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Plant License Renewal Subcommittee
Edwin I. Hatch License Renewal Application

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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

October 25, 2001

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2 NUCLEAR REGULATORY COMMISSION

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4 ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

5 PLANT LICENSE RENEWAL SUBCOMMITTEE MEETING

6 + + + + +

7 EDWIN I. HATCH LICENSE RENEWAL APPLICATION

8 + + + + +

9 THURSDAY

10 OCTOBER 25, 2001

11 + + + + +

12 ROCKVILLE, MARYLAND

13 + + + + +

14 The Subcommittee Meeting was called to order at
15 the Nuclear Regulatory Commission, Two White Flint
16 North, Room 2B3, 11545 Rockville Pike, at 8:31 a.m.,
17 Dr. Mario V. Bonaca, Chairman, presiding.

18 PRESENT:

19 DR. MARIO V. BONACA, Chairman

20 DR. F. PETER FORD, Member

21 DR. THOMAS S. KRESS, Member

22 DR. WILLIAM J. SHACK, Member

23 DR. JOHN BARTON, ACRS Consultant

24 MR. NOEL F. DUDLEY, ACRS Staff Engineer

25

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1 STAFF PRESENT:
2 WILLIAM BURTON, NRR
3 JAMES DAVIS, NRR
4 CHRIS GRIMES, NRR
5 JOHN NAKOSKI, NRR
6 GENE CARPENTER, NRR
7 TANYA EATON, NRR

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

(8:31 a.m.)

1
2
3 CHAIRMAN BONACA: Good morning. The
4 meeting will now come to order. This is a meeting of
5 the ACRS Subcommittee on Plant License Renewal. I am
6 Mario Bonaca, Chairman of the Plant License Renewal
7 Subcommittee.

8 The other ACRS Members and consultant in
9 attendance are Peter Ford, Thomas Kress, William
10 Shack, and John Barton.

11 The purpose of this meeting is for the
12 subcommittee to review the Safety Evaluation Report
13 related to the license renewal of Edwin Hatch Nuclear
14 Plants, Units 1 and 2.

15 The Subcommittee will gather information,
16 analyze relevant issues and facts, and formulate the
17 proposed positions and actions, as appropriate, for
18 deliberation by the full committee. Mr. Noel Dudley
19 is the Cognizant ACRS Staff engineer for this meeting.

20 The rules for participation in today's
21 meeting have been announced as part of the notice of
22 this meeting previously published in the Federal
23 Register on October 10th, 2001.

24 A transcript of this meeting is being kept
25 and will be made available as stated in the Federal

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1 Register Notice. It is requested that speakers first
2 identify themselves and speak with sufficient clarity
3 and volume so that they can be readily heard.

4 We have received no written comments or
5 requests for time to make oral statements from members
6 of the public. At our March 28th, 2001 Subcommittee
7 meeting, we reviewed the SER with open items.

8 In a letter to Dr. William Travers,
9 Executive Director for Operations, issued on April
10 16th, 2001, the ACRS provided conclusions based on its
11 review of the SER with open items.

12 We will now proceed with the meeting, and
13 I call upon Mr. William Burton of the Office of
14 Nuclear Regulatory Regulations to begin. Actually,
15 Mr. Grimes, would you like to have an introductory
16 statement?

17 MR. GRIMES: Yes, Dr. Bonaca. First of
18 all, I would like to thank the ACRS for this
19 opportunity for the staff to present the results of
20 the staff's review and resolution of open items.

21 As you mentioned, Butch Burton, a senior
22 project manager, who is in charge of the license
23 renewal review for Hatch, is going to lead the staff's
24 presentation.

25 I would also like to introduce John

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1 Nakoski, who is an acting section chief in the license
2 renewal and standardization branch. I have to leave
3 shortly to attend to another function for the Division
4 of Regulatory Improvement Programs.

5 But we are looking forward to the ACRS
6 reactions and comments on the staff's resolution of
7 the open items and the final safety evaluation report.

8 Mr. Nakoski is going to represent my
9 interests to make sure that we clearly understand what
10 issues or what comments the subcommittee would like
11 for us to address more fully for the full committee on
12 November 8th. Thank you very much.

13 And so with that introduction, I will turn
14 the presentation over to Butch Burton.

15 MR. BURTON: All right. Thank you, Chris.
16 I am going to use the remote mike. Is that going to
17 be all right and can everybody hear okay? Okay. My
18 name is Butch Burton, and I am the lead project
19 manager for the staff's review of the Plant Hatch
20 license renewal application.

21 I have with me some of the staff reviewers
22 who performed the review. Not all of them are here
23 today. So if you have some questions that would
24 really be addressed by them, I am going to have to
25 perhaps defer the question until the full committee

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1 meeting.

2 But most of the reviewers should be here
3 today. I also have the representatives of Southern
4 Nuclear here to clarify any items that you may need to
5 ask of them.

6 According to the agenda, this is actually
7 going to be in two parts. The first part as I
8 understand it that you wanted to do was to go over the
9 open items that did not go through the appeal process.

10 So the first part, I was just going to go
11 through those and what the resolution of those open
12 items were. And then following the break, I was going
13 to go through the open items that did go to appeal.

14 And it was my understanding that for each
15 of those that you wanted to make sure that you
16 understood exactly the basis for going to appeal, as
17 well as the final resolution of each of those items,
18 and so I will be going through that also.

19 Okay. First, a little bit of background,
20 and a lot of this is similar to what I provided during
21 the previous meetings back in -- what, the March-April
22 time frame.

23 Southern Nuclear submitted its application
24 in late February of last year. As you know, Plant
25 Hatch is a two unit site, located about 11 miles north

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1 of Baxley, Georgia. They were requesting renewal of
2 both of the licenses for both of the units.

3 And for Unit 1, an extension of 20 years
4 so that it would move from 2014 to 2034; and for Unit
5 2, from 2018 to 2038. The initial SER was issued in
6 early February of this year, and we just recently
7 issued the final SER that I will be talking about
8 earlier this morning on October 5th.

9 Just briefly, I wanted to put up the
10 milestone schedule, and just let you know some of the
11 activities that have gone on since the last ACRS
12 meetings, which occurred April 5th.

13 Since that time, or at that point we had
14 not gotten or completed all the necessary responses
15 for all of the open items. So since that meeting, we
16 have gotten all of the open items, and we have been
17 working to resolve those, and they are all resolved at
18 this point.

19 The staff also issued its final
20 environmental impact statement in late May, and we
21 also did the final optional inspection. As you know,
22 there are two inspections that are normally done, and
23 then an optional final inspection, and we did do that.

24 And we got the associated inspection
25 report, and as I said before, the staff issued its

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1 final SER on October 5th, and following that we got
2 the regional administrator's letter basically saying
3 that as a result of the inspections that were done
4 there were no outstanding issues.

5 Now, we identified 18 open items during
6 the staff's review. Of those 18, 12 were resolved
7 without going through the appeal process, and six were
8 resolved as a result of going through the appeal
9 process.

10 The next couple of slides is just a
11 laundry list of the open items that were resolved
12 without appeal, and I am going to be going through
13 each one of these. Now, if you actually look at the
14 next two slides, you will actually count -- rather
15 than 12, you will actually count 13 items.

16 The reason for that is that one of the
17 open items, the very last one, 413-1, had two parts to
18 it. Part A was not appealed and Part B was. So, I
19 split it up along those lines. So you actually see 13
20 items on this list.

21 Okay. The first open item was Open Item
22 2.3.3.2-1, and it had to do with the screening of
23 skid-mounted components. The big issue at hand was
24 should skid-mounted components be subject to an AMR.

25 These skid-mounted components were

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1 actually associated with the hydrogen recombiners, and
2 the emergency diesel generators. We had actually gone
3 through this issue with Oconee earlier, and the final
4 resolution was that we needed to clearly define the
5 boundaries between these two components, which were
6 considered active, and then the associated skid-
7 mounted components.

8 And what we recognized was that there were
9 some skid-mounted components that actually fit the
10 criteria for being long-lived and passive, and as such
11 they needed to be -- well, they were already brought
12 into scope, but also needed to be subject to an AMR.

13 So after some discussion the final
14 resolution was that there were some additional
15 components that were brought within that were subject
16 to an AMR. As you can see with the recombiners, they
17 were such things as blower casing, piping, reaction
18 chamber, and some other things.

19 And similarly with the diesel, jacket
20 water cooling, lube oil, and scavenging air. And what
21 I wanted to make sure that you all understand is that
22 when we have these scoping issues, when we did decide
23 that something needed to be brought within scope,
24 and/or subject to an AMR, there was a whole cadre of
25 aging management information that had to come with it.

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1 And so in each of the scoping and
2 screening open items, if they were resolved such that
3 things had to be brought within scope, or be subject
4 to AMR, all of the associated aging management
5 information was brought with it, and the staff
6 evaluated it.

7 CHAIRMAN BONACA: I have a question on
8 this. One is that this was an open item as you
9 mentioned before on Oconee, and is the guidance --
10 well, I believe the guidance right now, for example,
11 in the GALL report is pretty clear about what it
12 should be.

13 So with other applications coming through,
14 does it look like this is going to be again contested
15 in some other applications, or is it pretty much of a
16 clear understanding now of what the interpretation is?

17 MR. BURTON: Well, if you look at the
18 latest license renewal guidance, the SRP, and all of
19 that, it is pretty clearly laid out. Once of the
20 issues as I go through this and I guess you will kind
21 of find is that the timing of the Plant Hatch
22 application versus some of the infrastructure work
23 that the staff was doing, we kind of got caught in
24 cross-purposes.

25 But as we reach resolution on some of

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1 those things, we were able to see if it was applicable
2 to Hatch and be able to resolve it that way. You will
3 see that with some other items that had to do with
4 some of the work that we had to do with GALL and
5 things like that. So that was part of it.

6 DR. BARTON: I had the same question,
7 because it seems to me that there is going to be
8 generic issues that are going to come up, and another
9 one I think is seismic two over one piping issues.

10 Now, is the staff going to have to go
11 through every application and go through the same
12 arguments? Isn't there some way once a precedence has
13 been set that the word gets out or something, and
14 don't come back in and try to argue it, because it
15 seems to me just a waste of resources to fight the
16 same issues if the staff is going to say, hey, we are
17 never going to accept seismic two over one.

18 And so everybody is going to come in with
19 the same argument, and we are going to have the same
20 response. So, you know, let's get on with it.

21 CHAIRMAN BONACA: And another thing that
22 I wanted to note in particular for seismic two over
23 one is that the SER for Hatch contains a discussion
24 that is very clarifying.

25 I mean, the logic why an existing high

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1 energy line break, for example, analysis doesn't
2 provide sufficient understanding of locations that you
3 have to protect for.

4 So I think an important question is how is
5 this information or this guidance being provided to
6 the licensees. Clearly, an update of GALL may be the
7 way, but it is important to provide it in a way that
8 open items on the same issues don't appear again.

9 Unless, of course, it is an issue that is
10 highly contested by the industry, and then in that
11 case we will have to go through to a resolution.

12 MR. BURTON: I will say that in the
13 specific case of seismic two over one with Hatch, I
14 was going to speak not only about the resolution, but
15 how that actually got played out.

16 (Brief Interruption.)

17 CHAIRMAN BONACA: Let me ask another
18 question about this. Are there any other skid-mounted
19 systems in the plant that one should look at?

20 MR. BURTON: Not -- well, I guess --

21 CHAIRMAN BONACA: Well, I am just saying
22 that I would like to ask that question.

23 MR. BAKER: Of the items related to
24 license renewal, the only ones that came to mine --

25 MR. DUDLEY: Excuse me, but could you

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1 introduce yourself for the record?

2 MR. BAKER: Ray Baker with Southern
3 Nuclear. The hydrogen recombiners skid and the diesel
4 generator skids represent two major examples of skid-
5 mounted components that have an overall active nature
6 associated with them, but which through the
7 discussions that we had with the staff, we resolved
8 how to break that down into the parts that required
9 aging management. There are no others that I am aware
10 of.

11 CHAIRMAN BONACA: Okay.

12 MR. BAKER: And that would reach that
13 level of the interest.

14 MR. BURTON: And for your other question
15 about in general how we deal with these items that
16 come up, I think Mr. Grimes wanted to speak to that.

17 MR. GRIMES: Thank you, Butch. Yes, I
18 would like to first emphasize that we were learning
19 how to resolve some of these issues, and which
20 includes renewal guidance.

21 And parallel with the staff's review of
22 Hatch and Turkey Point, and the practice that we have
23 established in it is that I would intend to continue,
24 as has been illustrated by the demonstration project,
25 is that as we identify areas where there is still

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1 controversy or sensitivity.

2 That wherever we can clarify the staff's
3 expectations, we would send proposed positions to NEI,
4 and give the industry an opportunity to react to them
5 on a generic basis, and then augment the improved
6 renewal guidance either in the form of supplements to
7 the standard review plan, expectations regarding the
8 contents of the application, or changes in the style
9 guides that we have established to try and articulate
10 a consistent treatment of these issues.

11 You might recall that the industry
12 identified five -- what they referred to as dialogue
13 issues, and those were areas where the industry felt
14 that there was still an opportunity for improvements
15 in the process.

16 Most notably, environment effects of
17 fatigue is an area where there is ongoing research
18 activity, and ongoing industry initiatives, and
19 ongoing staff review.

20 And in those areas, as we find ways to
21 clarify the expectations and minimize the extent of
22 the struggle over finding the right answer on a plant
23 specific basis, we would intend on capturing those.

24 I do think that the improved renewal
25 guidance is probably achieved 95 to 98 percent of the

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1 resolution of controversy over how to do license
2 renewal, aging management, scoping, and other aspects
3 of the process.

4 But there will continue to be areas where
5 we are trying to find the optimum solution. There
6 will continue to be areas where there will be
7 challenges on a plant specific basis, and that just
8 represents the nature of the emerging issues and
9 adaptability that will be a part of the process, I
10 think, on an ongoing basis.

11 MR. BURTON: And I wanted to add to that,
12 is that as we do our work with grappling with the
13 emerging issues, there is always the timing issue
14 where as things come up you have applications that are
15 being reviewed at that time, and applications that
16 have already been reviewed and approved.

17 So there is also the part of what we do as
18 part of our process is as we resolve these things, we
19 have got to see how do we communicate that resolution
20 to the plants who are so far along that they didn't
21 have an opportunity necessarily to incorporate it.

22 And also for those who have already been
23 or had their license renewed, part of the process that
24 we follow is that we have to evaluate, well, how does
25 that impact on them and what needs to be done.

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1 And some of that as well we are going to
2 bring out with some of the seismic two over ones. So
3 those are all issues that we as a staff are aware of,
4 and we try to take into account as we resolve these
5 things.

6 MR. GRIMES: Okay. The next open item was
7 2.3.4.2-1, fire suppression in the radwaste building.
8 Our fire protection engineer, in her review, did a
9 thorough review of the fire hazards analysis, and what
10 some of the commitments were in there.

11 And comparing that to what had been scoped
12 in for license renewal, and we found that some of
13 these fire suppression systems in the radwaste
14 building according to the fire hazards analysis was
15 necessary to protect charcoal filters, and some
16 combustibles, in the dry waste storage area.

17 And also as a result of one of the
18 inspections, we also found that there was some cabling
19 that needed some protection. So as a result of that,
20 we said, well, we think that needs to be brought into
21 scope and be subject to an AMR.

22 And we did some walkdowns during the
23 scoping inspection, I believe it was, and actually
24 identified that portion of the system, and exactly
25 what it was designed to protect.

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1 And in the end we did decide -- the
2 applicant did decide to bring that into scope, and
3 make it subject to an AMR. And again all of the
4 associated aging management information came along
5 with it.

6 Now, I just happen to know in this
7 particular case that as you know, what was done was
8 once you identified components in scope and subject to
9 an AMR, you commoditized it. You broke it down into
10 its material environment combination.

11 And I know that in this case the staff
12 that was brought in to scope when it was commoditized,
13 it didn't really result in anything new, in terms of
14 aging effects or aging management programs, and things
15 like that.

16 The next open item was open item 3.0-1.
17 This is a standard open item. What it is, it is sort
18 of a place holder for all of the work that we do with
19 the FSAR supplement. As we review the FSAR supplement
20 information, we will find open items, whatever issues
21 that need to be resolved.

22 This open item is sort of a catch all,
23 that when we are satisfied that all of the issues in
24 the supplement are correctly resolved, then we will
25 close that out.

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1 There is also a standard license condition
2 associated with that. Basically, the license
3 condition says that the FSAR supplement, as it has
4 been agreed to, needs to be incorporated into the FSAR
5 at the next available FSAR update, and that is a
6 standing license condition.

7 Another standard license condition states
8 that in the supplement that there are a number of
9 future activities that are committed to, and so we
10 also have another standard license condition that says
11 all of those activities have to be performed before
12 the end of the current term, another standard license
13 condition.

14 And that is two of the three license
15 conditions that we actually have in this review, and
16 I will speak to the third one later.

17 CHAIRMAN BONACA: A number of the closure
18 of open items result in new one-time inspections, or
19 some modifications of existing programs, and in some
20 cases actual changes in site procedures.

21 And in fact I have some questions on that,
22 and I think you, John, had some questions on that.
23 But the question that I have is are these changes
24 going to be reflected in the FSAR supplement, or how
25 are these new commitments captured?

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1 I mean, the reason to commitment to the
2 licensee to update the application, and we discussed
3 this before. The application stands as is, and it
4 doesn't have included an amendment to reflect these
5 changes. Are they going to just sit in the SER, or
6 what are they going to go?

7 MR. BURTON: That is a good question, and
8 I guess in order to answer it, I am going to let
9 Southern Nuclear talk a little bit about their
10 commitment tracking process, and then how we as the
11 staff actually as part of our inspection actually took
12 a look at that.

13 MR. BAKER: This is Ray Baker again at
14 Southern Nuclear. One of the activities that we began
15 early was to track the commitments that we were making
16 as a part of the license renewal application review
17 process.

18 And we had several stake points in that
19 process, one of which was the issuance of the final
20 SER to go through that document again, and identify
21 any revised commitments or new commitments that had
22 been made since the previous stake points, and we
23 capture those in a database.

24 And for each of those commitments, we have
25 performed an extensive review process of the existing

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1 site procedures, and we have identified the
2 procedures, and the procedure steps, where
3 enhancements will be made, or where we will credit
4 those activities to satisfy those license renewal
5 commitments that we have made.

6 And so we have that process in hand now so
7 that once the license is issued, we will then go
8 through a process of actually converting those draft
9 procedures into the actual implemented site
10 procedures.

11 DR. BARTON: I have one additional
12 question. You have got this in the commitment
13 tracking system, and I know that people sometimes have
14 problems with commitment tracking systems, and lose
15 commitments, and lose track of commitments, et cetera,
16 et cetera.

17 Have you also placed each one of these
18 items in your corrective action system?

19 MR. BAKER: We have a separate database
20 besides the actual site commitments matrix, that we
21 are in the interim managing these commitments until
22 they are established in the site's commitment tracking
23 system.

24 As far as a separate -- our site processes
25 would not lend themselves to having them in a separate

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1 corrective actions kind of a database.

2 DR. BARTON: So you have got more than one
3 corrective action system at the site?

4 MR. BAKER: There is a corrective actions
5 process.

6 DR. BARTON: A corrective actions process?

7 MR. BAKER: Yes.

8 DR. BARTON: So it has got many systems or
9 many fingers to this, and how you track actions?

10 MR. BAKER: One of the things that you
11 would do would be to identify conditions that require
12 correction. So that is a piece of it. And another
13 part would be the tracking and trending of those
14 issues.

15 And so you have some procedures that track
16 and trend internally, and then you have other
17 procedures where the tracking and trending would be
18 performed perhaps at a departmental level, rather than
19 at the procedural level. Those are all a part of the
20 corrective actions control for the site.

21 DR. BARTON: Okay. It just seems to me
22 that it more complex, and I have seen other plants
23 where everything goes into one corrective action
24 system. So I only have to worry about tracking one
25 place.

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1 MR. BAKER: There is one corrective
2 actions system, yes, but it is made up of many parts,
3 yes, sir.

4 MR. PIERCE: I just wanted to add one
5 other thing. This is Chuck Pierce, and I am with
6 Southern Nuclear as well. To more specifically answer
7 the question that you had asked earlier, Chairman
8 Bonaca, the SER supplement, which is a part of what we
9 send the NRC, was updated to reflect these new
10 commitments, and what we have resolved with these open
11 items.

12 So there was an update made to that
13 document that will go into our FSAR.

14 CHAIRMAN BONACA: And that will list, for
15 example -- well, I don't expect a description, but it
16 will list the programs that you are committed to?

17 MR. PIERCE: Yes, and it includes the
18 final resolution of the commitments made in the open
19 items.

20 CHAIRMAN BONACA: Okay. So there is a
21 place then.

22 MR. PIERCE: Yes, sir.

23 CHAIRMAN BONACA: Because that is really
24 generic to all this license renewal, and not
25 specifically to Hatch. I mean, I think it is

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1 important that somewhere we have what is that we have
2 agreed to support license renewal.

3 And I think that it is up to the location
4 that there has to be a place where we understand what
5 the programs are going to be. Some of them are
6 modifications that can be lost in a SER. So, all
7 right.

8 MR. BURTON: Now, having a better
9 understanding of what they do, now let me talk a
10 little bit about what the staff did in terms of its
11 confirmation of all of that.

12 As they said, what they tried to do was to
13 capture all of the commitments, and all of the
14 commitments are identified in the application in the
15 SER.

16 And as they said, they capture all of
17 those commitments in a commitment matrix. So what we
18 did -- and this was at the very first scoping
19 inspection, we spent a fair amount of time that week
20 understanding their system, and taking examples of
21 commitments as they were incorporated in the matrix at
22 that point, and seeing how they were tracking them
23 down to the procedure level.

24 And in fact we found that they actually
25 did a very good job in terms of tracking those

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1 commitments, and they actually had red-line strikeouts
2 of the associated site procedures. And all of that is
3 documented in, I believe, the first scoping inspection
4 report.

5 And actually in that respect, they were
6 actually ahead of some of the previous applicants, in
7 terms of their development of that phase of the
8 process.

9 Now, it was not complete at that point,
10 because obviously now that we have the final SER out,
11 there are more commitments that have been made as a
12 result of resolving the open items.

13 All of that was actually before we had
14 resolved the open items, and so what their process
15 does is that they are going to go back now once
16 everything is resolved, and put to bed, and see what
17 other commitments they have made, and put them in that
18 tracking system, and run them down to the procedural
19 level.

20 But after we took a look at the process,
21 we were pretty comfortable that they were actually
22 doing things right there, and we are actually better
23 than some of the other applicants.

24 MR. NAKOSKI: Butch, this is John Nakoski.
25 If I could just add that post-renewed license, that we

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1 do plan to have an inspection procedure that will
2 specifically go and look at confirmation that the
3 commitments made have been implemented and met prior
4 to or about the time the existing license would have
5 expired.

6 MR. BURTON: The next open item is 3.1.1-1
7 had to do with the BWR water chemistry guidelines. We
8 had developed in the initial license renewal
9 application, they talked about some of the water
10 chemistry guidelines that they were going to use, and
11 they committed to following EPRI 103515.

12 And in response to an RAI, they noted that
13 this document was going to be revised to Rev. 2. So
14 the issue came up, well, we haven't seen that, and we
15 are not sure what is in it. So we are not sure that
16 we are going to be comfortable if you move to that
17 revision.

18 And that was the basis of the open item.
19 After some discussions, we realized that the applicant
20 needs to have flexibility in their water chemistry
21 program. They have hydrogen water chemistry, and
22 hydrogen water chemistry with Noble gas chemical
23 addition.

24 And as a result of some of the operating
25 experience, they need to have the flexibility to make

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1 whatever changes that they need to make. But in
2 response to the open item, because our concern was,
3 well, how does Rev. 1 differ from Rev. 2, they also
4 included some of that information.

5 And in fact when you look at Rev. 2, what
6 it does is that it does in fact give someone who
7 implements Rev. 2 a lot more flexibility if they are
8 using hydrogen water chemistry. They are allowed to
9 relax some of the limits for chlorides and sulfates,
10 and things like that.

11 So after -- again, after looking at all of
12 that, and realizing that they really do need to have
13 that flexibility, we said, okay, we are going to close
14 this out and basically not ask them to stick
15 necessarily to Rev. 1.

16 DR. FORD: Can I ask a procedural
17 question? I agree entirely with our decision there,
18 but since you haven't reviewed Rev. 2, how is that
19 -- if you have not reviewed Rev. 2, how can you just
20 go along and agree with the application?

21 MR. BURTON: Okay. And let me be clear.
22 Right now what they are doing is associated with Rev.
23 1. Rev. 2 at the time -- and I don't know whether the
24 -- or at what stage of completion that is in. I don't
25 know if any of you all know that.

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1 But again -- and I guess to some extent
2 that you may call that a judgment call, and part of it
3 very much was, well, we need to understand the delta
4 between the two.

5 And once we understood it, it really was
6 just a relaxation of some of the chlorides and
7 phosphates if you are using hydrogen water chemistry,
8 because it gives you a big benefit to do that.

9 We thought that was a good thing. The
10 other thing that it did was that it also relaxed some
11 of the monitoring frequencies. I think Rev. 1 says
12 that you have to monitor for these things daily.

13 Rev. 2 says, well, you can relax that if
14 you have got satisfactory trends in some of your
15 conductivity, and things like that. Oh, okay. Did
16 you want to add to that?

17 MR. DYLE: This is Robin Dyle from
18 Southern Nuclear, Dr. Ford. One of the things that we
19 did in this process was evaluate for the staff the
20 differences between Revision 2 and Revision 1, and
21 provide that to them.

22 So there was an assessment of Rev. 2. I
23 think it would be better characterized that they
24 didn't do a generic review, and to say that it is
25 applicable to the entire fleet.

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1 But they do understand that the
2 differences. The one thing between Rev. 1 and Rev. 2
3 is that there is no change in the action statements,
4 and the real requirements. There was more guidance on
5 how to monitor things that should be noted and kept up
6 with when you are implementing HWC or Noble Metal.
7 But that has been reviewed as far as what the
8 differences were and that was provided.

9 And the documents are available for
10 generic review also, but it just has not been
11 submitted that way yet.

12 MR. BURTON: The next open item was 3.1.3-
13 1 having to do with diesel fuel oil testing. The open
14 item was that we had a concern with degradation of the
15 tank bottoms, and that we thought that it would be
16 advisable to do a one-time inspection of the tank
17 bottoms.

18 One Southern Nuclear informed us of was
19 that recently they had actually done some excavation
20 and actually had done just the kind of inspection that
21 we were looking for on one of the four buried diesels.

22 I'm sorry, diesel fuel oil storage tanks.
23 They couldn't bury diesels. Wouldn't that be
24 something. They are pretty large tanks as I am sure
25 that you all know. When they looked at the one, they

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1 did not find any significant wall thinning or any kind
2 of degradation.

3 And the thought was that these four tanks,
4 and they are all made of the same material, and they
5 are all in the same environment, and they have all
6 been in the same environment for the same period of
7 time.

8 So the implication is that if we are not
9 seeing any significant degradation in the one, that is
10 probably true for the other three. There was also --
11 well, actually, when we went on the scoping
12 inspection, as we did our walk around, we noted the
13 diesel fire pumps.

14 They also have fuel oil storage tanks.
15 However, they are above ground, and easily accessible,
16 and the same material, and a more benign environment.
17 So if we were going to see any kind of degradation, we
18 would see it here before we saw it here. So the
19 conditions here really bounded these.

20 DR. BARTON: I have a question. The
21 buried diesel oil fuel storage things, the tanks, the
22 four tanks, steel construction, coated or uncoated?

23 MR. DYLE: The exterior surface is coated.

24 DR. BARTON: The exterior surface is
25 coated, and you inspected one of four tanks?

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1 MR. DYLE: Yes.

2 DR. BARTON: And ultrasonic showed that
3 you had no loss of wall on the one tank?

4 MR. DYLE: That's correct.

5 DR. BARTON: Now, what assurance is there
6 that -- well, maybe that tank has no deterioration or
7 no damage to the external coating when it was
8 installed.

9 What assurance do you have that when the
10 other three tanks were put in the ground that there
11 was no damage done to the external coating, and you
12 could have some corrosion going on in those tanks.

13 And that the condition, if you did inspect
14 them, could be different than in the 1-A tank?

15 MR. DYLE: I think that what you are
16 postulating is exactly correct, and is the case for
17 all construction. That is always a possibility for
18 buried components; that if there is some construction
19 related issue that is unique to a specific location,
20 it could damage that exterior coating, but we have not
21 observed that.

22 DR. BARTON: How do you know? Have you
23 looked at the external coating of those other three
24 tanks or other four tanks?

25 MR. DYLE: We have not observed any

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1 consequences, any results of that throughout the plant
2 in general. When you backfill, you backfill with
3 clean backfill so that there is not a significant
4 likelihood of there being damage to the exterior
5 coating of those tanks.

6 But your premise is exactly correct, and
7 no, we have not looked at those. But the assurance
8 that we are able to provide ourselves is that by
9 examining that one, a 25 percent sample showed no
10 damage.

11 DR. BARTON: Well, I still think that
12 there could be damage to the other ones that you don't
13 even know exists. I think the staff should require
14 additional inspections before closing the site, or
15 requiring additional inspections somewhere down the
16 road.

17 You expected this one because you went in
18 and had to do some cleaning or something, and if you
19 had to do some cleaning of the other tanks somewhere
20 down the road, maybe the requirement ought to be that
21 you do an ultrasonic inspection of those tanks while
22 you are doing the cleaning.

23 I think it is a crap shoot, you know. You
24 hit one out of four, fine. That's 25 percent, but you
25 don't know what the condition is of the other three

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1 tanks.

2 DR. FORD: I have a related question
3 actually.

4 MR. BURTON: Okay. Well, go ahead.

5 DR. FORD: And it is somewhat related to
6 John's. I am pretty uncomfortable about the idea of
7 one time inspections when it is applied to a time
8 dependent degradation mechanism.

9 DR. BARTON: Yeah, 60 years.

10 DR. FORD: And especially corrosion, when
11 if it is uniformly general corrosion, fine. But if it
12 is localized corrosion, and if you have a bad batch of
13 oil, with some chloride in the water or whatever it
14 might be, then it depends on when you do the
15 inspection as to whether you are going to see any
16 results.

17 MR. BURTON: Okay.

18 DR. FORD: And so it is related to that.

19 DR. BARTON: Well, you can only do it from
20 the inside of the tank, and when it comes from the
21 outside of the tank --

22 DR. FORD: Right. I was going to speak to
23 that.

24 MR. BURTON: Well, let me speak to both.
25 One of the things that Southern Nuclear has is they

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1 have put in their procedures how to deal with buried
2 components, and actually I will speak to that in a
3 little while.

4 And that is one of the things that we
5 looked at in our inspection, is how did those
6 commitments get carried through to the procedural
7 level.

8 And the protective coatings program is one
9 of the aging management programs that they take credit
10 for. When you go to the implementing procedures at
11 the site level.

12 What they say is that any time that things
13 are being excavated, there is a specific pointer in
14 there to have their protective coatings people go in
15 and take a look at the exterior of the status of the
16 protective coating.

17 So the aging management program -- the
18 implementing procedures for the aging management
19 programs actually will get them to where they do that.

20 DR. BARTON: Butch, most people have that
21 in their programs. But, you know, one, when you go
22 and do that inspection, it is usually when you have a
23 leak, and then you do the excavation, and then you fix
24 the leak.

25 And then you look at adjacent piping, or

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1 tanks, or whatever, and areas of the tank adjacent to
2 the leak, and you go patch that up also. But that is
3 a reactive program, and it is usually after you have
4 a leak and you are chasing a leak.

5 Now, you want diesel fuel oil leaking? You
6 know, that's where I am coming from, you know, before
7 you go and chase the tank or the coating. I know the
8 procedure, and most people do have that same
9 procedure, because how else are you going to inspect
10 all the buried stuff.

11 And you inspect it when it is leaking, and
12 you go after it, and you do an inspection of the
13 coating, and you repair the coating. Otherwise, no
14 one is going to dig up everything on site and look at
15 what was buried 20 years ago. I mean, that is not
16 practical.

17 DR. SHACK: At the risk of beating this
18 one to death, how detailed was the ultrasonic
19 inspection? I would expect a coating failure to lead
20 to a localized corrosion. I am not too worried about
21 uniform corrosion of this tank. That's not likely to
22 be a problem.

23 DR. BARTON: Right.

24 MR. BAKER: There were 144 locations that
25 were probed around the tank, and none of those showed

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1 any reduction in wall thickness.

2 CHAIRMAN BONACA: Why did you perform this
3 inspection?

4 MR. BAKER: It was an opportunity. The
5 tank was opened and we knew that this was a question
6 that was of interest, and so we took that as an
7 opportunity to go take a look and see, just to
8 convince ourselves.

9 In general, these one time inspections are
10 where we don't expect an aging effect to exist to
11 begin with, but we want to confirm the absence of that
12 aging effect.

13 So in that respect, perhaps they are
14 proactive because it is not inspecting on an
15 expectation of there being a problem, but to confirm
16 that perhaps there is not a problem. And so that was
17 the rationale for what we did here.

18 MR. BURTON: And actually what Mr. Baker
19 said, I think that is an important point. I think
20 from the beginning of license renewal that we tried to
21 lay out the rules of engagement, I guess you would
22 want to call it, as it concerns one-time inspections.

23 And as Mr. Baker said, we generally
24 expected those kinds of inspections one time in
25 situations where based on operating experience we

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1 really have not found any evidence of age related
2 degradation.

3 But again just if -- well, just to make
4 sure that we are assuming is correct, or I shouldn't
5 say we, but assuming what they are assuming is
6 correct, they will go and do that.

7 And many times that is associated with
8 things that have to do with chemistry of some sort.

9 CHAIRMAN BONACA: I don't understand.
10 What are the commitments that you have to -- I mean,
11 the current licensing term, and there is no
12 commitment?

13 MR. BURTON: I'm sorry, but say that
14 again?

15 CHAIRMAN BONACA: I am trying to
16 understand for the first 40 years of operation of the
17 plant.

18 MR. BURTON: Oh, for the current term.

19 CHAIRMAN BONACA: There is no commitment
20 to tracking aging degradation of that tank?

21 MR. BURTON: I must admit that I am less
22 familiar with what is currently done. So I don't know
23 if you all can speak to that.

24 MR. NAKOSKI: Butch, this is John Nakoski,
25 and let me just ask -- I guess I am going to ask you

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1 a question here out of turn maybe.

2 MR. BURTON: Go ahead. I'm ready.

3 MR. NAKOSKI: Are we taking any credit for
4 corrective action if there were degradation of a
5 buried component? Is that part of an aging management
6 program?

7 MR. BURTON: Sure.

8 MR. NAKOSKI: And where they would
9 increase the scope of the --

10 MR. BURTON: Yes.

11 MR. NAKOSKI: Well, consider that as part
12 of the corrective action program?

13 MR. BURTON: Yes, absolutely. I am glad
14 that you said that. If I didn't make it clear before,
15 let me do it now. The corrective action program --
16 and this kind of speaks to your question also, but the
17 corrective action program is an aging management
18 program.

19 And what it is, is that when any kind of
20 problem is identified across any of the systems, their
21 guidance has to feed that into the corrective action
22 program, which basically is at an Appendix B level.
23 And so they implement all of those actions.

24 DR. BARTON: Is the commitment tracking
25 system at the same level?

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1 MR. BURTON: In terms of the maintenance
2 of the commitment tracking?

3 MR. BAKER: I'm sorry, I was talking to
4 Chuck. I apologize. Repeat the question.

5 MR. BURTON: What I was talking about was
6 the correction actions program, and I was explaining
7 that it is a separate aging management program, and it
8 applies across all of license renewal, all of the
9 systems.

10 And the way that the process works is that
11 any time any problems are found anywhere, it gets fed
12 into the corrective actions process. And what I was
13 just saying was that that process is really at an
14 Appendix B level.

15 MR. BAKER: That's correct.

16 MR. BURTON: Even for some things that are
17 not Appendix B.

18 MR. BAKER: That's correct.

19 DR. BARTON: The question was is the
20 commitment tracking system at the Appendix B level
21 also, or just the corrective actions system?

22 MR. BAKER: The corrective actions system
23 is an Appendix B program.

24 DR. BARTON: And the commitment tracking
25 is part of that?

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1 MR. BAKER: The commitment tracking is
2 more of a licensing process I would characterize.

3 DR. BARTON: So it is really not --

4 MR. BAKER: I don't believe that it is
5 subject to QA.

6 DR. BARTON: That's my problem. You are
7 using different systems to track things that --

8 MR. NAKOSKI: This is John Nakoski again
9 to try to maybe help answer Mr. Barton's question. I
10 think the point was made earlier that the commitments
11 are captured in the FSAR.

12 Further, there is a license condition that
13 requires -- if I understand right, Butch, and correct
14 me if I am wrong. But there is a license condition
15 that requires that those commitments be met before
16 entering the extended period of operation. That is
17 really where the FSAR controls the commitments.

18 DR. BARTON: These commitments that are in
19 the FSAR?

20 MR. BURTON: Oh, yes, all the commitments
21 are ultimately going to be in the FSAR, and controlled
22 from that point.

23 MR. NAKOSKI: And like I said further, we
24 will have an inspection procedure, post-renewed
25 license, that will go and look at satisfying these

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1 commitments.

2 MR. BURTON: Okay. Now, all of that is
3 true, and I think that satisfies at least part of your
4 question. But it sounds like your concern is that the
5 entity that they used to track the commitments, the
6 actual commitment tracking system, which is not
7 technically part of an aging management program, that
8 it is buried in the corrective actions program.

9 And I guess what I need to do is I need to
10 get some clarification about that and what the level
11 of accountability is for that.

12 CHAIRMAN BONACA: It seems to me that --
13 well, what we are saying is that the one time
14 inspection would be adequate if we had not concern for
15 a possible inspection phase issue that may have led to
16 having coating chipped?

17 DR. BARTON: Failure of the coating.

18 DR. FORD: Or localized corrosion, which
19 may occur the day after you have done an inspection.

20 MR. BURTON: Right. And of course I want
21 to address your question, because I don't think that
22 we really spoke to that. The issue of degradation
23 from the inside -- and actually you said it already.

24 I mean, part of the ongoing program
25 currently, programs currently, is to sample. So if

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1 there is any evidence of degradation, it is caught
2 fairly early. I am not sure what the frequency is,
3 but there is guidance for that.

4 So if there is evidence of degradation,
5 they jump on it right away, and it gets fed into the
6 corrective actions program, and is dealt with.

7 DR. BARTON: Butch, my only point is that
8 if you are going to go in the future, and if you are
9 going to inspect other diesel fuel oil tanks for
10 whatever reason -- you had a reason to inspect the 1-A
11 tank.

12 But if you have any reason to go in and
13 clean and inspect the other ones, do an ultrasonic
14 inspection, or do an inspection and tests like you did
15 on the 1-A tank somewhere down the road.

16 That is what I am looking for to ensure
17 that there is nothing going on in the other three
18 tanks. It is the same as if you have a buried pipe
19 that has a leak.

20 So you are going to excavate and you are
21 going to go and repair it. But you are going to also
22 expose other pieces of this piping. So you would go
23 and look at that while you had the hole open, all
24 right?

25 MR. BURTON: Absolutely.

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1 DR. BARTON: And all I am saying is that
2 if the opportunity presents itself in the future to do
3 other fuel oil tank inspections, go do them, and right
4 now you are letting them off the hook on a one-time
5 sample of one tank. That's my problem.

6 MR. BURTON: Okay. And I do understand.
7 I guess what I will ask Southern Nuclear to talk about
8 is currently what their normal process is. If they go
9 in to do any work on a tank for whatever reason -- and
10 I don't want to put words in your mouth, you know, if
11 you speak to that.

12 But I think the normal -- I think even
13 normally now that when you go in to do something --

14 DR. BARTON: Why don't you ask them what
15 they do. Don't tell them what they do.

16 MR. BURTON: You are absolutely right.

17 DR. BARTON: Yes, I'm good at that.

18 DR. FORD: The internal corrosion, and to
19 ask a question. This standard that you have got not
20 to exceed .1 percent of water, what data was that
21 based on, and how much margin do you have if you have
22 maintained that specification? How much margin do you
23 have?

24 MR. BURTON: I don't know. Jim, can you
25 speak to that?

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1 MR. DAVIS: I am Jim Davis. That is
2 really more for damaging equipment than it is for
3 damaging the tank. You don't see any damage to a fuel
4 oil tank because you have got water in it, because the
5 oil keeps you from corroding. You just don't see the
6 damage.

7 DR. FORD: Are the two liquids -- well,
8 does the water just fall to the bottom?

9 MR. DAVIS: Water falls to the bottom,
10 yeah, but you still have a film of oil there, and you
11 just don't see that damage. I have seen air cushion
12 vehicles operating in sea water in Vietnam, and the
13 oil coming out of the gas turbine engines coated the
14 steel bolts connected to aluminum.

15 And there was absolutely no corrosion, and
16 I couldn't believe it, but there was no corrosion.

17 DR. BARTON: Did you ever see a thousand
18 gallon fuel oil tank on a boat that has got water in
19 the fuel oil, and it gets holes in the bottom of the
20 tank and leaks a thousand gallons of diesel fuel in
21 the bilge? I have.

22 MR. DAVIS: Yes, I have seen that.

23 DR. BARTON: Well, what is different here?
24 You are telling me that you have got oil protection
25 coating, and you have got the water, and there is no

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1 corrosion. Well, how come it corrodes in the boat,
2 and it doesn't corrode in those tanks?

3 MR. DAVIS: That's sea water, and --

4 DR. BARTON: I have got sea water in the
5 tank?

6 MR. DAVIS: You can, yeah. I mean, you
7 are right in the ocean.

8 DR. BARTON: Okay.

9 MR. DAVIS: But really what I pushed for
10 and what they actually do in a lot of these instances
11 that I don't want to take credit for, is there are
12 well-established methods for determining corrosion of
13 these tanks, and you normally are more concerned about
14 corrosion from the soil than you are from the
15 interior.

16 DR. FORD: Is it protected as well --

17 DR. BARTON: No.

18 MR. DAVIS: And if you own a gas station,
19 there are certain things that you have to do that the
20 nuclear industry doesn't do. And I came from the oil
21 and gas pipeline industry, and pipeline coatings.

22 And there are very simple techniques that
23 you can use to determine how good your coatings are.
24 You know, if you coat a pipe for the Department of
25 Transportation to transfer oil or gas, you have to

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1 cathodically protect it and coat it.

2 And you have to do a subpipe to soil
3 potential survey every year, and that tells you
4 exactly where you have any problems, but NEI refused
5 to accept that. And so we put in a provision that
6 -- and it's not just if you are having a leak.

7 If you are going in there to make a
8 change, or you are going in to modify a line when you
9 look at the coatings, and we have a sub to that on all
10 of the license renewal applications.

11 But you can do a coating conductance
12 measurement, or something like that. A lot of the
13 utilities actually do that, but they don't want to
14 take credit for it because they didn't purchase their
15 rectifier safety related and that causes some
16 problems. So they are actually doing more than they
17 are taking credit for.

18 DR. FORD: I noticed that they say here
19 that incidents of such leakages is very low. But what
20 would be the consequence?

21 MR. DAVIS: Well, they are following EPA
22 rules. If they have a leak in a fuel oil tank, they
23 have to clean it up, and that is very, very expensive.

24 DR. FORD: Well, I was thinking more in
25 terms of that, but also the safety of the plant.

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1 CHAIRMAN BONACA: Well, you have four
2 tanks and probably the leakage would be small at the
3 beginning.

4 DR. FORD: So we are banging something to
5 death.

6 DR. KRESS: Well, this is as to a safety
7 issue.

8 DR. BARTON: Well, I think you were about
9 to ask the licensee what his inspection program would
10 be?

11 MR. BURTON: What is his normal practice,
12 yes. And I don't know if we have the people here to
13 do that, but if you can talk a little bit about what
14 is normally done when you go into the tanks and things
15 like that, and the scope of any follow-up activities
16 that would apply to other tanks. If any of you all
17 could speak to that.

18 MR. BAKER: The ultrasonic examination
19 that we did -- and again this is Ray Baker, but the
20 ultrasonic examination would not be a routine thing.
21 And we took the opportunity to go ahead and do that.

22 And if a tank was being cleaned, certainly
23 you would visually observe the condition. You would
24 note whether there was any localized corrosion on the
25 interior. And, of course, that just deals with the

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1 interior of the tank.

2 And as was said, you would not expect to
3 see anything in there, because there is -- except
4 perhaps the oil vapor space would be where you might
5 be likely to see something if there was anything,
6 because the rest of it would be coated with oil, and
7 would be very resistant to attack.

8 The exterior surface would be observed by
9 our excavation procedure. If you excavated for any
10 reason -- you were doing a plant modification and it
11 required exposure of a part of a buried component,
12 even though there was no leak or anything that had led
13 you to that excavation, you would still bring in the
14 coating specialist to check the condition of the
15 coating. That is excavation for any reason.

16 MR. BURTON: And if you did find
17 something, you have processes to deal with that, and
18 to identify the possible scope of the problem.

19 MR. BAKER: That's right.

20 MR. BURTON: And things like that.

21 MR. BAKER: Correct, and the corrective
22 actions program is applied across all of our license
23 renewal programs. So it will assure then that if the
24 individual program does not have built within it the
25 tracking and trending, the corrective actions program

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1 assures that it gets tracked and corrected, and
2 remediated.

3 DR. BARTON: If I understand you
4 correctly, if you had to go into another tank for
5 cleaning somewhere down the road, you would do a
6 visual of the interior of the tank. That's what I
7 thought I heard you say.

8 MR. BAKER: That's correct.

9 DR. BARTON: Why did you do an ultrasonic
10 on the 1-A tank?

11 MR. BAKER: Because we knew that this was
12 an issue that was being raised and we just wanted to
13 satisfy ourselves and the staff that what we expected
14 the result to be was in fact what we found.

15 And that if we had found something
16 different, then that piece of operating experience
17 would have been factored into what we proposed as
18 appropriate aging management programs.

19 DR. BARTON: So based on that, you don't
20 plan on doing anything for the next X number of years
21 on any of these tanks?

22 MR. BAKER: Unless operating experience
23 were to show that there was something going on that we
24 did not expect to see. And as was indicated, we -- I
25 think all licensees probably do more than they have

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1 committed to doing just to assure themselves that they
2 do maintain that equipment.

3 So if we were to observe anything, the
4 operating experience is a piece of the equation to
5 factor in and do self-correction on these programs as
6 we go through the period of extended operation.

7 We can't just ignore operating experience
8 just because we now have the license for an extension.
9 We continue to see what is happening not only at our
10 plant, but in the industry.

11 DR. KRESS: If you had a leak, would you
12 know about it? Do you have liquid level measurements
13 in those tanks?

14 MR. BAKER: It would have to be a pretty
15 significant leak to observe it right away I think.
16 But ultimately you would observe it, and as was said,
17 that would be a pretty big deal. You would be in
18 trouble with the EPA, and there would be an expensive
19 process.

20 DR. BARTON: It would be cheaper to do an
21 ultrasonic if they ever opened another tank than to
22 clean up if I had a leak.

23 MR. BAKER: Yes. And I am not saying that
24 we would not do that apart from what is committed to,
25 because I know in other areas of the plant we have

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1 some aggressive programs to do radiography in areas
2 where we are looking to see if there is wall thinning.
3 So it is not something that we want to ignore. You're
4 right.

5 DR. BARTON: Okay. The reason that I am
6 being a stickler on this is because I was at a plant
7 that ended up with tanks leaking, all right? And then
8 after 30 something years, you know?

9 So here you are doing a one-time
10 inspection for 60 years, and then you are saying
11 everything is hunky-dory, and I am not going to do
12 anything else, and that is what bothers me. All
13 right. End of my spiel.

14 CHAIRMAN BONACA: I have just one more
15 question. How do we treat this for -- if I remember
16 for the other applications, they also had one time
17 inspections.

18 MR. NAKOSKI: That's true. That's true.

19 MR. BURTON: I want to -- and I think it
20 will get to yours, too, because I don't want to let
21 Dr. Barton's question go just yet, because I
22 understand where you are coming from in terms of what
23 it says in the application.

24 It sounds like we do a one time
25 inspection--

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1 DR. BARTON: Of one tank.

2 MR. BURTON: -- of one tank, and the
3 results were satisfactory, and we don't need to go on.

4 DR. BARTON: And I won't do anything else
5 unless I have a leak.

6 MR. BURTON: Right. I think -- and
7 probably we need to clarify this in the SERs, is that
8 -- and when Mr. Baker talked about operating
9 experience, it is more than just even the operating
10 experience at that particular plant.

11 One of the things that -- and it is an
12 ongoing think that is factored in, is that if there is
13 any evidence that this commodity group shows evidence
14 of leakage or any kind of degradation, the license
15 renewal process factors that knowledge in, whether it
16 is plant specific operating experience, or industry-
17 wide operating experience.

18 And that is an ongoing thing that goes on
19 now, and will continue to go on into the renewal term.
20 So your concern that we look at it this one time, and
21 it is never looked at again, is really not what
22 happens.

23 But if we need to clarify that in the SER,
24 that probably would be beneficial to talk more about
25 some of the more routine things that go on.

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1 CHAIRMAN BONACA: And also I think you
2 might want to think about it in terms of -- and this
3 is in preparation for the presentation for the full
4 committee, but in terms of the specific definition of
5 the rule, I would suspect that this is a support
6 system and this failure could cause safety systems not
7 to perform.

8 MR. BURTON: The aging criteria.

9 CHAIRMAN BONACA: And you went on to look
10 at it in the context of what would it take to lose
11 function, which means to empty the tank to the point
12 where you are really losing inventory, because from
13 the perspective of the rule, that is really it seems
14 to me the objective you have.

15 DR. KRESS: But the question is, is there
16 a safety concern, and that would be one question.

17 CHAIRMAN BONACA: And they would be going
18 into that. So I think that is clearly an issue that
19 we raise, and want to talk about.

20 DR. KRESS: If there is no safety concern,
21 it just seems like it is up to the applicant to deal
22 with it the way that he wants to.

23 CHAIRMAN BONACA: Correct.

24 MR. DAVIS: This is Jim Davis again.
25 Under the current regulations, they require nothing.

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1 CHAIRMAN BONACA: Well, that's why before
2 I was asking what is the regulation asking for under
3 the current --

4 MR. DAVIS: There is no requirement.

5 CHAIRMAN BONACA: I was asking before what
6 do the current regulations require for the current
7 term, and the answer is --

8 MR. DAVIS: That there is no requirement.

9 CHAIRMAN BONACA: -- there is no
10 requirement. But I think the presumption is that you
11 would leak oil at a rate that would not -- well, by
12 the time that it manifests itself, you would still
13 have sufficient inventory in the four tanks to run
14 your four diesels for the commitment that you have in
15 the FSAR.

16 MR. BAKER: Dr. Bonaca, if I could
17 clarify. There are two sets of tanks that are of
18 interest when you are dealing with the emergency
19 diesel generators. These are the bulk fuel oil
20 storage tanks.

21 The day tanks, which are associated with
22 the immediate operability of the diesel generators,
23 are above ground and are separate tanks. So these are
24 just the bulk fuel oil storage.

25 CHAIRMAN BONACA: Okay.

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1 MR. BURTON: Okay. But we will be
2 prepared to talk about that a little bit more next
3 week. The next open item was 3.1.11-1, having to do
4 with stress corrosion cracking of high-strength bolts.

5 The issue was that we know that bolting
6 that has a yield strength below 150 ksi is not really
7 subject to stress corrosion cracking.

8 DR. KRESS: Why is that? Does that have
9 to do with residual stresses?

10 MR. DAVIS: This is Jim Davis. It is the
11 microstructure of the material. We know that
12 materials that have a yield strength above 150 ksi can
13 be subject to hydrogen embrittlement actually. We
14 call it stress corrosion, but they can crack just in
15 moist air.

16 DR. KRESS: Because they have a very small
17 micro structure?

18 MR. DAVIS: Yes. It is probably -- well,
19 it is a strength issue, and it is related to the
20 microstructure. So the specifications say a minimum
21 of 125 ksi yield, and what happened was that we saw
22 yields in the neighborhood of 175, and made sure that
23 they met the 125.

24 And after a lot of study, we found that
25 anything below 150, really you don't see the cracking

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1 problems.

2 MR. BURTON: It's great to have a
3 materials guy around. Thanks.

4 CHAIRMAN BONACA: Well, with this issue --
5 well, go ahead.

6 DR. FORD: May I ask -- well, in this item
7 you say an approved thread lubricant.

8 MR. BURTON: I'm sorry, what?

9 DR. FORD: It says to be lubricated with
10 an approved thread lubricant. It is not molybdic
11 sulfite by any chance?

12 MR. DAVIS: No. That has been found to
13 cause cracking very definitely. A lot of the cracking
14 problems were related to the thread lubricant, with
15 molybdic sulfite decomposed to hydrogen sulfite.

16 DR. KRESS: So the resolution is or
17 experience has shown that these particular bolts had
18 a cracking problem?

19 MR. BURTON: Right. These bolts are used
20 across a number of different systems, and what we
21 found was that when we asked them to go back and look
22 at some of the procurement data to see what that high
23 limit was, it wasn't in the documentation.

24 So what they did was that they went back
25 and again looked at operating experience and found

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1 that stress corrosion cracking for these bolts, that
2 they really had not seen it across the industry.

3 DR. KRESS: And where do they use these
4 bolts? Are they around the head, or --

5 MR. DAVIS: They are used everywhere.
6 There is about 40,000 of them in the plant. They are
7 used on pumps, valves.

8 DR. KRESS: And in the primary system they
9 are used?

10 MR. DAVIS: They are used in the primary
11 system, and in the primary system the only place that
12 I am aware that they are used are in pumps and valves.
13 Everything else is welded.

14 CHAIRMAN BONACA: Let me tell you what
15 makes me a little bit uncomfortable about this. Just
16 a month ago, we looked at Turkey Point and the same
17 issues. And they say, oh, yeah, in fact we are
18 concerned enough that in our procedures we have a
19 limit of 150 ksi in our positions, and so when you
20 tork these bolts, you don't go above that.

21 Now here we are a month later, and we see
22 a different applicant that says, oh, there is no
23 issue. Well, I am left with the feeling that we don't
24 know where this is coming from.

25 MR. DAVIS: They are two different issues

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1 actually.

2 CHAIRMAN BONACA: Were they?

3 MR. DAVIS: Yes. The high strength steel
4 issue is the yield strength can't be above 150 ksi,
5 and for A286 bolts, which are a corrosion resistant
6 fastener, if you tork those above 100 ksi, then you
7 are going to have stress corrosion problems. Those
8 are two different issues.

9 CHAIRMAN BONACA: So two different types
10 of bolts.

11 MR. DAVIS: Right.

12 CHAIRMAN BONACA: Could you explain to me
13 exactly the difference again?

14 MR. DAVIS: Well, they had both issues at
15 Turkey Point, and we raised -- or I raised both
16 issues, and that is the high strength steel with the
17 yield strength above 150, and what they did was they
18 did a license event report review, and found that they
19 had no operating history of any problems with those
20 bolts.

21 With PWRs, there is another issue, and
22 that is that when you do system pressure tests, you
23 have to remove the insulation, and inspect the bolts,
24 and there is a code case N616 that says -- ASME Code
25 case that says if you have corrosion resistant

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1 fasteners, you don't have to remover the insulation.

2 And we impose some requirements on heat
3 treatment and applied stress. For 17 -- and stainless
4 steel, you have to temper the temperature, or the age
5 of the temperature above 1100F, and then you won't get
6 into stress corrosion problems.

7 With A286, if you apply a preload above a
8 hundred ksi, you are going to start seeing stress
9 corrosion cracking.

10 CHAIRMAN BONACA: So you think it is still
11 appropriate after the discussion, that it is
12 appropriate to have Turkey Point have their procedures
13 stay below 150 ksi?

14 MR. DAVIS: Yes, that's right, and they
15 went back and looked at the certified material test
16 reports to show that either they didn't have any above
17 150, or that they had no experience with any cracking.

18 CHAIRMAN BONACA: And I went back to the
19 Turkey Point, and in the discussion I just could not
20 pick out the difference, and maybe I should have.
21 Thank you.

22 DR. FORD: But the point here is that the
23 minimum yield -- this is for the specifications,
24 procurement specifications, with a minimum yield
25 stress of 105, and there is no upper limit stated. So

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1 they were lucky. They weren't above 150.

2 MR. DAVIS: Well, actually, there have
3 been some that are above 150. They have been as high
4 as 175. When people start seeing cracking problems,
5 the industry kind of modified that specification and
6 they are asking -- well, most of the industry, and I
7 won't say for everybody. But they are saying that
8 between 105 and 150 yield.

9 DR. FORD: But for these applications,
10 would it not be wise to impose it on the
11 specification?

12 MR. DAVIS: I think that they already know
13 that.

14 DR. FORD: Well, there is a difference in
15 knowing it and in fact demanding it I would expect.

16 MR. DAVIS: We could do that, but that's
17 not really the issue, because there is 40,000
18 fasteners already installed in that plant, and if we
19 did a back-fit analysis and remove the antibolts with
20 a yield strength above 150, we couldn't satisfy the
21 back-fit requirements under 50.109.

22 DR. FORD: But if you go into license
23 renewal in the future, this will occur, and it should
24 be documented, and in the future you will not or
25 should not.

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1 MR. BURTON: Well, I think that the
2 industry is aware of the fact that if they maintain
3 high strength steel fasteners with a yield strength
4 above 150 that they can get into trouble.

5 But that is not the real problem, because
6 they don't change these fasteners all that often.
7 They have got 40,000 fasteners in there, and they are
8 not going to go back and change them.

9 And unless we do a back-fit analysis and
10 show that there is a problem, then we can't justify
11 that. I am aware of two cases where there have been
12 a problem in the nuclear industry, and that is at
13 Dresden.

14 And they had closure studs that were
15 overly hard, and they had two of them that cracked.
16 But there has been no other occurrences, but I still
17 ask the question just to make sure

18 MR. BURTON: Okay. Thank you, Jim. The
19 next open item was 3.1.13-1. This open item actually
20 had three parts to it. The first part -- and we have
21 actually started to talk about this -- had to do with
22 buried components.

23 The license renewal application credited
24 this for managing aging effects of buried components,
25 but when you went to the actual write-up in the amp,

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1 it didn't really speak to the buried components.

2 And so as a result the applicant clarified
3 that the protective coatings program, that amp, is
4 really what does the managing. But what happens is
5 that again, going down to these site procedures, the
6 site procedures invokes an inspection that is part of
7 this program.

8 And part of that inspection is to use
9 protective coatings personnel to look at the buried
10 components, and they use the protective coatings
11 program to do that.

12 So there is a linkage between the two
13 applications, but the staff was a little unclear as to
14 what the linkage was. So they clarified it.

15 CHAIRMAN BONACA: And that was brought up
16 by the clarification in fact now. So is the
17 commitment only in site procedures, or is it also a
18 license renewal commitment?

19 MR. BURTON: The commitment -- well, go
20 ahead.

21 MR. BAKER: It is programmatic. It is in
22 the program, yes, sir.

23 CHAIRMAN BONACA: In the program?

24 MR. BURTON: Yes, sir.

25 CHAIRMAN BONACA: All right.

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1 DR. BARTON: And the words in the SER say
2 that you will place this in the instruction. My
3 question is have you already done it?

4 MR. BURTON: Yes.

5 MR. BAKER: On that particular one, the
6 trigger to get the coatings specialist in when buried
7 components are exposed is already in the site
8 procedures.

9 DR. BARTON: And they will be examined by
10 a protective coating specialist? That is already in
11 the procedures?

12 MR. BAKER: The trigger to do that is
13 already in there, yes, sir.

14 MR. BURTON: And we will make that change
15 to say that it has been done.

16 DR. BARTON: Good, because this looks like
17 you are going to do it when you go to license
18 extension.

19 MR. BURTON: All right. Now --

20 DR. BARTON: Don't end up. I have another
21 question with this one. There is a third part to
22 this, Part C. Are you going to break this up into
23 three pieces, or are you going to be done with it?

24 MR. BURTON: No, no, go ahead. Ask your
25 question.

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1 DR. BARTON: The staff proposed to close
2 the site and based on the applicant stating the plan
3 is to inspect portions of PSW piping that is
4 surrounded by guard piping during an outage during
5 February of 2002.

6 Now, I heard what John said, is that they
7 are going to have tracking, and these guys are going
8 to do this inspection, et cetera. Are you prepared to
9 make sure that any outage scope of this February 2nd
10 thing, that this is already in there?

11 MR. BURTON: Actually, let me put some
12 context in there. What happened was that when we went
13 down for the scoping inspection, there were three
14 issues associated with this, and we have jumped to the
15 third issue.

16 DR. BARTON: This is the third issue.

17 MR. BURTON: So let me speak to that and
18 then I will go back to the second one. This has to do
19 with the plant service water guard pipe. What
20 happened was that during the scoping inspection, one
21 of our regional inspectors, going through some of the
22 diagrams, saw this section of guard pipe, and it just
23 wasn't discussed at all.

24 So the question came up should this
25 component be in scope. So Southern Nuclear went back

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1 and looked at it, and looked at the intended function.
2 There is absolutely no documentation anywhere of what
3 this guide pipe is supposed to be for.

4 So they went through there and asked their
5 eight questions for the scoping criteria, and found
6 that it did not have an intended function, and so it
7 was not put in scope.

8 The problem is that this guard pipe is
9 actually welded. It is in the diesel generator
10 building. I guess it is about a hundred-foot section
11 or so, and it is welded at each end to the exterior of
12 the plant service water piping, which is in scope.

13 So what it does is that it creates an
14 internal environment that we are not sure what it is.
15 So again common sense tells you when they welded it
16 that it is probably just dry air in there, and that
17 there probably isn't any aging effect associated with
18 it, but we don't know that for sure.

19 So what they said they would do is that
20 during the next outage, they would actually go in and
21 put in a baroscope or something, and take a look in
22 there, and see exactly what the environment is.

23 Again, we don't anticipate any adverse
24 aging effects. but if they go in and they do find it,
25 again it gets fed into the corrective active program,

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1 and is dispositioned accordingly.

2 DR. BARTON: My question is whether it is
3 already in the outage scope, or is nailed in the
4 outage scope for the February 202 outage, and has the
5 NRC confirmed it is in the outage scope? That is my
6 question.

7 MR. BURTON: Right now do you guys have it
8 as part of your plans for the outage?

9 MR. BAKER: We plan to do it. I can't
10 speak to whether it is in an outage scope of work
11 activities, or whether NRC has confirmed that it is
12 there. But the engineer who is going to be doing that
13 work is planning on doing that work.

14 DR. BARTON: The reason that I asked the
15 question is usually this close to an outage, your
16 scope is frozen.

17 MR. BAKER: That's right.

18 DR. BARTON: And if it is not in there
19 now, are you going to be able to get it in there, and
20 has the NRC confirmed that it is in there. That's my
21 concern.

22 You made a commitment to do it, and I want
23 to know if it is in the outage scope, and it is
24 approved in the outage scope, and the NRC is satisfied
25 that it is in there.

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1 MR. BAKER: What we should so -- well, we
2 can call back and ask. I am certain that it is,
3 because I was just talking with the individual this
4 week about it again, and he said, yes, that is still
5 on track, and we intend to do that. So I will get
6 confirmation on that before the day is over.

7 DR. BARTON: Thank you.

8 MR. BURTON: And let me just say from our
9 end that given the circumstances, we weren't sure
10 whether we needed to lock this in with a license
11 commitment, or license condition and that sort of
12 thing, because they are saying that they are going to
13 do it in February, which is like the time frame when
14 we are talking about issuing the renewed license,
15 again it was another timing issue where things could
16 be working at cross-purposes.

17 DR. BARTON: I am just reading what they
18 said, and I am asking did they do it, and are they
19 sure it is in here, and are you guys satisfied.

20 MR. BURTON: Right. And I will say that
21 on our end our resident inspector, he has it on his
22 "to do" list to go and check that out when that is
23 done. So we expect that to be done in February, and
24 we have the things in place to make sure that it is
25 done.

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1 DR. BARTON: Thank you.

2 MR. BURTON: Okay. Now, let me back up to
3 issue number two. Now, I wasn't sure whether you were
4 talking about a third part in the first issue or just
5 the third issue. But it is no problem.

6 We needed some clarification regarding the
7 treatment of the RHR heat exchangers. The activities
8 in the PSW and RHR service water inspection program
9 apply across a number of components, including heat
10 exchangers.

11 There is another aging management program,
12 and I have an open item associated with that, but it
13 is the RHR heat exchanger augmented inspection and
14 testing program, which also speaks to activities
15 associated with the RHR heat exchanger.

16 So the issue came up, well, which one does
17 what. So part of the resolution was that they
18 clarified this program, and the plant service water
19 and RHR service water really does more than just a
20 visual inspection of surfaces.

21 Whereas, the RHR heat exchanger augmented
22 inspection testing program is really the primary amp
23 to deal with components in the RHR system, looking at
24 internals and things like that.

25 So they just clarified the scope

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1 difference between the two. Okay. Let's see. The
2 next open item, the reactor vessel monitoring program.
3 This is another aging management program. This
4 program actually is sort of a compilation of three
5 different things.

6 There are three parts to it. There is a
7 fatigue monitoring aspect, which actually is done
8 through an aging management program called the
9 component SLIC or transient limit program, CCTLP. It
10 is done through that, and there is also aspects to it
11 that are TLAA.

12 Another aspect of the program are code
13 required augmented inspections and tests, and that is
14 done through the ISI program, which is also one of the
15 aging management programs that they credit.

16 The third has to do with surveillance
17 materials testing, and that was the basis of the open
18 item. The issue here is that there is a BWR VIP 78
19 for an integrated surveillance program, where they are
20 trying to work the surveillances across the entire BWR
21 fleet.

22 The problem is that when they submitted
23 the application the staff was in the process of
24 reviewing this. Now, the current status is that we
25 finished the review, and I am going to turn to Gene

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1 just to be clear exactly about what the status is of
2 VIP-78, and its associated implementing document, 86.
3 If you want to speak to that for a second.

4 MR. CARPENTER: This is Gene Carpenter.
5 Basically, the staff has completed the review of the
6 BWRVIP-78 and the VIP-86 document, which is the
7 implementation plan.

8 We are in the process of documenting that
9 in a safety evaluation report, and that should be on
10 the street within the next month or so.

11 MR. BURTON: Thanks. So what we had was
12 that we had the crediting of a document that hadn't
13 gone through our review process yet. So what we had
14 was that we asked them either to commit to that, or if
15 that doesn't go through, to commit to a plan specific
16 material surveillance program.

17 And the open item came out that we need
18 this to be clear that those will meet Part 54, and the
19 10 attributes for the aging management programs. So
20 we needed to get that commitment.

21 We did get it, and they said we will do
22 one or the other. Either way, it will meet the
23 requirements of Part 54, and the 10 attributes, and we
24 locked them in with a license condition. That is the
25 third license condition. The first two I already

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1 mentioned having to do with the FSAR supplement, and
2 this was the third one.

3 DR. FORD: I am a little bit unsure about
4 the 78. It was only applicable to the current
5 licensing period, and they are going to put in a
6 supplement due in 2002 for the extended period?

7 MR. CARPENTER: That is correct.

8 DR. FORD: What are the details of that?
9 Why is it limited to only the current licensing
10 period?

11 MR. CARPENTER: As the VIPs of the
12 document is presently written, it is for the current
13 operating term. The reason that it is not at present
14 for the extended operating period is because the
15 BWRVIP program takes credit for a variety of plants
16 surveillance materials.

17 When the program was initially implemented
18 or put together by the BWRVIP, they still were not
19 sure which licensee, which BWR licensees, were going
20 to be going for a license renewal.

21 They are in the process at this time of
22 finalizing which plants will be in the license renewal
23 period, and they will be able to take advantage of.

24 This is going to be a somewhat fluid
25 matrix, because as things change, they need to have

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1 something that is flexible enough, a program that is
2 flexible enough that will allow for Plant X, Y, Z,
3 which would be one that they would take credit for,
4 does not for whatever reason go into the license
5 renewal period.

6 They need to be able to be flexible enough
7 to move to another plant and to make adjustments for
8 it. So this is something that the staff and the
9 BWRVIP are working together on to ensure --

10 DR. FORD: And this relates to the number
11 of capsule samples at various fluence levels, and
12 instead of going into the expected fluence for a given
13 plant in a license renewal period, or is it something
14 to do with that? I am trying to work out why you need
15 all these other licensees to --

16 MR. CARPENTER: Well, it is an integrated
17 surveillance program, where you have one licensee
18 pulling its capsules and several other licensees being
19 able to take advantage of that study.

20 DR. FORD: So you are studying all the
21 fluence levels?

22 MR. CARPENTER: Correct.

23 DR. FORD: Okay. That is what I was
24 getting at.

25 MR. CARPENTER: Yes.

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1 DR. FORD: Okay.

2 MR. CARPENTER: Robin, did you want to add
3 something?

4 MR. DYLE: Yes, Gene, thank you. This is
5 Robin Dyle of Southern Nuclear. The VIP-78 document
6 is the technical basis document for why an integrated
7 surveillance program is appropriate, and how you would
8 go through and screen for fluence materials and select
9 the best capsules that would be representative for the
10 fleet.

11 And that 86, as Gene correctly
12 characterizes, is the implementation schedule. We
13 believed at the time that we put it together that all
14 those plants would go for license renewal, and for one
15 reason or another we are not ready to make that
16 commitment.

17 And instead of sitting on the
18 implementation schedule, we put one together for the
19 current term, and submitted it, and then we will
20 revise the implementation schedule. The technical
21 basis won't change.

22 We have to be able to predict fluence, and
23 we have to be able to test a range of capsules that
24 will give an overview of what the fleet behavior is
25 for vessel embrittlement. So that is the way the

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1 program is put together.

2 Just as a note, both Hatch units capsules
3 were going to be pulled as part of the ISP anyway, and
4 so it doesn't affect Hatch one way or the other. That
5 is where we currently are.

6 MR. BURTON: And that is an important
7 point, and that's why they can make the commitment
8 that if 78, for whatever reason, doesn't work out,
9 they can do it themselves.

10 CHAIRMAN BONACA: Okay. Good.

11 MR. BURTON: The next open item was
12 3.1.18-1, having to do with fire protection. There
13 are actually two issues associated with this. The
14 first one had to do with the adequacy of system flow
15 tests to be able to manage aging.

16 This was another one of these issues that
17 was being worked at cross-purposes generically, and
18 what was finally determined was that we did not need
19 to have system flow tests per se as part of the aging
20 management program.

21 It is currently done already and will
22 continue to be done in the extended term. But what we
23 do have is that we do have an aging management program
24 called fire protection activities, which is primarily
25 inspections.

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1 And so the idea is that those inspections,
2 as part of the aging management program, along with
3 the ongoing flow tests, should together be adequate to
4 manage aging for the fire protection components in the
5 extended term.

6 DR. KRESS: Did you inspect just the
7 heads?

8 MR. BURTON: The extent of the inspection?
9 I don't think it was just the heads. I think they
10 look at the piping and all the way up and down. I
11 think they look at everything. There are some issues
12 with the heads which I am going to get to, but yeah.

13 DR. KRESS: And what did the flow tests
14 consist of? Do they actually turn these on?

15 MR. BURTON: Well, what it is -- well, I
16 do actually have some notes about that. What they
17 have is what they call an inspectors connection, and
18 which is at the furthest end of the system. And
19 what they do is that they actually just run the flow
20 all the way through.

21 DR. KRESS: Run it into a bucket or
22 something and that tells you how much?

23 DR. BARTON: Yes, I guess it is a bucket
24 or something like that.

25 DR. KRESS: So it is a measure of the flow

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1 rate?

2 MR. BURTON: Right, and the existence of
3 the flow, right.

4 MR. BAKER: At the furthestest point of the
5 branch connections, right.

6 MR. BURTON: Right.

7 DR. KRESS: So what that tells you is that
8 when you turn the system on that you are going to get
9 flow?

10 MR. BURTON: You are going to get flow,
11 right. Now, the issue --

12 DR. KRESS: And what does that tell you
13 about aging; that was my question.

14 MR. BURTON: Well, that was the question.
15 Does that really tell you anything about age related
16 degradation, and the question was that it really
17 didn't. What you really have to rely on is actually
18 doing the inspections to see what is actually going
19 on.

20 But between that and the flow tests, you
21 have kind of got everything covered. But, yes, the
22 actual age related degradation, what we are depending
23 on and what is being credited for license renewal, are
24 the inspections as part of the fire protection
25 activities amp.

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1 DR. KRESS: So my question once again is
2 how extensive is the inspection, and what all does it
3 look at, and how often?

4 MR. BURTON: And I can either speak to
5 that, or -- oh, Tanya. I'm sorry. You did come back.

6 MS. EATON: This is Tanya Eaton, NRR, and
7 I was the fire protection engineer that reviewed the
8 application. And Jim just told me, as I was out, and
9 he said that you all were asking questions about the
10 inspectors flow test, and how that is performed.

11 I know that -- well, I don't know if Butch
12 explained this, but usually the most remote connection
13 from the water supply, and so what they do is -- and
14 I know, for example, with ANO, their connection was on
15 the roof of some building somewhere.

16 And it hydraulically is the most remote
17 point from the water supply. So when they flow that,
18 they are able to look at the water to see if there is
19 any type of corrosion products that are coming from it
20 or anything.

21 I don't know that they tested it. That is
22 not an NFPA requirement. Usually, they are just
23 trying to ensure that they are getting flow through
24 the system.

25 DR. KRESS: How often do they do that?

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1 MS. EATON: I think it is annual. If you
2 look in NFPA-13 requirements, every year they will do
3 the inspectors flow test.

4 DR. FORD: As I read this, it is saying
5 that you could have a situation of the year 49, for
6 instance, and you suddenly want to turn on the
7 sprinkler systems, and you are hoping that nothing has
8 occurred from a corrosion point of view. And this is
9 not the time to be assuming no corrosion is going to
10 occur in 49 years.

11 CHAIRMAN BONACA: This is the second issue
12 item.

13 MR. BURTON: Yes, we are actually getting
14 into the second issue.

15 CHAIRMAN BONACA: And that is an
16 interesting one by the way, Issue Number 2. I just
17 don't understand -- you know, it seems to me that the
18 earlier that you perform an inspection the better off
19 you are.

20 Now, we understand that the licensee
21 proposed to perform a one time inspection before 40
22 years. And the staff said no, and you have to go
23 NFPA, and the NFPA requires a one time inspection of
24 50 years.

25 MS. EATON: It is not one time.

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1 DR. BARTON: It is 50 years.

2 CHAIRMAN BONACA: Fifty years, because it
3 says 50 years, and then your intervals. Well, at 60
4 years, the plant is retired, at least for this
5 license.

6 MS. EATON: I can address that. The time
7 -- well, if you look at the NFPA requirement, it
8 requires at 50 years of service life of the
9 components, and if you look at what I think Hatch was
10 doing in this case, at 40 year operating life, their
11 suppression system -- I think the sprinklers were
12 going to be something like 46 or 47 years old.

13 So at that point when they were testing,
14 right before they go into renewal, the system was
15 already going to be 47 years old. And I think
16 initially that they proposed to do this as a one-time
17 inspection.

18 The NFPA 25 requirement is that you do it
19 at 50 year service life, and then you do it at 10 year
20 intervals thereafter, and that is what we were trying
21 to have them do, which was not just to do the one
22 inspection.

23 CHAIRMAN BONACA: So at the end of 50
24 years, you are telling me that 50 years will come
25 actually after 3 or 4 years in the new licensing

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1 period.

2 MS. EATON: Right.

3 CHAIRMAN BONACA: You see, that is not
4 clear in the SER at all. The SER speaks of 50 years,
5 and 50 years from the moment of the license, and you
6 are telling me that actually you are starting the
7 clock years before.

8 MS. EATON: When it is installed and
9 operable, right.

10 CHAIRMAN BONACA: So for the 50 year --
11 all right. I think it would be important to have some
12 clarification in the SER just to specify that that 50
13 years -- well, because when you read that, you are
14 saying, well, you give up at 40 years of inspection,
15 and then you are waiting 10 years longer.

16 And that way you would have two
17 inspections than one at, say, 43 years, and the other
18 one at 53.

19 MR. BURTON: Right.

20 MS. EATON: Right.

21 DR. FORD: When they came up with this
22 specification, this 50 year business or whatever the
23 number, they are very large numbers.

24 MS. EATON: Right.

25 DR. FORD: What data is --

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1 MS. EATON: I think what NFPA looked at
2 was that their program, NFPA-25 has programs for the
3 inspection, testing, and maintenance of fire
4 suppression teams, and that in most cases it was their
5 understanding that if you follow those programs that
6 at your 50, that's when you really need to begin
7 checking for the type of failures that you might see
8 due to corrosion.

9 And with most licensees, we found that
10 they would commit to NFPA-13, which is the sprinkler
11 code that requires them to install suppression
12 systems, and then they will have maintenance procedure
13 inspections that are in accordance with the NFPA
14 requirements that they follow. And that is all the
15 information that I have.

16 DR. FORD: It just seems an incredibly
17 long time --

18 MR. BURTON: Yes, it is a long time.

19 DR. FORD: -- of being assured that no
20 corrosion has occurred.

21 MS. EATON: Right. The NFPA requirements
22 are also the minimum requirements. It is always up to
23 whoever the authority having jurisdiction is, which in
24 this case will be the NRC to say that we require
25 beyond that for these types of applications.

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1 If we see that there is evidence out there
2 that shows that there are problems being experienced
3 in cases of less than 50 year time periods.

4 DR. FORD: Well, shouldn't the NRC be
5 applying -- I mean, this thing was done for warehouse
6 --

7 MS. EATON: No, NFPA-25 is -- a lot of
8 industries outside of nuclear use that as guidance for
9 whatever their particular industry is. And so in the
10 case for the NRC, if we find that -- well, for nuclear
11 energies, we think that they should look before 50
12 years, and we would need evidence to support that from
13 our perspective.

14 I know that there have been studies done
15 in the fire protection section to look at corrosion
16 and blockage due to corrosion, and those types of
17 things. And we were unable to find any cases or we
18 looked through licensee event reports, inspection
19 reports.

20 And there were two studies. One was done
21 in the '80s, and another in the '90s, and I don't have
22 the numbers now. But the conclusions reached were
23 that the licensees were aware that this could be a
24 problem.

25 They had programs in place to at it, and

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1 to manage it if it were a problem. It is not just a
2 license renewal issue. That is more of a current
3 licensing issue.

4 CHAIRMAN BONACA: Are these wet pipes or
5 dry pipes?

6 MS. EATON: For NFPA-25?

7 CHAIRMAN BONACA: Yes.

8 DR. FORD: Carbon steel pipes.

9 MR. BAKER: Let me clarify. Dr. Bonaca,
10 this is Ray Baker again. The item that we are talking
11 about here is an inspection of a -- it is actually a
12 destructive examination of a closed-head sprinkler.

13 And that is a separate issue from all of
14 the other more general fire protection activities,
15 where you are concerning yourself with corrosion, and
16 blockage, and these other things.

17 The specific issue here relative to this
18 50 years of service testing is to ensure that that
19 closed head sprinkler will actually actuate, and that
20 is the thing that NFPA-25 is addressing itself to with
21 regard to this 50 year service test.

22 And just to clarify the distinction that
23 we are not talking about corrosion and those kinds of
24 things with regard to this sprinkler.

25 DR. FORD: The stocking --

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1 MR. DAVIS: That is part of the assurance
2 that we give ourselves with the system flow test at
3 the furthest branch connection to ensure that
4 throughout that entire time period we are not
5 accumulating a corrosion problem that might lead to a
6 flow blockage situation.

7 DR. KRESS: It seems like the corrosion
8 products would accumulate in the head.

9 DR. BARTON: That's where they will go.

10 MR. BAKER: Well, on these closed systems,
11 there is not going to be any flow in those branch
12 lines.

13 DR. KRESS: Well, there is static all the
14 time.

15 MR. BAKER: Right. Right.

16 DR. KRESS: Stuff can't get down there.

17 DR. BARTON: It has a lot of moist carbon
18 steel, and it is a dry system or --

19 MR. BAKER: No, it is a wet system.

20 DR. KRESS: They have little pony puffs
21 that they can't pull.

22 DR. BARTON: So you have got air in there,
23 and water, and you have got some corrosion in the
24 pipe.

25 MS. EATON: The NFPA requirement for 25

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1 does require that you test a sample of each type of
2 sprinkler head that is in the plant. So if they did
3 find problems, then they would have to go back and
4 replace those heads.

5 DR. KRESS: You made a study of NFPA-25 to
6 assure yourself that it would be applicable to
7 nuclear, because the issues are protection of
8 investment versus safety, and I think that NFPA
9 doesn't look to you for safety does it?

10 MS. EATON: They do. I think the concept
11 is that the sprinkler systems are designed similar.
12 In either case, you don't want to have failure,
13 whether you are protecting life or equipment.

14 And especially in the case where you have
15 safety related equipment. You don't want to have
16 failures.

17 DR. KRESS: Yes, but there is a difference
18 whether you are protecting life or equipment.

19 DR. BARTON: That's right. There really
20 is.

21 MS. EATON: Right. But the systems are
22 designed the same, and I think that they apply them in
23 general throughout if you look at the NFPA-25
24 guidance.

25 DR. KRESS: But my question is, is that

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1 applicable to nuclear, where chances of an accident is
2 not just limited to the site, and I would question the
3 applicability of that to nuclear safety.

4 DR. BARTON: That's a good point. Is it
5 Bloomingdale's, or is it Plant Hatch.

6 DR. KRESS: Is it an insurance issue or is
7 it something else.

8 DR. BARTON: That's right.

9 MR. BURTON: Okay. We will go back and
10 research that a little bit and get an answer for you.

11 DR. KRESS: I appreciate it.

12 MR. BURTON: Thank you, Tanya.

13 CHAIRMAN BONACA: Let's finish these items
14 here, and then we will take a break.

15 MR. DAVIS: I would like to make a comment
16 on the 50 year life. In a former life, I used to make
17 fire protection pipe as well.

18 MR. BURTON: He did it all.

19 DR. BARTON: No doubt about it.

20 MR. DAVIS: Actually, what occurs is that
21 most of these are static and they are always filled
22 with water. And when you consume -- it drops to an
23 extremely low value, and there were lots and lots of
24 studies -- and this is in the '70s that I did this
25 one, and I am an old guy.

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1 But they really had some good studies and
2 they projected the corrosion rate, and what they
3 really recommend is that you don't really disturb the
4 system too much, because when you put new oxide in
5 there, it starts to corrosion over again.

6 All these piping systems were designed to
7 last 50 years, and still be within a margin of safety
8 just for the thickness of the pipe.

9 So they are just plain carbon, carbon
10 steel pipe. And they last that long, and they did a
11 lot of corrosion studies to show that they would last
12 that long. They have a lot of data.

13 CHAIRMAN BONACA: I would expect also that
14 if you had a lot of corrosion going on and tests that
15 you performed once a year, it would show the clogging
16 of the sprinkler heads at the end of the rods.

17 DR. KRESS: Except that they don't check
18 the sprinkler heads as I understand it.

19 DR. BARTON: They normally just check
20 flow.

21 CHAIRMAN BONACA: Just the flow, and as I
22 was saying, you would have a lot of junk coming
23 out.

24 DR. KRESS: I don't think so, because I
25 think they would tap in before you get to the heads.

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1 You wouldn't find out anything about the heads.

2 CHAIRMAN BONACA: No, I am talking about
3 the corrosion of the piping.

4 DR. KRESS: Well, you would find out
5 whether they had crap in the water, yes.

6 MR. DAVIS: And we have had plenty of
7 discussions on this, and what we should do, and
8 reflecting about maybe putting or changing it as well.

9 And should we make them if they are going
10 to go into the pipe, look and see if there is any
11 corrosion, and I really recommended against that, and
12 I think the better approach would be to do some
13 ultrasonic measurements, and not disturb the pipe,
14 because you are really doing more damage by opening it
15 up and looking at it, because you are reintroducing
16 oxygen into it.

17 DR. KRESS: And then you have a problem as
18 to where to do the measuring.

19 MR. DAVIS: Right. And so that's what we
20 are saying, and saying in GALL -- well, I am not sure
21 that we have made the change, and that would be to do
22 ultrasonic measurements for wall thickness and see if
23 you are losing wall.

24 DR. FORD: Well, that all makes technical
25 sense, but where does it appear in the formal

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1 paperwork?

2 MR. DAVIS: I am not sure that we
3 addressed it with Hatch, because it was only a couple
4 of weeks ago that we had a really big meeting, and
5 discussed this for GALL. Maybe we need to take
6 another look at that.

7 MR. BURTON: Well, it is another example
8 of where some of the ongoing work timing wise gets
9 cross-purposes. So as we resolve this issue, one of
10 the things that we have to do is to go back and see,
11 number one, how does it affect those folks who are
12 going through license renewal right now, and how does
13 it affect the people who are getting ready to come in
14 and maybe far enough along in their application that
15 they can't really get to it.

16 And in which case obviously we would go
17 through an RAI process to get our arms around it. And
18 then how does it affect folks who perhaps already got
19 their license, and then you get into the whole back-
20 fit issue and stuff.

21 But those are all things that as we get
22 these emerging issues coming out, how do we address
23 it, not only -- well, you know, once we have resolved
24 it, how do we address it for applicants and licensees
25 at different phrases.

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1 So I don't have an answer for you, but it
2 is something that the staff is aware of, and that we
3 try to do for each one of them.

4 Next, open item 3.1.28-1, RHR heat
5 exchanger inspection and testing. An issue came up
6 with how do he provisions in the aging management
7 program manage aging, or manage damage that may result
8 from vibration, vibration-induced cracking.

9 And we asked basically for a lot more
10 information about their methods, and their
11 frequencies, and all the things that you see there, in
12 addition to there was a tube leak in '96, and we
13 wanted to get a little bit more information about how
14 that was looked at, and how it was ultimately
15 dispositioned.

16 There were some issues with dents and
17 things like that, and the augmented inspection and
18 testing program, which I spoke about before, that is
19 really the main aging management program that deals
20 not just with the RHR heat exchangers, but all the
21 components in RHR.

22 But this one also includes activities that
23 ultimately between the inspections and all that stuff
24 will tell you whether or not there is some tube
25 damage, and whether it is due to vibration or anything

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1 else.

2 So they provided that additional
3 information to try and clarify that the actions are in
4 fact adequate to detect that sort of thing. And then
5 like I said, they also gave us some additional
6 information on the operating experience they had
7 associated with the tube leak.

8 DR. BARTON: Before you get off of that,
9 look at the words in the SER. You asked four specific
10 questions, and the licensee responded, but they didn't
11 fully answer your question, and yet you signed this
12 thing off.

13 The first thing you asked for was to
14 provide information on inspection methods,
15 frequencies, acceptance criteria, about bases, et
16 cetera, et cetera, and they tell you I am going to do
17 any current testing every 10 years.

18 MR. BURTON: Right.

19 DR. BARTON: Well, they didn't say
20 anything about any acceptance criteria, associated
21 bases.

22 MR. BURTON: Okay.

23 DR. BARTON: And then in Item C, you ask
24 for inspection criteria, et cetera, et cetera, and
25 they said, hey, we are going to do general visual

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1 inspections of the RHR heat exchanger every three
2 operating cycles.

3 And if you are satisfied with that, that's
4 fine, but I don't think they answered fully what you
5 asked for -- A, B, C, and D. They gave you partial
6 answers. So maybe you are happy, and maybe there is
7 something that is not in the SER. I don't know.

8 MR. BURTON: You just hit the nail on the
9 head. Actually, some of the supporting information
10 for the bases and stuff was actually in response to an
11 RAI, and it didn't get transferred into the final SER.

12 And now that you have said that, it
13 probably ought to be in there for clarification. But
14 let me give you the answers.

15 DR. BARTON: Okay.

16 MR. BURTON: For the leak testing and the
17 RHR heat exchange of the tubes and tube sheets, what
18 they said, and I think this is in the SER, that they
19 do 10 percent of the operational tubes.

20 DR. BARTON: Every 10 years, right.

21 MR. BURTON: Every 10 years. The basis
22 were test results that they have done on three heat
23 exchangers, where they found no damage. And they also
24 have a 5 percent margin, in terms of excess tube
25 capacity, to take into account when they -- if they

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1 have to do any tube plugging.

2 And so that is what they used to provide
3 assurance that they could catch anything between the
4 intervals.

5 DR. BARTON: All right.

6 MR. BURTON: In terms of the general
7 visual inspection that you talked about -- and again,
8 for 10 years -- the basis was actually a Sandia Lab
9 report that recommended --

10 DR. BARTON: When you say every three
11 operating cycles, are they on a 24 month cycle?

12 MR. BAKER: We are going to 24 months.

13 DR. BARTON: You are going to 24.

14 MR. BURTON: Yes, every three operating
15 cycles.

16 DR. BARTON: Every three operating cycles.
17 Okay.

18 MR. BURTON: And shell side every 10
19 years, with bundle supports and some other things.
20 That was based on the Sandia Lab report, and again
21 operating experience.

22 You know, some satisfactory results from
23 some previous inspections. But you are right. None
24 of that got into the SER, and it probably needs to be
25 included.

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1 DR. BARTON: Thank you.

2 CHAIRMAN BONACA: And you do have what you
3 asked for?

4 MR. BURTON: Yes. Yes, in response to the
5 RAIs.

6 DR. BARTON: Well, I just didn't see it,
7 Butch, and it should be in here I guess.

8 MR. BURTON: Well, I am going to make a
9 note of that.

10 MR. BAKER: Butch, I have that response
11 here if you need it.

12 MR. BURTON: Oh, okay. So we will make
13 sure that we get all of that to the SER. Let's see.
14 Next. Open Item 3.2.3.1.1-1, having to do with cast
15 austenitic stainless steel components, CASS
16 components.

17 The issue was that we know from the
18 science that CASS or Cast Austenitic Stainless Steel
19 components, can be susceptible to a loss of fracture
20 toughness as a result of thermal and neutron
21 embrittlement.

22 We also know that that will come about if
23 there is evidence of cracking in the components. If
24 there is no cracking, then you won't see the effect of
25 the thermal and neutron embrittlement on loss of

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1 fracture toughness.

2 So the staff said, okay, well, let's do a
3 one time inspection to see if there are any cracks in
4 the components. We should ask for that. We did some
5 additional discussions about that, and in the end we
6 determined that probably at this point a one time
7 inspection probably isn't warranted and here is why.

8 First of all, when you look across the
9 industry, in terms of operating experience, there
10 really is no evidence of cracking in these CASS jet
11 pump assemblies and fuel supports. These are the
12 components that were under question.

13 The other portion was that the assembly
14 welds are already being inspected as part of VIP-41,
15 and that these welds actually would show evidence of
16 the aging effect before the CASS components in
17 question.

18 So this is sort of the precursor to it.
19 Once you found it in the welds, then that would direct
20 you through to the corrective actions process to
21 perhaps look at this.

22 But this is where you would find it first.
23 So based on that, we said, well, it is probably not
24 appropriate since we have not seen it, and we have a
25 precursor for it, it is probably not reasonable to ask

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1 for it.

2 CHAIRMAN BONACA: Well, you have
3 inspections that would be a precursor to identify
4 that?

5 MR. BURTON: Right.

6 CHAIRMAN BONACA: You do have inspections.

7 DR. FORD: What is your basis for saying
8 that, that the assembly welds should be from a timing
9 component more susceptible in CASS.

10 MR. BURTON: Okay. We are going to talk
11 a little bit more about the science, and I --

12 DR. FORD: Well, it is not the science for
13 science sake. You are using that as a leader of the
14 fleet.

15 MR. BURTON: Yes.

16 DR. FORD: And I am just questioning what
17 --

18 MR. BURTON: Well, I can have perhaps
19 Robin speak to it or Barry.

20 MR. DYLE: I can speak to it from the VIP
21 perspective, and I am not sure who the staff evaluator
22 was. This is Robin Dyle. Peter, one of the things
23 that we looked at when we developed VIP-41 was that
24 the material and those welds are more susceptible to
25 IGSCC than the CASS material is.

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1 And the inspection program requires all of
2 that to be inspected, and to do examinations of the
3 welds, and the wrought material, and that would be a
4 precursor before we would have to worry about cracking
5 in the CASS material itself, just by the general
6 nature of IGSCC and the material properties.

7 And the only way that you are concerned
8 about fracture toughness is once you have the
9 cracking, and so the inspection program -- and about
10 half the fleet has already done these the best that we
11 can tell.

12 And if you are looking at the entire jet
13 pump assembly in all 20 of them, based on how the
14 wrought material and the welds are behaving, that
15 would be a precursor before you would have to worry
16 about these actual CASS austenitic abusers that are at
17 the bottom.

18 That is the way that the program was put
19 together. The practical side of it is that when you
20 go down with a camera, and you have got it calibrated
21 to do an EVT-1 or a VT-1, knowing what the distance is
22 in the aim, unless you are going to be looking at
23 these things also jus while you are putting the camera
24 in place to look so that there will be some -- I
25 started to say collateral, but that's not the best

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1 term. You want to avoid that term these days.

2 There will be some additional inspections
3 that occur that we just actually have not taken credit
4 for, but we know that it will happen.

5 And we are confident that what we would
6 see in the wrought and the welds would be a precursor
7 to anything being a problem with the CASS austenitic
8 material.

9 Also, as we go forward with HWC and open
10 metal, we can also do things to further minimize
11 concerns.

12 DR. FORD: I guess my problem with this
13 particular one was the statement that because we
14 haven't seen cracks, you never expect to see a problem
15 because the parent material being brittle.

16 And you are leaving aside the fact of how
17 -- that if you are going to see a crack, then how did
18 it get there to start with. And there is no reason at
19 all why you could not have some sub-critical crack
20 that you have not yet seen.

21 And to say that in the year 2035 or 2040
22 that these sort of flux levels, and therefore
23 fluences, that you wouldn't see some sub-critical
24 crack growth in the CASS material.

25 And that's why I was questioning that if

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1 you are going to use the assembly welds, that there
2 are so many variables which control the initiation and
3 growth of a crack in a weld --

4 MR. BURTON: Well, this is hardly -- well,
5 this is 10 to the 17th.

6 DR. FORD: I agree with you, Bill.

7 DR. KRESS: This is mostly thermal don't
8 you think?

9 DR. SHACK: I think the embrittlement is
10 probably neutron. I mean, 10 to the 17th does a
11 wonderful job in embridling fahrenheit islands, but
12 it is not going to produce IASCC in a non-submittal.

13 DR. FORD: I agree with you. I am just
14 pushing the questioning, and the assumption that if
15 you haven't seen a crack now, at this time in its
16 life, it doesn't mean to say that you are not going to
17 see it in 10 years. I mean, our industry is bedeviled
18 by that argument.

19 MR. CARPENTER: Dr. Ford, this is Gene
20 Carpenter, and --

21 CHAIRMAN BONACA: Point A I think was
22 pretty irrelevant to the answer to some degree, and I
23 think Point B was the one, because we were looking for
24 an inspection program. Point B is where the whole
25 issue is.

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1 I mean, how credible it is that as you
2 inspect the welds, you will also see cracks in the
3 CASS components. I don't know, and that is a good
4 question.

5 DR. SHACK: You will never see the crack
6 in a CASS component until it busts. You are probably
7 better off inspecting the welds.

8 CHAIRMAN BONACA: Okay. So you are saying
9 that the welds are only a precursor. Okay. That's
10 right. You're right.

11 DR. SHACK: But I probably believe your
12 argument about IGSCC susceptibility. In Peach Bottom,
13 where did the fatigue cracks occur? Were they at the
14 welds, or were they in the elbows? So there is
15 another mechanism potentially for cracking here
16 besides IGSCC.

17 MR. DYLE: Let me be careful -- this is
18 Robin Dyle again. Let me be careful on how I answer
19 that since I don't work at Peach Bottom. I think you
20 are talking about the jet pump riser pipe cracking is?

21 DR. SHACK: Yes. I don't know. All I
22 know is that they had a peak problem, and I don't have
23 any idea where it was.

24 MR. DYLE: That was in the jet pump riser
25 pipe and that is wrought material and it is down where

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1 the nozzle is inserted into the vessel, and it is that
2 elbow. And it was wrought, and so it was a
3 combination of IGSCC and then fatigue.

4 These CASS materials are further
5 downstream, where the defusers sits on the jet pump,
6 and the jet pump defuser sits on the shroud support,
7 and actually injects the water into the bottom end
8 region.

9 But we have seen cracking in the jet pump
10 assemblies and the wrought material, and at the weld
11 locations. Not to date in the CASS material. So we
12 do have the inspection program that looks at the whole
13 assembly.

14 And I believe that the precursor would be
15 more thorough inspections in that more susceptible
16 material.

17 MR. BURTON: Okay. Thank you, Robin. Now
18 -- oh, I'm sorry. Gene.

19 MR. CARPENTER: I just wanted to reply to
20 Dr. Ford's question. Basically, you are right. There
21 are things that could occur in 10 years that we don't
22 expect today.

23 And to address that, we are trying at this
24 time to put into place a research program to look at
25 the effects of the radiation embrittlement, et cetera,

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1 on these CASS components.

2 And I can't tell you that it will be in
3 place in Fiscal 2002, but it will be in place well
4 before any of these plants go into the license renewal
5 term.

6 DR. FORD: Now, as well as the kinetics
7 embridlement, what about sub-critical crack growth?

8 MR. DYLE: That is part of the program
9 that we are talking about at this time with our
10 research department, the Office of Research
11 Department.

12 MR. BURTON: And the truth is that we
13 didn't want to include it in the SER at this point
14 because it isn't a firm commitment on either side
15 right now. We expect that it is going to be done with
16 budgets and things like that at the point that we were
17 doing the SER.

18 There was no short commitment for that,
19 and so we decided not to put it in, but as Gene said,
20 we expect that to happen.

21 CHAIRMAN BONACA: Well, you do have a
22 discussion in the SER regarding that on page 135,
23 right?

24 MR. BURTON: Yes. Yes. Right.

25 CHAIRMAN BONACA: Well, we are running

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1 late, and so for those items, we will just have
2 confirmation. You know, you asked for confirmation
3 from the licensee and he gave it to you, and just try
4 to go fast.

5 MR. BURTON: For the remaining things?

6 CHAIRMAN BONACA: No, no.

7 MR. BURTON: Oh, you are still on this
8 one? I'm sorry.

9 CHAIRMAN BONACA: No, I am talking about
10 on the future items that you are going to present us
11 with, and which you are asking for a question to them,
12 and they say yes, and that's what it is, try to go a
13 little faster.

14 MR. BURTON: A little faster. Okay.
15 There is just a couple of more in this portion, and
16 let me do this a little expeditiously. Open Item
17 3.6.3.2-1, two items regarding the primary
18 containment.

19 The first was that we were a little bit
20 unclear as to what was being credited to manage aging
21 in the TORUS, and what they did was that they provided
22 us with a drawing that showed very clearly the aging
23 management programs that were being credited, and
24 there are a number of them.

25 Basically, and I have jotted it down

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1 because there is no way that I can remember it all,
2 but what they did was they identified the programs to
3 manage aging for the TORUS above the water line, and
4 then there was another set of aging management
5 programs below the water line, and in the splash zone.

6 Above the water line, they took credit for
7 in-service inspections, primary containment leak
8 testing, protective coatings, and the CCTLP, fatigue
9 monitoring basically.

10 Below the water line in the splash zone,
11 they took credit for water chemistry, and associated
12 inspections. So they did clarify that, because at
13 first we weren't sure how it was being done, and in
14 fact it is being done by a combination of aging
15 management programs.

16 So that was the final resolution for Issue
17 Number 1. For Issue Number 2, this is another example
18 when we asked this open item, this was being dealt
19 with as part of GALL, and again timing wise, it was
20 for kind of cross-purposes.

21 But in the end this issue was clarified
22 both in GALL, and Hatch's position is consistent with
23 that, in that they are going to use performance based
24 requirements and criteria to ensure that the
25 penetration leakage and overall containment leakage

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1 doesn't exceed the tech specs limits. That is
2 consistent with GALL.

3 DR. BARTON: Well, in the initial item on
4 the TORUS water level, above and below water level
5 inspection, as I read the applicant's response, they
6 say they have taken credit for the protective coating
7 program for TORUS penetrations above the water line?

8 MR. BURTON: Yes.

9 DR. BARTON: I didn't get out of there
10 what program is covering corrosion below the water
11 line.

12 MR. BURTON: Below the water line? Okay.

13 DR. BARTON: I couldn't find that.

14 MR. BURTON: Okay. It should be right
15 there.

16 MR. DYLE: If you recall, one of the
17 clarifications that I provided you is that the
18 protective coatings also should have been applied in
19 the SER wording to the penetrations below the water
20 line.

21 MR. BURTON: Right. That's right.

22 DR. BARTON: Well, it is not in there now
23 though.

24 MR. DYLE: It was not in the SER, but it
25 is --

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1 MR. BURTON: Yes, the protective coatings.
2 Right. That's right, and he had already pointed that
3 out and we will have to take a look at that.

4 DR. BARTON: Okay. That was my problem
5 with it.

6 MR. BURTON: Oh, just with the protective
7 coatings?

8 DR. BARTON: Well, to address what program
9 covers below water line. It is not answered there.
10 It is not in the current SER, unless I missed it.

11 MR. BURTON: On page 3-196.

12 DR. BARTON: Okay. I was looking back
13 here.

14 MR. BURTON: That was kind of a summary of
15 some of the stuff, but it is in the body.

16 DR. BARTON: It is covered in the body?

17 MR. BURTON: Yes.

18 DR. BARTON: Okay.

19 MR. BURTON: Okay. So I did identify the
20 aging management programs, and protective coatings was
21 missed, and we are going to have to include that.

22 DR. BARTON: Okay.

23 MR. BURTON: This is the last one of the
24 open items that did not go to appeal. Open Item
25 4.1.3-1 had two parts to it. Part (a) did not go to

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1 appeal, and Part (b) did. So I will be talking about
2 Part (b) after the break.

3 For Part (a), it had to do with fatigue
4 analyses, and the issue was -- well, actually, there
5 were a couple of questions. For the vessel internals,
6 how was the fatigue analysis found to be acceptable
7 for the 60 years, for the extended term.

8 And Section 4 covers TLAAAs, and as you
9 know, disposition of TLAAAs, there are three options.
10 Either you can show that the analyses are already good
11 for the extended term, and you can project the
12 analyses or the evaluation to cover the extended term,
13 or you manage.

14 It turns out that they clarified that the
15 fatigue analysis for the internals was projected over
16 the 60 years, and found to remain below one, and
17 therefore met the second requirement.

18 And for the second part of the question,
19 were there any other coolant pressure boundary
20 components that were subject to fatigue analysis, and
21 if so, how was that disposition, and they said that
22 the -- they clarified that they didn't identify any
23 other reactor and pressure boundary components that
24 that would apply to.

25 And that's it. That was the last of the

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1 open items that we resolved without going through
2 appeal. Any questions on any of that?

3 CHAIRMAN BONACA: If not, let's take a
4 recess for 15 minutes. Let's meet at a quarter-of-11,
5 and we will review the appeal issues or items.

6 (Whereupon, at 10:30 a.m., the meeting was
7 recessed and resumed at 10:45 a.m.)

8 CHAIRMAN BONACA: Let's start the meeting
9 again. We have now a presentation on the appeal
10 process, and then a discussion of the six items
11 resolved by appeal.

12 MR. BURTON: Okay. I am going to try and
13 go through this fairly quickly. But Southern Nuclear
14 had mentioned that there were a couple of things from
15 last session that they wanted to clarify, and if you
16 wanted to go on and do that real quick, Chuck.

17 MR. PIERCE: Yes, my name is Chuck Pierce.
18 One item had to do with whether the commitment
19 tracking program at Plant Hatch was an Appendix B
20 Program, and I would like to clarify that in fact it
21 is an Appendix B program, rather than what I said
22 earlier.

23 It is audited by our QA organizations, and
24 falls under Appendix B. The other clarification had
25 to do with whether the guard pipe inspection

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1 activities that we are planning in the outage
2 schedule.

3 Two items here. The action item tracking,
4 Item 4 of this work, has been generated already. So
5 it is scheduled in that sense. It falls below the
6 level that you would see in the outage schedule or the
7 work schedule, per se.

8 But it is in fact scheduled by action item
9 tracking, and then the maintenance work order will be
10 generated as we get into the time to do that work.

11 MR. BURTON: Okay. Of course, Dr. Barton
12 isn't here to hear that, but --

13 MR. PIERCE: I did mention to Dr. Barton
14 as he went by about the Appendix B item.

15 MR. BURTON: Okay. Moving right along
16 here, I am going to go over the six open items that
17 did go through appeal. There were two appeal
18 meetings, one on March 29th at the branch level; and
19 a second appeal meeting on June 6th at the division
20 level.

21 And what I want to do is just go through
22 this chart very quickly to explain how the process
23 works. This is a relatively old chart, and I think
24 some of this may have changed, but I think that the
25 relevant part is still relevant.

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1 Any time we have a disagreement -- what
2 did I say?

3 CHAIRMAN BONACA: Just keep going.

4 MR. BURTON: All right. When we have a
5 disagreement, we take it and the first level of appeal
6 is at the branch level, and we had several of the
7 items that did that. If we resolve them at the branch
8 level, great, and we continue on with our business and
9 close it out.

10 If we continue to have a disagreement, we
11 then go to the division level, and that is the next
12 level of appeal. Again, if it is resolved, which it
13 was in this case, and so we followed this branch, and
14 resolved the comments.

15 And the resolution was established and
16 implemented in the SER. So that is the branch that we
17 actually took. If there continued to be a
18 disagreement at the division level, we would go on and
19 move to the office level and so on.

20 But for our work with Hatch, we followed
21 this patch here, and of course we keep the license
22 renewal steering committee informed of our progress in
23 this. So that is how the appeal process works.

24 CHAIRMAN BONACA: Is this process unique
25 to the license renewal, or is it a process that is

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1 used in other areas?

2 MR. NAKOSKI: This is John Nakoski with
3 NRR. I think this is a typically and fairly informal
4 process that is used throughout any licensing activity
5 or licensing action.

6 Essentially, if the staff and the licensee
7 can't agree, we apply ever increasing levels of
8 management attention until we come to a final agency
9 position that may be in alignment with what the
10 licensee asks, or it may not.

11 But having the burden of making a
12 regulatory decision, once we have gotten our
13 management to agree we established a regulatory
14 position and move forward. So I would say that this
15 is an informal process that has been used typically
16 throughout all licensing activities.

17 DR. KRESS: Suppose the lower level staff
18 that raised the issue in the first place continues to
19 disagree with the resolution after he gets up to the
20 higher level?

21 MR. NAKOSKI: The recourse is that the NRC
22 -- well, we fully support the right of any individual
23 on the staff to have a differing professional view or
24 differing professional opinion, and we will take
25 appropriate actions consistent with those programs.

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1 DR. KRESS: Okay. Thank you.

2 MR. BURTON: The first open item, Seismic
3 2 over 1. We have spoken a little bit about it in the
4 previous session. The issue is that structures,
5 systems, and components that have been identified as
6 seismic 2 over 1, should those be in scope and be
7 subject to an AMR.

8 The specifics of what brought this to
9 light had to do with some piping segments that were
10 seismically supported, and as a result of being
11 seismically supported, Southern Nuclear felt that the
12 associated pipe segments didn't need to be brought
13 into scope, because with them being seismically
14 supported, they wouldn't fall during a seismic event.

15 And we asked them to consider that, and
16 they considered it to be hypothetical, and the reason
17 that it is hypothetical is that there has been no
18 industry experience of piping, whether new or old
19 piping, that has actually fallen during a seismic
20 event.

21 The staff's position was that when you
22 look at operating experience, we in fact have a lot of
23 operating experience that shows that pipes have failed
24 due to age related degradation mechanisms.

25 And that in that respect, failure of the

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1 piping is not hypothetical, and should be considered
2 in the scope and be subject to an AMR. There was a
3 lot of discussion on this issue.

4 And where we are now is ultimately there
5 were some additional components that were brought into
6 scope, and subject to aging management, but as a
7 result of the discussions, we realized that there is -
8 - that this is a generic thing that needs to be --
9 that resolution needs to be incorporated into some of
10 our guidance documents.

11 And that's where we are now. What we did
12 in the short term is we developed -- we are developing
13 the staff position, but for those plants that were
14 right after Hatch, which are going through now --
15 Catabawa, Peach Bottom, Maguire, and some of those --
16 this is also an issue that needs to be captured.

17 So the first thing that we did was we
18 developed a series of both scoping and aging
19 management RAIs to begin to understand what they put
20 in scope, and what they didn't, and why.

21 And then once we understand what is in
22 scope, exactly how is that to be managed. So in the
23 short term, we have developed and distributed RAIs so
24 that we can do that with some of the applicants behind
25 us.

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1 We also have to look at it as we document
2 the position and put it in the guidance documents.
3 Now we have to apply it to the folks who already have
4 their license, and does it raise to a level -- you
5 know, go through the whole back fit thing, and see
6 whether it needs to be addressed there.

7 So we are trying to capture the whole
8 thing with the Seismic 2 over 1, and what we are doing
9 right now is we are actually working on the staff
10 position.

11 Next, Open Item 2.3.3.2-2, aging
12 management review for the housings of active
13 components. The issue was raised that for active
14 components the actual housing for those should be
15 subject to an AMR.

16 And it actually came into play for four
17 specific systems; standby gas treatment, control
18 building, outside structures, and reactor building
19 HVAC.

20 Southern Nuclear's position was that what
21 the staff was asking for was basically to do a piece
22 parts review, and if you go to the rule and some of
23 the supporting documentation, what it specifically
24 calls out are valve housings and pump casings.

25 It specifically calls those out as

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1 requiring an AMR, and Southern Nuclear's position was
2 what needs to be done is already identified, and
3 that's all we need to do.

4 The staff's position was, no, we see the
5 valve housings and pump casings as being examples of
6 what needs to be done, and it needs to be expanded
7 beyond that to cover other housings for active
8 components where there may be a pressure boundary
9 function, and things like that.

10 So that was the source of the conflict and
11 why it went to appeal. It went through the first
12 level of appeal as I recall, and in the end the
13 resolution was that the housings would be brought into
14 scope and be -- well, it was already in scope, and be
15 subject to an AMR.

16 And again the associated aging management
17 information was brought with it. But we did recognize
18 that the issue of the housings, we need to somehow
19 clarify that in our guidance documents that it is more
20 than just the valve housings and the pump casings.

21 CHAIRMAN BONACA: Because this is not the
22 first time it comes up anyway.

23 MR. BURTON: Right. Exactly.

24 CHAIRMAN BONACA: Now, let me understand
25 one thing. Here you say that it has to be developed

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1 into a guidance, and of course it will be some place
2 for guidance, and there are guidance documents.

3 Now, the previous issue of Seismic 2 over
4 1, you said you are developing a staff position.

5 MR. BURTON: Right.

6 CHAIRMAN BONACA: How would that position
7 be conveyed? Also in guidance documents I would
8 imagine?

9 MR. BURTON: Yes, that's right. They
10 would ultimately be in the guidance documents; in the
11 SRP, and the Reg Guide, and --

12 CHAIRMAN BONACA: Well, when you talk
13 about backfitting to the previous applicants, but I
14 thought this issue of 2 over 1 already was dealt with?
15 I mean, it came up before.

16 MR. BURTON: Yes, and I probably
17 mischaracterized that. With previous applicants, it
18 may have been dealt with in other ways. For instance,
19 I think with ANO, they had actually -- it actually had
20 its own specific category.

21 It was -- I can't remember what it was
22 called. So it may in fact have been dealt with with
23 previous applicants, but the thing is that part of our
24 process is that we have to just make sure that it is.
25 That is the main thing.

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1 CHAIRMAN BONACA: Okay.

2 MR. BURTON: The next issue is 3.2.2.3-1,
3 small bore piping. The staff recognized that small
4 bore piping could be subject to high cycle thermal
5 fatigue due to either thermal stratification or
6 turbulent penetration, or it could be susceptible to
7 intergranular stress corrosion cracking.

8 So we needed to have that captured in an
9 aging management program. What Southern Nuclear did
10 was that they looked at all of their small bore
11 piping, and looked at it from both a susceptibility
12 standpoint and a consequence standpoint.

13 And after going through all the small bore
14 piping, what they identified was about -- I don't
15 know, about a 2 foot section of the --

16 MR. BAKER: Four foot.

17 MR. BURTON: Four foot -- of the enclosure
18 for the electrochemical potential sensor. The
19 enclosure for that seemed to be something that should
20 be within the scope of this aging management program;
21 the treated water systems, piping and inspection
22 program.

23 And what that does is it is a series of
24 one-time inspections just to confirm again -- and as
25 we spoke before, just to confirm that there is no

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1 adverse aging degradation.

2 So the scope of this aging managing
3 program was revised to include that portion of the
4 piping.

5 MR. BAKER: Butch, could I clarify?

6 MR. BURTON: Sure.

7 MR. BAKER: That was always within the
8 scope of the treated water. We just clarified
9 explicitly that it was in scope.

10 MR. BURTON: Right.

11 CHAIRMAN BONACA: Well, what happens if
12 you -- the expectation is that you have no cracking
13 due to -- well, that is a one-time inspection, and you
14 are really doing that for confirming that the effect
15 is not taking place.

16 Should you find that, would these
17 inspections be expanded to other components; that is,
18 more piping, or not?

19 MR. BURTON: Yes, and again, as we had
20 said before, the corrective actions program captures
21 any of those kinds of problems, and once it is fed
22 into the corrective action program --be expanded

23 CHAIRMAN BONACA: So that will be a
24 leading indicator?

25 MR. BURTON: Right.

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1 MR. BAKER: One thing. If you did start
2 finding some of this cracking, you could actually look
3 and see what type of a program you need to put in
4 place to manage it.

5 So the one time inspections would probably
6 cease at that point, and you would come up with a
7 program that managed the cracking for the compliments.

8 CHAIRMAN BONACA: Well, you are talking if
9 you need further inspections, or why not.

10 MR. BAKER: Exactly.

11 MR. BURTON: That's correct. The next one
12 was Open Item 3.6.3-1(b), reactor building controlled
13 in-leakage. At this point in time in the review, what
14 Southern Nuclear was crediting was maintenance of
15 individual penetrations to make sure that the
16 degradation was not so bad that leakage would be a
17 problem.

18 The staff's position was that that is fine
19 for each individual penetration, but you have to look
20 at the cumulative effect, even though leakage for
21 individual penetrations may be acceptable, and when
22 you look at it on a global basis, we still may not be
23 able to maintain the in-leakage limits.

24 So the staff's point of view is, well, we
25 already do the draw-down test for the standby gas

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1 treatment system, and why don't we credit that as an
2 overall gross indicator for the entire building that
3 leakage is being maintained.

4 Because we recognize that even though it
5 is okay at the individual component level, globally
6 there might be a problem. Southern Nuclear felt like
7 that was overkill, and that basically if we adequately
8 managed the penetrations that should take care of the
9 wider in-leakage problem.

10 Again, they took it to appeal, and when
11 all was said and done, they did decide that we will
12 credit it. We are doing it now anyway, and we are
13 going to continue to do it in the license term, and we
14 will go on and take credit for it. So that's how that
15 was done.

16 CHAIRMAN BONACA: I just have a question
17 here. Given that you are performing the tests anyway,
18 you must have had a reason for trying to have it
19 included in the commitment for license renewal.

20 MR. BAKER: We believed that the test was
21 really a very gross test and added nothing to any
22 assurance relative to aging management. The threshold
23 for detectability of a leak was probably on the order
24 of 2 square foot on one unit, and about 4 square foot
25 on the other unit.

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1 So we felt that that was really not going
2 to add anything of value. I think the resolution of
3 it was that in fact, yes, you are doing that test
4 anyhow, and so there is really no regulatory burden,
5 and we agreed.

6 And so we have agreed, and the resolution
7 of it is that we will do the test. It is a tech spec
8 requirement as it is.

9 CHAIRMAN BONACA: And is that the course?
10 I wasn't aware of that. Okay.

11 MR. BURTON: Actually, I think this is the
12 last one. Again, I mentioned to you that open item
13 4.1.3-1 had two parts to it. Part (a) wasn't
14 appealed, and I discussed that earlier. Part (b) was
15 appealed.

16 This is the next to last one. Pipe break
17 criteria is a TLAA. The issue was postulated pipe
18 break locations meet the TLAA criteria, and should be
19 evaluated as TLAA. Southern Nuclear's position is
20 that it did not meet the six criteria that were
21 necessary for it to be a TLAA.

22 Whereas, the staff said, look, in our
23 guidance documents it says very clearly that this is
24 to be a TLAA. The cumulative usage factor, which is
25 tied up in the identification of break locations, it

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1 is a TLAA, and the associated break locations should
2 be also.

3 So that was the basis of the open item.
4 Again, when all was said and done, the applicant did
5 revise the application to identify or to address the
6 postulated pipe breaks, and the locations are going to
7 be monitored using this component SLIC or transient
8 limit program, the CCTLP. So that was the resolution
9 on that.

10 The final was environmentally assisted
11 fatigue, and I am sure that you all know more about
12 this than --

13 DR. SHACK: Could we just go back to that
14 for a second?

15 MR. BURTON: Oh, sure.

16 DR. SHACK: On the pipe break, I thought
17 the idea was that you would look at pipe break
18 locations again in light of any aging mechanisms that
19 would be going on. Not just fatigue.

20 MR. BURTON: Yes, that's true. Now, let
21 me say up front that I cannot get into it to any deep
22 extent. Our reviewer is not here, and we will see
23 what we can do to answer your question, but I may need
24 to table it.

25 MR. BAKER: The pipe break locations that

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1 we are dealing with here specifically are those
2 outlined and which provide or basically says that for
3 a class one boundary, if you have pipe break, or you
4 have locations that have a CUF greater than .1, it
5 would be a 3-1 evaluations, and predicted values of
6 greater than .1, you would specifically consider that
7 a pipe break location and deal with it appropriately
8 within the 3-1 space.

9 Now, that is the specific issue that is
10 being dealt with here. If we are not dealing with
11 IGSCC, or any other fatigue issues -- and of course
12 there is general fatigue.

13 DR. SHACK: Suppose I had a carpet steel
14 align that I would suspect could be susceptible to
15 FAC. Could I then postulate breaks due to FAC, or is
16 it just fatigue still?

17 MR. BAKER: We would deal with the fact
18 issue separately, or as a separate --

19 DR. SHACK: But that is in your fact
20 control, and so there is no need to postulate, okay,
21 I blew the fact control.

22 MR. BAKER: Right.

23 DR. SHACK: And I have a burst anyway, and
24 that is not addressed.

25 MR. BAKER: Correct.

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1 MR. DYLE: Bill, this is Robin Dyle. Just
2 for one clarification. This goes back a long time
3 that says that when you are designing the pipe
4 restraints how are you going to select the location to
5 look at, and the staff determined in the branch
6 technical position, that anyplace the CUF exceeded .1,
7 and so it was originally a somewhat arbitrary
8 location, and just identify where you would assess the
9 pipe break location.

10 DR. SHACK: It didn't apply when you
11 thought the principal aging mechanism was fatigue.

12 MR. DYLE: Right.

13 DR. SHACK: And you have new aging
14 mechanisms.

15 MR. DYLE: Yes, and so the issue here was
16 whether that should be treated as a TLAA or not, and
17 not whether any of those locations was the only issue
18 to be dealt with. It was just whether it needed to be
19 a TLAA or not.

20 And the argument that we had put forth was
21 that since it was a design parameter, and not really -
22 - this evaluation didn't manage cracking, it was just
23 an old design parameter. That was our argument for
24 why it wasn't a TLAA.

25 But the staff disagreed with that, and as

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1 Butch said, the staff member is no here to address
2 that.

3 MR. BURTON: Is that something that you
4 perhaps want to discuss more about next week?

5 DR. SHACK: Yes, that is a topic that
6 interests me, is that why should I only postulate the
7 break space and not the fatigue.

8 CHAIRMAN BONACA: Yes, because that is
9 really what it does, and it would monitor for fatigue.

10 MR. BURTON: The last item was
11 environmentally assisted fatigue, and as I said, you
12 all have dealt with this ad nauseam I know.

13 DR. SHACK: You always love it, ad
14 nauseam.

15 MR. BURTON: We love it. Thank you, sir,
16 may I have another. The issue was that the staff's
17 position was that the applicant should assess the
18 locations identified in this new reg, considering the
19 applicable environmental fatigue correlations in these
20 other two new regs.

21 As you all know, environmentally assisted
22 fatigue has a long and torturous history. A lot of
23 documentation. The bottom line was that Southern
24 Nuclear had data that was coming from Susquehanna, and
25 was basically saying that this is applicable to Hatch.

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1 Our staff reviewer had some questions
2 about that, the applicability, and felt that it would
3 be more prudent to actually have things in place to
4 actually monitor and collect data at Hatch as regards
5 the environmentally assisted fatigue as recommended in
6 these documents, in terms of locations and fatigue
7 factors.

8 In the end, after our discussion, the
9 applicant did commit to evaluating the six locations,
10 and it was actually incorporated into again the
11 component SLC or transient limit program, aging
12 management program.

13 So they have committed to actually
14 collecting that data at those locations. That was the
15 last open item, and the last couple of things is that
16 I wanted to again identify the three license
17 conditions that we have with the review.

18 DR. SHACK: Before you get into that can
19 I bring up one more issue in the SER.

20 MR. BURTON: Sure.

21 DR. SHACK: It is on page 3-62, discussing
22 FAC. And it says basically that water chemistry
23 control can be achieved by reducing the oxygen content
24 in the water environment. Such a water chemistry
25 control program to mitigate the aging effects

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1 attributable to FAC is not implemented in the Plant
2 Hatch units.

3 I would argue that typically one would
4 mitigate FAC by adding oxygen, and not by reducing it,
5 and I just had a question for Hatch. Do they maintain
6 such a remittable oxygen level?

7 MR. BAKER: We have to have oxygen comply
8 with the code.

9 DR. SHACK: Is that in the BWR
10 environmental -- well, the water chem specs. What do
11 you maintain, 20 PPD or 15 PPD? And that is part of
12 the EPRI water chem specs?

13 MR. DYLE: The normal situation --

14 DR. SHACK: But you ought to correct that
15 statement in the SER.

16 MR. BURTON: Okay. Clarify that a little
17 bit more. All right. Let me write this down just in
18 case.

19 (Brief Pause.)

20 MR. BURTON: Okay. All right. Just a
21 summary of the three license conditions. We already
22 talked about them. One is the standard license
23 condition that says that the FSAR supplement should be
24 incorporated into the FSAR at the next update of the
25 FSAR.

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1 And that is required by 50.71(e); and the
2 other one, the second standard license condition is
3 that all the future actions that were identified in
4 the FSAR supplement should be completed before the
5 beginning of the extended term.

6 And finally the third one was what we
7 talked about before, that they should inform the NRC
8 regarding whether they are going to use the integrated
9 surveillance program associated with BWRVIP-78, or if
10 they are going to use a plant specific program, and
11 identify those actions.

12 So we tied those three things to a license
13 condition. And then finally the bottom line
14 conclusion after the staff's review is that the staff
15 believes that the applicant has met all the
16 requirements of license renewal as required by 54.29.

17 And specifically actions have been
18 identified, and have been or will be taken, either
19 present actions or future actions, such that there is
20 reasonable assurance that the activities will continue
21 to be conducted in accordance with the current
22 licensing basis.

23 And again the guidance documents say,
24 bottom line, what we are trying to do is to maintain
25 the licensing basis in the same manner and to the same

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1 extent in the future, in the renewal term, as it is
2 being maintained now.

3 And we have reasonable assurance that they
4 are taking the actions to do that. Also, the
5 applicable requirements of 10 CFR Part 51, which is
6 the environmental piece of the review, have been
7 satisfied.

8 And finally matters raised under 10 CFR
9 2.758, which is hearings and all of that, have been
10 addressed. There were no hearings, no petitions to
11 intervene, or any of that stuff.

12 So we feel that as a result of the review
13 that we have covered the safety review, and we have
14 covered the environmental review, and there were no
15 intervenors or other issues raised.

16 But that they have all been satisfied, and
17 on that basis, we feel like that they can get their
18 license. As I said, we have also gotten the
19 confirmation from the regions, in terms of some of the
20 follow up inspections.

21 We got some clarification for Dr. Barton
22 about the level of quality for the commitments, for
23 the commitment matrix. So hopefully we are satisfied
24 there. So we recommend that they should get their
25 license.

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1 CHAIRMAN BONACA: And since we are talking
2 about an appeal process, I think I read somewhere or
3 I read some comments maybe from NEI that the appeal
4 process is not working as it should, or something like
5 that. Is everybody happy about the appeal process?

6 MR. NAKOSKI: This is John Nakoski, and if
7 I could just say something about that. NEI has
8 proposed or submitted a proposed appeal process just
9 recently that we have not completed our review on.

10 We will work towards an appeal process
11 that improves the fairness or perceived fairness on
12 the part of NEI, and other stakeholders, and the
13 efficiency of the process.

14 And at this point, I don't think that
15 there is a whole lot more that we can say about that.

16 CHAIRMAN BONACA: Well, I think we were
17 asking some questions on --

18 MR. BAKER: Dr. Bonaca, one other quick
19 item. I just wanted to mention that the NRC has been
20 or has encouraged through the working group or through
21 the steering committee a lessons learned process.

22 And as a result of that encouragement of
23 lessons learned process, the industry as a whole has -
24 - well, when we have identified things that we think
25 could be improved, has made recommendations to the

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1 NRC, and the NRC has been very open about considering
2 those recommendations, and this is just another one of
3 those type items.

4 MR. BURTON: And let me add that just as
5 John had mentioned before, I think people have the
6 impression that Hatch is the first one to go through
7 the appeal process, and my understanding is that that
8 is not true.

9 Some of the other applicants have, and it
10 wasn't as formalized as what I just showed you. So
11 Hatch is the one who has really gone through the more
12 formalized system, and it was our first testing of it.

13 And just like anything else, we found
14 areas where it could be improved, and Southern Nuclear
15 has transmitted some of their suggestions about that,
16 but that, just like everything else in this whole
17 license renewal effort, we have a whole lessons
18 learned process, and how do we take those lessons
19 learned and incorporate them, and try to do things
20 better.

21 And again because this was the first -- it
22 wasn't the first appeal process, but it was the first
23 one that really went through the technical aspects as
24 I tried to show you.

25 CHAIRMAN BONACA: My question was more

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1 directed at understanding the difference between an
2 appeal, a formal appeal process, and the normal
3 process that takes place in an engineering environment
4 where you have levels of management that should be
5 involved in decisions, but certainly should not bypass
6 the technical people and the technical input.

7 And so I am sure that the appeal process
8 is not a process designed to bypass technical
9 insights.

10 MR. NAKOSKI: This is John Nakoski again.
11 I agree with you that it is not the purpose of the
12 appeal process to bypass the technical decisions by
13 escalating it to higher levels of management.

14 CHAIRMAN BONACA: Which I would expect
15 would happen anyway. So that's why I was intrigued a
16 little bit by the process itself.

17 MR. BURTON: One of the things that we
18 have tried to do with license renewal is to try and
19 make it as visible and transparent as possible,
20 because as you know, we have several pillars that we
21 try to meet.

22 One has to do with public confidence in
23 our processes and stuff like that. So we feel like
24 the more that we can clearly show how we do our
25 business, then the better that is going to be able to

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1 instill confidence with our stakeholders.

2 So what you are saying is true. I mean,
3 even before you get on the diagram, there is a whole
4 lot of interaction that has gone -- that is done at
5 the reviewer level, and even at that level it involves
6 a lot of section chief interaction, the first level
7 supervisory action.

8 And if we just reach an impasse where our
9 views are just diametrically opposed, and we just
10 don't seem to be making any progress, then we have to
11 get the first level of management -- and not just at
12 the NRC, but also the applicant's management involved,
13 too.

14 And at that first branch level, and it is
15 not just the NRC who is making this decision. It is
16 also the applicant.

17 MR. NAKOSKI: Butch, let me interrupt here
18 at this point and say that this is not unique to
19 license renewal. This is essentially the same process
20 that we would use anytime there is a disagreement
21 between the staff and an applicant on a licensing
22 action.

23 In license renewal, like Butch was saying,
24 we want to make this -- we want to put this in front
25 of the public, as this is the process that we use in

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1 this space so that you are aware of the activities and
2 actions going on that may appear to be behind the
3 scenes.

4 But we are being open and up front about
5 it, and these discussions go on. We are telling you
6 that they go on, and this is the steps that you need
7 to go through, the licensee or the applicant would go
8 through, if they disagree with us.

9 The bottom line is that we have the burden
10 to make the regulatory decision, and we are going to
11 provide the public with the information that we based
12 our decisions on.

13 MR. BURTON: And also I should clarify
14 that what it says on that diagram, it says
15 stakeholders. There are more stakeholders than just
16 as and the applicant, and the process allows for any
17 stakeholder who has an issue or a question that they
18 feel needs to be brought up. We have a process to do
19 that. And again all to instill public confidence.

20 MR. NAKOSKI: And I guess I would add
21 fairness.

22 MR. BURTON: Right.

23 CHAIRMAN BONACA: Some of these
24 resolutions -- for example, seismic 2 over 1, the
25 discussion in the SER as I said during this meeting is

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1 quite -- is defined. It provides a lot of information
2 about the reasons why. So that's good.

3 In some of the cases, you know, it is more
4 that the applicant decided to just go along with it,
5 for example, and do the test, and it doesn't mean that
6 they are going to be happy about what the resolution
7 is. And they simply said fine.

8 Is there any additional work being done on
9 these issues on a generic basis or not, or is it a
10 closed item? I guess where I am going is that when I
11 look at seismic 2 over 1, you have a very convincing
12 explanation of why aging will bring potentially some
13 fractures in locations that are not really covered by
14 a normal break analysis and so on and so forth, and
15 that makes sense. So you have a solid technical basis
16 to argue from, and I think the issue can be put to
17 rest.

18 MR. NAKOSKI: Mario, I think I would
19 answer that in a generic sense. We would look at the
20 resolution of these open items for generic
21 implications moving forward, and take the lessons
22 learned from that review and apply them to future
23 applicants.

24 If in the case of the standby gas
25 treatment system draw down test, we made a

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1 determination that it was generically applicable, we
2 would look at incorporating that into generic
3 guidance.

4 And I am not presupposing the position,
5 but I am just stating a premise. If we determined
6 that it was generically applicable, we would
7 incorporate that into generic guidance that we have
8 developed.

9 MR. BURTON: And also to understand that
10 there is -- that operating experience plays a big part
11 in this whole thing. In the case of the end-leakage,
12 and what we were saying is that you are maintaining
13 the individual penetrations, but we are not sure
14 whether that is enough on a global perspective.

15 Operating experience as we go along, as
16 they implement management of the penetrations, and do
17 the confirmatory draw down test, we may in fact see --
18 well, that is kind of a bad example, because you have
19 got to do it anyway.

20 But operating experience in general, and
21 let me try to be more general about it, if we find
22 that something really isn't having a real benefit and
23 it is an unnecessary regulatory burden and all that
24 stuff, now this goes beyond license renewal.

25 You always have the normal 50.59 process

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1 to try and provide justification, but we probably
2 don't need to do this anymore.

3 CHAIRMAN BONACA: Are any of these issues
4 still open with NEI? I know that you are looking at
5 a number of generic issues with NEI.

6 DR. BARTON: Well, one that I am aware of
7 was the housings and ventilation, et cetera, et
8 cetera, where if applicants said, hey, NEI Appendix
9 whatever kind of excludes this, but it really doesn't,
10 that there is an issue there.

11 CHAIRMAN BONACA: That's right.

12 DR. BARTON: There is an issue there with
13 the NEI guidance. That somehow has to get closed in
14 or closed out here as a factor.

15 MR. DYLE: That's exactly correct. I am
16 a member of the NEI working group, and Ray Baker next
17 to me is a member of the NEI task force. What NEI
18 does is that they take each of these issues that we
19 have as open items, and they look at them, and we also
20 make a decision on whether they are generically
21 applicable or not, or whether they need to be pursued
22 with further discussions with the NRC.

23 And some of these issues are likely to be
24 discussed further with the NRC staff on a generic
25 level as we move through time. What happens in the

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1 real world here is that when an issue like seismic 2
2 over 1 comes up, the plants that have just submitted
3 haven't -- you know, they were faced with that issue,
4 and as were us, as those plants were making
5 submittals.

6 So you may very well see open items and
7 issues with those plants that are currently going
8 through, and the plants coming in next year after
9 that, there should be enough time to where these
10 issues sort of get some legs to them, and the staff
11 and the industry can come to some agreement on how
12 this should be pursued in the future.

13 MR. NAKOSKI: Mario, if I could, I would
14 just like to take a minute here and go over what I see
15 are the issues that we need to emphasize when we meet
16 with the full committee. I think I have identified
17 four topics that you all would like to hear discussed.

18 The first one is the inspection of buried
19 components, particularly fuel oil storage tanks. And
20 really I think the focus of that is on what is the
21 safety implication of that, and how that relates to
22 the rule. So I think, Butch, if we could focus on
23 that.

24 DR. KRESS: There was another part of that
25 that you might want to think about, and that is for

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1 the codings of various typings and things. I think
2 that the commitment was that whenever they excavate
3 and uncover these in an inspection, that is kind of a
4 loose type of commitment.

5 I don't know that they will ever excavate
6 and uncover those, and --

7 DR. BARTON: Well, you see, the problem
8 that you have got with that, Tom, is that if you don't
9 commit to do an inspection when you are doing an
10 excavation, or you are chasing a leak, how else do you
11 inspect buried -- because there is so much stuff that
12 is buried in the site that there is no program that
13 really makes much sense to go and randomly dig holes,
14 because these holes -- you have got to shore them, and
15 depending on what your soil condition is -- the Oyster
16 Creek excavation was a million dollar excavation.

17 DR. KRESS: So you are telling me that is
18 really the only practical alternative?

19 DR. BARTON: Yes, on the coated buried
20 stuff, yeah. I mean, it is hard to swallow, but --

21 DR. KRESS: Is there no other way to do it
22 besides excavating?

23 DR. BARTON: Well, there is -- well, I
24 guess not. I guess you can run things in pipes and
25 stuff, and look, but --

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1 DR. SHACK: Well, you can put UT and look
2 at it from the inside, but since it is a localized
3 corrosion --

4 MR. NAKOSKI: And you might even miss it.
5 I mean, it is such a localized --

6 DR. KRESS: Somebody mentioned measuring
7 electrical potential?

8 MR. NAKOSKI: Well, let me keep us focused
9 here if I could. It really is when does it become a
10 safety concern, and you are going to have to have some
11 substantial degradation in a buried component before
12 it is going to impact the ability of most of this
13 stuff to do its safety function.

14 So if we stay focused on that, what they
15 are proposing -- and correct me again if I am wrong,
16 but I think that's why the staff included what they
17 are proposing is sufficient.

18 CHAIRMAN BONACA: Well, that is exactly
19 right. On the tanks probably that is the right
20 answer, and to go back to the scope of license
21 renewal.

22 MR. NAKOSKI: Right. And I would even
23 argue that having a similar experience with Mr. Barton
24 at Oyster Creek on service water piping, it would have
25 had to have been a substantial degradation of that

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1 piping before it impacted the ability of that piping
2 to perform its safety function.

3 CHAIRMAN BONACA: Okay.

4 And if I could, the next item that I
5 thought that I heard that we wanted to talk further
6 about is the applicability of NFPA-25 and nuclear
7 power plants raised by Dr. Kress.

8 DR. KRESS: Right.

9 MR. NAKOSKI: And commitment tracking
10 raised by Mr. Barton regarding the level of quality.
11 We got a feedback that that was an Appendix B program.
12 And I am not sure, John, but with that in mind do we -
13 - do you think we need to talk about that further?

14 DR. BARTON: I think what you need to
15 describe to the rest of the committee is how are some
16 of these commitments, or promises, or whatever you
17 want to call them, how is it assured that they are
18 implemented in programs, and how does the NRC make
19 sure that these things get closed. I think that
20 process should be described to the full committee.

21 MR. NAKOSKI: Have you got that?

22 MR. BURTON: Yes, I've got it, and perhaps
23 revise the SER to give a little more information on
24 how that is done as part of the methodology section.

25 DR. BARTON: That's fine.

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1 MR. NAKOSKI: And then the last one is
2 related to the pipe break TLAA raised by Mr. Shack,
3 and I think the fundamental question you had was why
4 are we only considering the postulated pipe break only
5 for fatigue, rather than looking at the other
6 mechanisms.

7 DR. SHACK: Yes. Once you decide that a
8 piping system is susceptible to other kinds of damage,
9 why not pick those as candidates for a pipe break.

10 MR. NAKOSKI: Okay. And those were the
11 four issues. I mean, you had talked about some other
12 SER updates, but I don't think that those necessarily
13 need to be discussed. Was there anything else that
14 the subcommittee wants to add?

15 CHAIRMAN BONACA: Let me do the following
16 now. First of all, I am going to go around the table
17 and first of all ask the members if they have any
18 further questions for Mr. Burton?

19 DR. SHACK: Just a quick one. I stepped
20 out and maybe it was addressed, but one of the unique
21 features of Hatch is the core shroud repair, and it is
22 sort of almost not mentioned anywhere. It is going to
23 be covered by the VIP program, and is that VIP-76 that
24 discusses that?

25 MR. BAKER: The shroud repair was actually

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1 done under VIP-02.

2 DR. SHACK: It is not referenced at all in
3 the SER.

4 MR. BAKER: Right. The reason for that is
5 that VIP-01 was the original inspection criteria, and
6 the VIP-02 was the repair criteria, and VIP-07 was the
7 reinspection criteria, and VIP-63 was the vertical
8 weld inspection criteria.

9 We rolled all of those into one document
10 now, which is VIP-76. So, 76 is referenced, and there
11 is not a staff SE yet on it, but this is a compilation
12 of the other four VIP documents for which there are
13 Ses.

14 So we have rolled them all into one
15 document, and so now an owner goes to one place to
16 figure what to do with everything on the shroud. The
17 shroud reinspection frequency is consistent with what
18 the original designer called for, which is what was
19 specified in VIP-02.

20 And what the staff reviewed and approved
21 when they did the review of the shroud repair itself.

22 CHAIRMAN BONACA: Okay. Any other
23 questions for Mr. Burton? If not, thank you for a
24 very informative presentation.

25 MR. BURTON: Thank you.

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1 CHAIRMAN BONACA: And then what I would
2 like to do is two things. One is to go around the
3 table and get views from the members, and your
4 observations. And also suggestions -- you know, we
5 have to draft a letter report on what are the
6 important points. You may give me that information
7 later by E-mail if you want.

8 MR. BURTON: Excuse me, but am I to assume
9 that I need not go over all of the open items next
10 week?

11 CHAIRMAN BONACA: Well, wait a minute, and
12 then after that I would like to go around the table
13 and suggest what we are going to have in the
14 presentation two weeks from today, whenever it is
15 going to be.

16 So with that, I will start with Mr.
17 Barton, our guest consultant here. What do you think?

18 DR. BARTON: As far as the -- let me start
19 with the items for the full ACRS meeting. John picked
20 up several of them that I had on my list. I think one
21 thing, Butch, that as far as -- and you don't have
22 this much time in a full meeting, but you are going to
23 talk about open items and appeals issues.

24 What I would recommend that you do is to
25 have the list of items, but differentiate between

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1 those that were closed, and the applicant said, yeah,
2 we agree with the NRC's position. So those are really
3 simple, right?

4 But then there are some where there is
5 some action required or whatever. There are two
6 different categories of how these open items were
7 handled, and I think you can save a lot of time by
8 just whipping through all of those where they say this
9 is the NRC's position and we are going to do it.

10 Also, I think you need to have some
11 discussion on the appeal process, and decisions and
12 resolutions, and actions that are yet required to
13 close appeal issues, and discuss the process you now
14 have, and what John mentioned -- and I wasn't aware of
15 NEI proposing a change.

16 So I think the full committee ought to
17 hear how this appeal process is all about, and what it
18 is all about, and what items are still required for
19 those issues that are -- to close those issues that
20 have been appealed.

21 Another one is -- well, Mario talked about
22 part of this also, I think, the handling of the
23 generic type components, the seismic 2 over 1 and fuel
24 tanks, and how will these things be handled in the
25 future so that they don't keep cropping up when you

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1 talk about guidance documents or whatever.

2 And skid-mounted equipment, and housings
3 for HVAC, and those kinds of issues that will keep
4 coming up, and explanations to the committee, and some
5 of those crept up during this discussion with Hatch,
6 and how were they resolved here, and what do you guys
7 plan to do with these things down the road. That's
8 about it.

9 CHAIRMAN BONACA: Any other thoughts in
10 general with the application, and realizing that this
11 is the final presentation to the committee, and after
12 that, hopefully we are going to write a letter after.

13 DR. BARTON: Well, based on what I heard
14 today, there is no burning issues that I have got that
15 should prohibit this thing from proceeding down the
16 path of granting them the extension. I mean, we
17 talked about a lot of issues today, but I think they
18 are all going to get resolved to the satisfaction of
19 the ACRS.

20 CHAIRMAN BONACA: Okay. Tom.

21 DR. KRESS: My issues were pretty well
22 covered by the list he had back here, and with respect
23 to what ought to be presented other than those at the
24 meeting, I don't think you have a lot of time to go
25 over all these open issues.

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1 And what I would do is I would list them
2 and hand them out, and say you guys can read these and
3 read what the issue was, and how it was resolved.

4 But I wouldn't spend a lot of time going
5 over them. I think the main committee is going to put
6 some sort of an ACRS position on whether the license
7 renewal review process was sufficient. So if it were
8 me, I would think about talking about here is the
9 review and the things that we did, and here is how
10 many RAIs we had, and here is how many open items we
11 had.

12 It would be very general. It would be
13 almost one slide that tries to convince the full
14 committee that this was a comprehensive review, and
15 that we went over the review, and the screening, and
16 the scoping process, and we questioned why these
17 things weren't in scope and that sort of stuff.

18 Just as a flavor of what you did so that
19 you can be sure that the full committee thinks it was
20 a comprehensive and thorough review, and that would be
21 my only real recommendation.

22 DR. BARTON: That's a good point, because
23 I think that the committee felt that this was a tough
24 application and hard to follow. That's a good point,
25 Tom.

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1 MR. BURTON: Can I say one thing? I think
2 that is very good. That would actually bring up
3 something that happened at the previous meetings, and
4 --

5 CHAIRMAN BONACA: It doesn't matter.
6 That's fine.

7 MR. BURTON: That's okay?

8 CHAIRMAN BONACA: Yes. In fact, I support
9 totally Dr. Kress' comments because if you look at the
10 way that we format the letter -- you know, you can go
11 back to the Arkansas letter in the spring.

12 We are trying to address scoping and
13 screening being adequate, and we are making a judgment
14 on what you did, and I think it is important that you
15 give us that feeling that your judgment, that your
16 evaluation, was thorough and you feel good about that.

17 And second are the aging effects properly
18 defined, and are the programs appropriate. So we are
19 attempting to pass a judgment on those terms.

20 DR. KRESS: And with respect to that, I
21 would -- you know, we really didn't get it here, but
22 I would add some comment about what aging programs
23 were already in place, and what new ones had to be put
24 in place as a result of license renewal, and not going
25 into any detail.

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1 CHAIRMAN BONACA: In fact, I think it
2 would be very helpful if the existing programs and the
3 enhanced programs, and I believe there are several of
4 those, or five of those, and the new programs.

5 And the fourth thing would be the
6 modifications due to closed items, because there were,
7 I believe, one new or two new one-time inspections,
8 and one of them is part of another program, and it
9 gives us a sense of what took place, and what specific
10 commitments are for the site.

11 And the other thing that I guess that I am
12 continuing here is that the other thing that I think
13 would be important is that often times -- and I
14 realize that you have a limited amount of time.

15 But a lot of issues are -- well, for
16 example, you have in TLAA's, you have certain analysis
17 that you do. But then you have in other programs
18 certain things that support.

19 For example, in the vessel, you have an
20 inspection of the materials, and so on and so forth,
21 and it would be good that those pieces are well-
22 integrated and the programs are supporting in fact
23 analysis, and just some suggestions in that case.

24 And again keep the general message to the
25 full committee regarding the whole application,

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1 because that is really what we are going to write
2 about. And again some element may come from the
3 previous letter or previous report that you made to
4 us.

5 For example, there is clearly an interest
6 in BWRVIPs. I mean, they are supporting other
7 comments.

8 DR. KRESS: With respect to the appeal
9 process, the full committee may not be so much
10 interested in the process itself. I think what they
11 are interested in is that they have a general concern
12 that quite often the technical staff gets overridden
13 by upper management without due consideration of all
14 of the technical elements that go into their decision.

15 And I think the full committee would like
16 some reassurance that that is not the case, and that
17 the process doesn't just do that to it. So rather
18 than just looking at the four processes and what they
19 are, get some assurance that there is due
20 consideration given to the staff's technical views.

21 MR. BURTON: Because the elements of the
22 appeal process are expected from a working engineering
23 organization, and so therefore why do you need a
24 formal one?

25 That's why I think that undoubtedly is an

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1 transparent one, but I think that is in the interest
2 of the committee. Peter, I will let you raise your
3 issues. I was going to talk about CASS, because the
4 conversation at the end left me uneasy, if nothing
5 else, because I am not an expert in materials.

6 DR. FORD: Well, I have two concerns. One
7 is CASS and the justification for one-time
8 inspections, and you are qualifying or inspecting is
9 not necessarily a time dependent degradation
10 mechanism, and so therefore it is very dependent upon
11 when you do that one-time inspection.

12 And I don't follow the justification, and
13 there is the question of tanks, which is not really a
14 big safety issue as I understand it, and the fire
15 protection system I would imagine would be a
16 significant safety impact.

17 And I follow the corrosion argument that
18 if you leave it there and don't open it up, you are
19 not going to have too much corrosion. I can
20 understand that, but I don't see any control of that.
21 And the 50 year thing, that just makes no sense at all
22 to me.

23 CHAIRMAN BONACA: Let me just say that we
24 have gone through a one-time inspection concept a long
25 time, and the expectation of the ACRS has always been

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1 that it is confirmatory of an aging mechanism that is
2 expected to be, or it is not expected to be there.

3 So it is applied to an aging mechanism
4 that it is possible and expected to be there I think
5 is inappropriate. So that is the way we always
6 understood it.

7 So now the only reason why I felt
8 comfortable enough was a listing of some supporting
9 statements, because this morning the pipe was designed
10 to a thickness that would be in fact supportive of 50
11 years of operation.

12 Now, if in fact there is a design, that
13 should have taken into account the corrosion, because
14 that is the only degradation mechanism that I could
15 think of. But I think it is valuable to raise it as
16 an issue, and so we can discuss it.

17 DR. FORD: And it goes beyond just Hatch.

18 CHAIRMAN BONACA: It is central to -- if
19 you look at most of the new programs, there are one-
20 time inspections, and so they are central to the whole
21 license renewal process.

22 DR. KRESS: I think that this is a generic
23 license renewal question, and shouldn't impact
24 anything having to do with Hatch. And like Butch
25 says, it is an ongoing thing maybe -- well, I think

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1 the staff considers it resolved, and that one-time
2 inspections are considered okay.

3 DR. FORD: Well, that is what worries me.
4 Somehow or another it gets into the law that it has
5 passed once, and therefore it is okay.

6 CHAIRMAN BONACA: Well, in my mind, I have
7 always considered it as what you want to do to
8 prevent, recognizing that a lot of things is going to
9 happen and you are going to react to it.

10 So really it is being proactive on the
11 issues that you understand may be there, versus to be
12 ready to be effectively reactive should they happen.
13 Of course, reactiveness also -- that when you accept
14 that, you imply that you can survive the event.

15 I mean, you accept that it could happen
16 because it still would not be a major seismic event,
17 and that sometimes is difficult to distinguish. But
18 what I am saying is that there is an expectation in
19 license renewal that these plants will not have in
20 fact new degradation mechanisms.

21 I mean, that's going to happen, and it is
22 just life, and that we would be proactive enough to at
23 least take care of what we understand today.

24 DR. FORD: The other issue I had was the
25 CASS situation, and how you are going to manage that.

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1 I can follow the argument, but I don't necessarily
2 technically agree with it, about using the degradation
3 of the associated weld as a precursor to the cracking
4 and possible failure of the CASS.

5 I don't necessarily agree with that, but
6 that's an academic point of view as you said, and the
7 whole thing will depend to a certain extent on
8 upcoming data. But I am open, as usual, to academic
9 discussion.

10 CHAIRMAN BONACA: Well, we identified in
11 the beginning four items that would be -- that you
12 will discuss in the committee that were brought up at
13 the beginning, and we can include these two also, and
14 that makes six.

15 DR. FORD: I don't now how it can be
16 presented at the ACRS meeting in a meaningful level.
17 I mean, they are open only for technical discussion.

18 CHAIRMAN BONACA: Well, they in the CASS
19 situation, they can simply state the position that
20 they are taking, the one that says that we will
21 perform the inspections of welds.

22 DR. KRESS: And then as usual, we can
23 discuss it ad infinitum.

24 CHAIRMAN BONACA: Well, the one-time
25 inspection also. We have the specific one on the

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1 fire, and I think we should raise that issue.

2 DR. SHACK: Is it the notion that you are
3 going to use a lead component as a surrogate for other
4 components that you are objecting to?

5 DR. FORD: Yes.

6 DR. SHACK: Is that because --

7 DR. FORD: The kinetics of what is
8 happening in that component --

9 DR. SHACK: So you don't believe that a
10 weld is more susceptible to IGSCC than CASS stainless?

11 DR. FORD: Not necessarily, because we
12 don't have the data to disprove it.

13 DR. SHACK: Well, GE did a lot of data on
14 Tom Devine, and critical --

15 DR. FORD: But that was 20 years ago.

16 DR. SHACK: I know, but --

17 DR. FORD: And it certainly wasn't under
18 radiation conditions, even though there was a low
19 flux.

20 MR. BAKER: But radiation doesn't seem to
21 be something that is going to change it.

22 DR. SHACK: Well, we will have a technical
23 disagreement on it.

24 DR. FORD: But my point is that we have
25 been bitten time and time again by this presumption

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1 that we know what is happening when we don't know what
2 is happening. It is a concern.

3 MR. BAKER: Peter, if I could, just one
4 thing, and I won't be here, but what the staff could
5 discuss is the safety implications. And again there
6 are other things that go into the plant to ensure that
7 there is not a safety issue related to that.

8 You have daily jet pump surveillance, and
9 other things, and so from a safety perspective that is
10 a whole other issue.

11 DR. FORD: Well, if you had to categorize
12 things, you would do it by that sort of thing, and I
13 would put fire protection over the tank for this one-
14 time inspection. And this one here, I would go along
15 and state maybe it is an academic exercise, and it is
16 not a big issue as far as PRAs.

17 And another thing I have got to mention is
18 -- and again this should not be brought up at the ACRS
19 meeting, but just for the record, I do have a problem
20 with some of the disposition curves that are being
21 used for the BWRs in general.

22 There is a huge scatter of disposition
23 curves, and we are not going to resolve that, and that
24 will not be resolved in the short term. But again I
25 am pinning my hopes on the statement that I keep

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1 hearing, that these are all living documents, and they
2 will be revised.

3 But I don't want us to get into the trap
4 of it has been passed once, and therefore it is the
5 bible. It is not the bible.

6 MR. BURTON: I do want to say one thing,
7 because as I am listening to it, it is clear that one
8 of the broad topics that I need to discuss is how the
9 process allows for change, and new data, and emerging
10 issues, and things like that, and it would fall into
11 that category.

12 DR. FORD: And CASS is --

13 MR. BURTON: Yes, in several of these
14 things.

15 CHAIRMAN BONACA: And there is a
16 distinction between license renewal and current
17 existing problems.

18 MR. DYLE: Just a comment, Butch, that
19 might help you pull that information together. The
20 VIP provides on a semi-annual basis the inspection
21 results across the entire fleet, and to the staff for
22 review to see what is going on. So that is ongoing
23 and documented, and we can respond to that.

24 MR. BURTON: How often was that?

25 MR. DYLE: Semi-annually. And after each

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1 outage season, we compile the stuff, and then forward
2 it to Gene.

3 CHAIRMAN BONACA: I think that is one of
4 the strengths by the way, and we noted that in our
5 interim letter that the fact that you have so many
6 power plants into a program, and even if one new event
7 occurs, it will occur once, and then you will know
8 that it is possible in the whole fleet.

9 So therefore you are reactive to that one,
10 but you can be proactive on the other units. So there
11 is a big strength coming from that.

12 DR. BARTON: Well, Mario, has the
13 committee made a statement regarding the BWRVIP
14 program, which I think is a pretty good program. Have
15 you guys already gone on record on that?

16 CHAIRMAN BONACA: Yes.

17 DR. BARTON: Okay.

18 DR. KRESS: I thought it was a good
19 program.

20 DR. FORD: And that is a jolly good idea.
21 It is a question about change. Again, I am thinking
22 about it from a public perception, and reading the
23 proceedings of the ACRS meeting. There are people out
24 there who have got concerns on some of these issues.

25 CHAIRMAN BONACA: Bill.

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1 DR. SHACK: I think everybody has sort of
2 raised the issues that I think need to be brought up
3 at the committee. I will say that I liked this safety
4 evaluation report. I thought you made a fairly good
5 case that we should renew their license, and better
6 than their license renewal application did. The staff
7 saves them again, huh?

8 CHAIRMAN BONACA: It was very good. I
9 think we gave you so much that you must be totally
10 confused, and you have to spend now every day until 11
11 o'clock at night putting things together.

12 MR. BURTON: I'll be busy. I think it
13 would be beneficial because it came up several times
14 today to talk about the corrective actions program as
15 part of the whole -- again, change process, because I
16 know that came up several times. And if I can talk
17 about it up front, I think that would probably be
18 helpful.

19 CHAIRMAN BONACA: Indeed, and you can talk
20 about that and how does the whole thing get together,
21 and I think it is important, but again my suggestion
22 would be that you go on the topics that Dr. Ford
23 highlighted, and then the second part would be more
24 like some concluding statements on those portions of
25 the application that refer or that are essential for

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1 license renewal.

2 MR. BURTON: Okay.

3 CHAIRMAN BONACA: Including some -- well,
4 maybe bring up data on the BWRVIPs, because when we
5 look at them, they weren't reviewed most of them. Now
6 we know they were being close to being completed, and
7 if there is additional information that you can
8 provide us with that, that's fine, and tell us. But
9 don't go into detail, but just simply when you think
10 the SER would be completed.

11 MR. BURTON: We have an interface meeting
12 every week, and we have a sheet that gives the status
13 of not just VIP, but all the topical reports, and I
14 will just put that on there. No problem.

15 CHAIRMAN BONACA: With that, are there any
16 other comments or questions from the members of the
17 public or the applicant? If not, the meeting is
18 adjourned.

19 (Whereupon, at 11:52 a.m., the meeting was
20 concluded.)

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

Name of Proceeding: ACRS Plant License Renewal
Subcommittee

Docket Number: (Not Applicable)

Location: Rockville, Maryland

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



Paul Intravia
Official Reporter
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