as I indicated before,
25 the standby liquid control system surveillance

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1 activities, what they were doing was they were
2 crediting leakage monitoring. They were trying to
3 detect aging effects through leakage monitoring. The
4 Staff had a problem with that. We didn't think that
5 that would address any piping concerns, or we had a
6 concern with the demin water chemistry not being
7 addressed, as well. So as I stated, they deleted that
8 program, came up with the one-time piping inspection
9 activities, and added demin water chemistry to the
10 condensate storage tank chemistry activities to
11 address demin water.

12 And the last comment is just that one-time
13 piping inspection activities was added to verify the
14 integrity of piping, and to confirm absence of
15 identified aging effects. Are there any questions?

16 MEMBER SHACK: Now what one-time piping
17 inspection activity are you talking about?

18 MS. KHANNA: This has to do with standby
19 liquid control. Right. System piping.

20 (Whereupon, the proceedings went off the
21 record at 12:23 p.m. and resumed at 1:24 p.m.)

22 CHAIRMAN LEITCH:: Okay, let's come back
23 in session, please. And David I guess it's over to
24 you to begin talking about these various section, 3.1
25 and following.

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