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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

May 31, 2005

The contents of this transcript of the proceeding of the United States Nuclear Regulatory Commission Advisory Committee on Reactor Safeguards, taken on May 31, 2005, as reported herein, is a record of the discussions recorded at the meeting held on the above date.

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

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
(ACRS)

PLANT LICENSE RENEWAL SUBCOMMITTEE

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TUESDAY,
MAY 31, 2005

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ROCKVILLE, MARYLAND

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The Subcommittee met at the Nuclear Regulatory Commission, Two White Flint North, Room T2B3, 11545 Rockville Pike, at 12:30 p.m., Mario V. Bonaca, Chairman, presiding.

COMMITTEE MEMBERS:

- MARIO V. BONACA, Chairman
- THOMAS S. KRESS, Member
- GRAHAM M. LEITCH, Consultant
- STEPHEN L. ROSEN, Member
- WILLIAM J. SHACK, Member
- JOHN D. SIEBER, Member
- GRAHAM B. WALLIS, Member

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1 ACRS STAFF PRESENT:

2 JOHN G. LAMB

3 CAYATANO SANTOS

4 NRC STAFF PRESENT:

5 KENNETH CHANG, NRR

6 KURT COZENS, NRR

7 GREG GALLETTI, NRR

8 FRANK GILLESPIE, NRR

9 MARK HARTZMAN, NRR

10 SAMPSON LEE, NRR

11 PATRICK LOUDEN, Region III

12 PATRICIA LOUGHEED, Region III

13 MICHAEL MORGAN, NRR

14 NEIL RAY, NRR

15 VERONICA RODRIGUEZ, NRR

16 GREGORY F. SUBER, NRR

17 PRESENT FROM NUCLEAR MANAGEMENT COMPANY:

18 BRAD FROMM

19 BILL HERRMAN

20 DOUG JOHNSON

21 TODD MIELKE

22 MARK ORTMAYER

23 STEVE SCHELLIN

24 JIM SCHWEITZER

25 JOHN THORGERSEN

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

12:30 p.m.

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

7 The ACRS members in attendance are Steven
8 Rosen, John Sieber, William Shack, Graham Wallace and
9 Dr. Kress. ACRS Consultant Graham Leitch is also
10 present.

11 Cayatano Santos of the ACRS staff is the
12 designated Federal official for this meeting. Also,
13 Mr. Jim Lamb with the ACRS staff is in attendance to
14 provide technical support.

15 The purpose of this meeting is to discuss
16 the license renewal application for Point Beach Units
17 1 and 2. We will hear presentation from
18 representative of the Office of Nuclear Reactor
19 Regulation, Region III Office and the Nuclear
20 Management Company.

21 The Subcommittee will gather information
22 and relies relevant issues and fact, and formulate
23 proposed positions and actions as appropriate for
24 deliberate by the full Committee.

25 The rules of participation in today's

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1 meeting have been announced as part of the notice of
2 this meeting previously published in the *Federal*
3 *Register*.

4 We have received no written comments or
5 requests for time to make oral statements from members
6 of the public regarding today's meeting.

7 A transcript of the meeting is being kept
8 and will be made available as stated in the *Federal*
9 *Register* notice. Therefore, we request that
10 participants in this meeting use the microphones
11 located throughout the meeting room when addressing
12 the Subcommittee. The participants will first
13 identify themselves and speak with sufficient clarity
14 and volume so that they be readily heard.

15 We will now proceed with the meeting.

16 Before I turn the meeting to Mr. Gillespie
17 of the staff, I would like to just make a statement
18 regarding the agenda.

19 As you can see in the first portion of the
20 meeting until 1:40 we are scheduled to review the
21 Point Beach Red Inspection Findings. The Committee
22 has adequate information regarding these findings, and
23 I want to make a statement about this.

24 The Committee is fully aware that the
25 license renewal rule deals with future action and the

1 programs necessary to support the plant operation
2 during that future action. And we realize that some
3 of the current performance issues are being dealt with
4 the current license basis. So we're not really
5 concerned about old issues that came from the
6 inspections, but those that related to specific
7 issues, one is human performance and the second one is
8 corrective action program.

9 The reason why we are asking questions
10 about those is because we have now experience with
11 license renewal and we have seen the corrective action
12 programs as really the foundation to license renewal.
13 Every program that is in license renewal moves right
14 through the corrective action program, either in the
15 identification of aging degradation or in the
16 resolution of it. So license renewal is fundamental
17 to it, and we are interested in knowing the condition
18 of this corrective action program.

19 We're also concerned about human
20 performance because thousands of commitments are being
21 made here, and only a portion of those are being
22 audited by the staff. And so the question we have to
23 ourself is what's the quality of the implementation of
24 these commitments, what is the quality of the future
25 implementation of these commitments. And so it's a

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1 narrow questioning of performance, but it addresses
2 these two specific areas.

3 With that, after we cover that area, we
4 will move into the normal process of the ACRS
5 reviewing programs and management activities.

6 With that clarification, I'll turn it over
7 to Mr. Gillespie.

8 MR. GILLESPIE: Thank you, Mario.

9 I know we've had this issue before and the
10 staff wrestles with it itself continuously of trying
11 to separate implementation from the licensing effort
12 of renewal. But we feel that the rule is pretty clear
13 in 54.30, as Mario said. And so this is a difficult
14 issue. And we've generally tried to be very cautious
15 of not mixing current performance and license renewal
16 together. And I do agree that the corrective action
17 program is key to renewal, and that's where the
18 commitments are kept. And so it's a difficult
19 threshold to wrestle with. And in general, the way
20 the staff really has to deal with it and rationalize
21 how we find this acceptable, is that the regions have
22 responsibility, and I think in Point Beach's case, the
23 region's involvement in the day-to-day program and
24 highlighting issues day-to-day is what we are fully
25 dependent upon as opposed to mixing that with the

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1 licensing activity, which is really looking at
2 processes and procedures so that there's a difference
3 between structure and implementation.

4 And as part of license renewal we're
5 looking at structure. And in the regions they're
6 looking at implementation.

7 It is a difficult line. I understand the
8 Committee's interest in it. But the staff is really
9 obligated to follow the rule itself, and that's what
10 we're going to be doing. And this is highlighted by
11 the kind of outside interface. And I don't know if
12 anybody here knows it, but Legislator Spano from
13 Westchester County wrote us a letter saying he
14 understood this difference. And it was petition for
15 rulemaking to actually change the rule to cause
16 current operations to have an influence on this
17 decision.

18 So, again, to the staff it's a threshold
19 we do try to maintain. And I'd appreciate the
20 indulgence of the Committee in anyway that if you
21 could appreciate what the staff is trying to do, and
22 our dependence upon the regions for the day-to-day
23 oversight so that we don't condition one thing with
24 the other.

25 CHAIRMAN BONACA: Yes. Let me just be

1 clear. That I don't think the Committee concern, if I
2 can voice at this stage we haven't had a meeting, is
3 to do with past/non-pass issue. It has to do with the
4 credibility at this time of the programs. Okay. And
5 so that's why we want additional clarification to
6 understand that in fact it can rely on these programs,
7 and also to -- you may, for example, have taken
8 actions like granted inspections that give you further
9 comfort that human issues, human performance issues
10 have not affected the quality of the commitment.

11 Now that certainly would be an element
12 that would be interesting to the Committee. It would
13 enforce -- so that kind of thing.

14 I would like to also state that the same
15 issues are of concern to the whole Committee, that's
16 why we asked you to come tomorrow and bring the same
17 views.

18 MR. GILLESPIE: Right.

19 CHAIRMAN BONACA: And we have only one
20 hour, I believe, 1 hour and 50 minutes tomorrow, but
21 that will be the focus.

22 MR. GILLESPIE: So Pat Loudon is ready to
23 go over from Region III the current operational
24 situation as the region sees it. But, again, if we
25 need a special inspection for some reason for human

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1 performance or corrective action, the staff generally
2 sees that in line with current operations. And that's
3 a fair comment to say that when this CAL is lifted,
4 you know should we have something that kind of crowns
5 the whole thing where we go in and take an interval
6 look. Fair comment, but I connect that with the CAL
7 and the current license, not necessarily with the
8 renewed license. But that's the staff's connection
9 versus the Committee's.

10 So, we look forward to your comments and
11 anything that we can answer, we will.

12 And I think I asked, Mario, we do have the
13 right people here to talk about PTS. And I will
14 highlight this is a unique facility in that it's the
15 first one that might inflict what I'll call the EDO
16 memo, where we kind of laid out that the PTS rule is
17 the only rule that has an automatic shutdown in it.
18 But the technical aspects the staff will be prepared
19 to answer detailed questions, because you might not
20 have gotten enough detail in the package.

21 CHAIRMAN BONACA: Yes. I believe I voiced
22 for all the members that first of all, we got the
23 submittal and the SER discussion and then there was a
24 dependency on the master curve.

25 MR. GILLESPIE: Right.

1 CHAIRMAN BONACA: And there is a further
2 commitment to manage aging of the vessel. So it's not
3 clear, I believe, to most of the members of the
4 Committee what path we're following there. And also we
5 need some tutorial from maybe Mr. Elliot, if he's
6 there, on how each one of these paths can take us to
7 end of life.

8 MR. GILLESPIE: Yes. I think this is one
9 of the more unique ones in end of life under current
10 rules is coming so soon, particularly I think for Unit
11 2.

12 CHAIRMAN BONACA: Yes.

13 MR. GILLESPIE: And so this is a good one
14 to get this technical issue on the table to see what
15 should the interval story look like versus maybe it
16 looks a bit piecemealish right now. So, hopefully,
17 the staff and the licensee can clear that up today and
18 do whatever they can. Because this will set the tone.
19 Because undoubtedly there's going to be some more.

20 Beaver Valley when it comes in, is in a
21 similar situation. I think we have four sites that
22 have similar issues. So this will give us an
23 opportunity to understand what's the best way to
24 demonstrate or lay out the technical aspects.

25 CHAIRMAN BONACA: Yes.

1 MR. GILLESPIE: With that, let me turn it
2 over to Pat from Region III.

3 MR. LOUDEN: Okay. Thank you, Frank.

4 Good afternoon.

5 My name is Pat Louden. I'm a branch chief
6 in Region III in the Division of Reactor Projects. My
7 main responsibility is supervisory oversight at the
8 Point Beach site for the Part 50 ROP.

9 My presentation I have for today will go
10 over a brief background of the red findings, some
11 actions taken by the region as far as inspection
12 actions. And I believe I've scoped it into the two
13 areas that you have an interest in, with the human
14 performance and the state of the corrective action
15 program to give you an update assessment of where we
16 see those programs.

17 The first slide is a background. During
18 a licensee's PRA upgrade in 2001, the licensee
19 identified a common mode of failure vulnerability with
20 the auxiliary feedwater system. This was raised to us
21 in November of 2001. The region responded by
22 conducting a special inspection to review the
23 circumstances surrounding and the considerations
24 involved with the discovery of the findings. And we
25 preliminarily issued a red finding in the spring of

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1 2002. And the final red was issued in July of 2002.

2 The licensee had requested one of the
3 considerations through Manual Chapter 0305 was that
4 for certain issues could be considered as an old
5 design issue, and there are certain set of criteria
6 that a finding would have to meet to qualify for that.
7 Because of that we conducted a follow-up inspection
8 later in 2002. And it was during as we were evaluating
9 the results of that inspection when the licensee
10 during post-maintenance testing, I believe it was, on
11 the auxiliary feedwater system identified what became
12 eventually the second red issue.

13 DR WALLIS: Can I ask you something here?

14 MR. LOUDEN: Yes, sir.

15 DR WALLIS: You found something here which
16 was presumably disturbing enough to issue a red
17 finding. What is the fix for this? What is the
18 corrective action as a result of this discovery of
19 these problems?

20 MR. LOUDEN: Well, I'll briefly go over
21 the immediate corrective actions, the corrective
22 actions that the licensee took had to deal with
23 addressing procedures and operator training.

24 DR WALLIS: And shouldn't that make the
25 finding go away or does it just -- what would be

1 required to make the red go away?

2 MR. LOUDEN: Per 0305 we can leave the
3 finding open until we feel that the root causes or the
4 causes that affected or caused the event have been
5 satisfactorily answered. Part of the problem with the
6 first finding we identified was the corrective action
7 piece of it and with procedures. And it's the
8 corrective action program, the corrective action piece
9 that we are continuing to evaluate fully for the
10 licensee--

11 DR WALLIS: I think what's puzzling me is
12 why it wasn't fixed when it was something that clearly
13 has to be done? Why is taking some time?

14 MR. LOUDEN: Okay. The --

15 DR WALLIS: The problem is still there, is
16 it?

17 MR. LOUDEN: Not with regard to the
18 operability of the system. There's still the
19 programmatic issues that we're evaluating for the
20 corrective action program.

21 CHAIRMAN BONACA: Or the actions to
22 prevent reoccurrence, I mean, also.

23 MR. LOUDEN: Correct.

24 CHAIRMAN BONACA: And the correct --

25 MR. LOUDEN: They're specific for that

1 given problem. We're evaluating broadly the whole
2 corrective action program.

3 MR. ROSEN: So when were the specific
4 technical fixes made to the first problem? When did
5 the licensee complete those?

6 MR. LOUDEN: They completed those, I
7 believe -- I don't want to defer that specific to the
8 licensee. If Mr. Schweitzer would like to address
9 that, the engineering director.

10 MR. SCHWEITZER: Well, the first technical
11 fixes that were done -- and this is Jim Schweitzer,
12 I'm the Director of Engineering at Point Beach.

13 Some of the initial technical fixes that
14 we needed to do was associated with procedures for the
15 operators so that they knew and took the proper action
16 and did not reduce aux feedwater flow to the point
17 where there was not adequate flow because of the
18 recirc valve.

19 They did physical changes to replace the
20 orifices. And those were replaced in 2002 and 2003. I
21 think March 2003 we finished the replacement of the
22 orifices.

23 We also did some changes to the aux
24 feedwater recirc valves to change the power supplies
25 and to make them safety related and change the safety

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1 related function to open. And that was completed in
2 2004, early 2004.

3 So the physical changes to address the
4 issue are done. The longer term issues that Pat was
5 talking about are associated with some of our design
6 control and the way we handle design to make sure we
7 do adequate reviews. And those were processes that we
8 have put in place. Special processes for review of
9 the modification. We established what we call our
10 Design Review Board which gets all of the different
11 departments involved in the reviews so that we do a
12 much more detailed review.

13 Another corrective action that we
14 identified as part of this was our independent reviews
15 that were done of the designs were not always
16 adequate. WE established a separate independent
17 review department in order to do that.

18 So a number of the actions are in place.
19 The physical changes are done. The longer term
20 program and process items are in place, but they're
21 still being reviewed to make sure that they're going
22 to be sustainable for going forward.

23 MR. ROSEN: But the initial changes that
24 were done that made the aux feedwater system operable
25 again were operational procedural changes, is that

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1 correct?

2 MR. SCHWEITZER: Yes. The very first
3 things we put in place --

4 MR. ROSEN: Because basically I think you
5 said to direct the operators not to reduce the
6 throttle feedwater back so far that they had to rely
7 on the recirculation.

8 MR. SCHWEITZER: That was the initial
9 changes that we put in place, correct.

10 MR. ROSEN: And those were done when?

11 MR. SCHWEITZER: Those were done when the
12 issue was identified? Immediately.

13 MR. ROSEN: You mean that day or
14 immediately?

15 MR. SCHWEITZER: Within weeks. I don't
16 remember the exact time, but it was essentially
17 immediately to establish the operability.

18 MR. ROSEN: Okay.

19 MR. LEITCH: I think the issue here is
20 that there were several opportunities prior to the
21 fixing of the problem. Several opportunities to
22 perhaps identify the problem that were not taken
23 advantage of. And so that the point is it's not
24 specific to this particular technical area, but the
25 fact that some of these other opportunities to

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1 identify and solve the problem were missed gave rise
2 to some of the questions that we see surfaced in the
3 CAL, things like human performance, engineering
4 operating interface, corrective action program and so
5 forth.

6 So those things, I believe, opened up a
7 wider area of programs than the specifics of this
8 particular issue. And I think that's the thing. I
9 think the specifics of this particular issue were
10 quickly solved. I don't think that's really the issue.
11 I think the issue is what are the more systematic
12 problems that exist at this site.

13 MR. LOUDEN: The second red issue that was
14 -- as we did the inspection when the plugging of the
15 orifice issue came up, that is when we identified the
16 design control type issues associated with the
17 modifications. We also identified at that time that
18 the first issue would not be a candidate for old
19 design issue credit, because there were indications of
20 current performance problems at the time.

21 It was in 2003 in the cover letter to the
22 inspection report from that inspection that we
23 notified the licensee that the first issue would be
24 considered red and they would be placed in column four
25 of the action matrix. And it was following the 2003

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1 agency action review meeting in a subsequent letter
2 that we notified them that we'd be conducting a 950003
3 supplemental inspection.

4 Go to the next slide.

5 The 950003 supplemental inspection is
6 diagnostic in nature and it helps us focus on
7 particular issues that we know whether or program has
8 performance deficiencies, to better understand the
9 depth and breadth of them. We also looked into areas
10 that we were not that apparent, given the one
11 individual issue, to find out if there were other
12 areas that may be of interest to us. The one most
13 noteworthy of the five that we've covered in the CAL
14 is the emergency preparedness program. That is where
15 we had known performance questions. We explored it
16 further during the 95003 as we did the Appendix A for
17 that procedure, which looks deeply into the emergency
18 preparedness program. And it was there were we
19 identified additional areas of concern within the EP
20 group at that time.

21 MR. LEITCH: What was the color of that
22 emergency preparedness finding?

23 MR. LOUDEN: Yes. There was a white PI, I
24 believe it was --

25 MR. LEITCH: PI, but what about the

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1 violation?

2 MR. LOUDEN: Well, the violations that we
3 identified during as outcome of the 95003 review, is
4 that what you're asking, sir?

5 MR. LEITCH: I think so, yes.

6 MR. LOUDEN: There were three -- I believe
7 I have the number right -- three green findings.
8 There was one unresolved item that had to deal with
9 changes the licensee had made to their emergency
10 action level considerations. That issue ultimately
11 resulted through traditional enforcement as a severity
12 level 3 violation. And we also issued a \$60,000 civil
13 penalty for that.

14 MR. LEITCH: Okay. But was there not a
15 color associated with that?

16 MR. LOUDEN: No. Not for traditional
17 enforcement.

18 MR. LEITCH: Okay. I guess I'm not sure
19 I understand that. I would have thought with a
20 violation of that nature there would be a color
21 associated with it. Not so?

22 MR. LOUDEN: Not because of the
23 enforcement path we went.

24 Is there anyone that would like to address
25 that from a 0305 perspective?

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1 MR. SCHWEITZER: Pat, Jim Schweitzer from
2 Point Beach. Maybe I can help out a little bit.

3 It mentioned a white finding. There was an
4 original white finding from a plant exercise that was
5 conducted where our critique was inadequate and we did
6 not identify a missed performance indicator. So there
7 was a previous white finding associated with that.
8 But at the 95003 inspection there were no findings
9 that were greater than green. And we did have this
10 one issue associated with not taking adequate
11 immediate action to address a concern with an EAL, an
12 emergency action level.

13 MR. LEITCH: Okay. Thank you.

14 MR. LOUDEN: We completed the 95003 in
15 three parts. It ran from late in July through
16 December. We had three different teams: One looking at
17 the corrective action program in process; one focused
18 on the emergency preparedness program, and; then a
19 third which was a combined look at engineering
20 operations and maintenance to try to look at various
21 other areas. More of an integrated plant operational
22 review.

23 Next slide.

24 The teams were comprised mainly of
25 inspectors from other regions and from headquarters to

1 provide a different viewpoint and a fresher look at
2 some of the issues. The result of the 95003, there
3 were ten green findings from that. All findings were
4 green. And there was one unresolved item, which turned
5 into this severity level 3 violation, NEP, which we
6 just discussed.

7 Combined with the results of that
8 inspection and the results of our baseline program and
9 the observations from our resident inspectors, we
10 found five general areas of concern that we wanted the
11 licensee to address. And those five areas are on the
12 screen. It's human performance, engineering design
13 control, engineering ops center face, EP and the
14 corrective action program.

15 Next slide.

16 These five areas then became the basis for
17 what would be the areas that we identified in our
18 confirmatory action letter. And we issued that letter
19 on April 21, 2004.

20 At the same time when we were working
21 through the 95003 inspection and developing the
22 concerns that eventually led to what was included
23 confirmatory action letter, the license had developed
24 a operating business unit plan they called the
25 Excellence Plan. And that plan consists of a number

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1 of different organizational actions and improvement
2 items. It includes various aspects of the business
3 and the operational end.

4 From that the licensee developed a subset
5 of actions which they then included in a commitment
6 letter that they sent to us in March of 2004. And we
7 attached that commitment letter in our confirmatory
8 action letter.

9 We acknowledged that the actions that the
10 licensee had described and given to us, we
11 acknowledged that those actions could be used as
12 measures to gauge improvement in the various areas of
13 concern. There were 143 of these action items.

14 MR. LEITCH: And one of those in the area
15 of corrective action program, one of those actions
16 states that the number of corrections -- that is as a
17 criteria for whether that action is satisfactory or
18 not, that the number of corrective actions should be
19 less than 2500.

20 And we're particularly interested in the
21 corrective action program. And I wonder why that's a
22 good criteria? Maybe that's a question for the
23 licensee rather the NRC. Because my concern is that if
24 for a number of years, and apparently this is a
25 program that's been deficient for a number of years,

1 I would think the goal would be not to limit the
2 number or not to set a goal to try to drive down the
3 number of corrective actions, but rather to in fact
4 bring on as many corrective actions as you possibly
5 can. As people on the site become aware of this new
6 corrective action program, they should be dredging up
7 all kinds of issues. And I would think you would be
8 trying to get that number as high as possible and to
9 encourage people to bring forth those corrective
10 actions, not to limit it to some arbitrary number like
11 2500.

12 MR. LOUDEN: Yes.

13 MR. LEITCH: Now I readily agree that
14 after a few years of working through an effective
15 corrective action program, probably 2500 is not a bad
16 number. I think most sites are about at that number.
17 But I would think when you're trying to have a
18 remedial program, it doesn't make a whole lot of sense
19 to limit the number. In fact, I think you should be
20 encouraging a higher number.

21 CHAIRMAN BONACA: In fact, I second that
22 comment, Graham. And particularly in consideration of
23 the potential legacy issues. I mean, there may be
24 issues that have been there for a long time, they've
25 have not been resolved, and I think only if you really

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1 open the dates and you encourage people to bring up
2 anything they had, they're going to do it with them.
3 Otherwise, you're going to have this stale of legacy
4 issues that take a long time to address and close.

5 So I think I don't understand the
6 limitation at that point.

7 MR. LOUDEN: I'll offer at least the way
8 we're using that number, and then certainly I would
9 like the licensee to address the way they approach
10 this.

11 That particular item for 2500 open
12 corrective actions is for the open ones. We viewed it
13 almost as a backlog reduction type of an approach to
14 an issue. It's not about generation rate or initiation
15 rate. I mean, certainly and I'll the licensee speak to
16 the numbers as far as what their generation rate per
17 year is of identified issues.

18 MR. LEITCH: Okay.

19 MR. LOUDEN: The point here of that
20 particular item that you mentioned, sir, we at least
21 are viewing it as a gauge to measure progress in
22 addressing issues and getting them closed and resolved
23 is the way we're viewing.

24 But for the rest of that, Jim, I will turn
25 that to you.

1 MR. SCHWEITZER: Yes. Again, Jim
2 Schweitzer from Point Beach.

3 Pat is correct. The 2400 number is a
4 backlog goal for us. Our initiation rate last year
5 was about 8,000 item initiated. And that number went
6 up by almost a factor of two following the issue of
7 the red findings and our improvements in our
8 corrective action program.

9 The basis for about 2500 is associated
10 with trying to make sure we get timely resolution of
11 the items. Because identification was not a big issue
12 for us. It typically went into timely resolution.

13 If we look at that generation rate and
14 look at about 120 day nominal turnaround for all
15 items, you can come up with a backlog of about that
16 number.

17 MR. LEITCH: Okay. So last year the
18 initiation rate then, just to repeat what I think I
19 heard, was more like 8,000 then?

20 MR. SCHWEITZER: That is correct. The
21 initiation rate was about --

22 MR. LEITCH: Okay. I misread then the
23 criteria here that you've established. I think that's
24 a good clarification.

25 MR. LOUDEN: Okay. Next slide.

1 As far as inspections for last year
2 following the count, within our baseline inspection
3 program we conducted two inspections; our safety
4 system design and performance capability inspection
5 which looks into engineering issues and a problem
6 identification and resolution inspection.

7 Both of those inspections we enhanced by
8 adding additional inspectors, almost doubling on each
9 of those, the number of inspectors that were looking
10 into the issues.

11 Besides using the baseline inspection
12 procedure guidance, we used that and we also were
13 using looking at corrective actions the licensee had
14 taken with regard to specific CAL related items to do
15 a progress or status check along the way there.

16 We also conducted two special inspections
17 last year, and the purpose of those special
18 inspections were to specifically look at and evaluate
19 progress that the licensee was making in addressing
20 these 143 items. The items as they're presented and
21 listed here are in kind of a sequence series step-wise
22 type approach to some of them. So there were a number
23 of them which were available to be evaluated if actual
24 progress was being made. And some of them the licensee
25 had committed to also do interim effectiveness

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1 reviews. So, again, it was another opportunity for us
2 to evaluate if things were being addressed in a timely
3 manner by the licensee per their commitment letter.

4 MR. LEITCH: One of the things that always
5 concerns me about these improvement programs is we
6 tend to look at the beans rather than the results. A
7 number of these things to verify that the objective
8 has been met is -- I'm just looking at this TRP for
9 example. It says that the TRP has been established.
10 That they've generated minutes from their meetings and
11 so forth. But the real crux of the matter is that the
12 third bullet under that, which is the effectiveness.
13 In other words they've done these things and that's
14 kind of easy to document and so forth. But how
15 effective has it been? And my question is does the
16 NRC really look at all at the effectiveness of those
17 actions?

18 MR. LOUDEN: Absolutely. If you look at
19 progress, and I'm just gauging a number that I looked
20 at a few weeks ago in answering another question. The
21 licensee's progress on completing their items here are
22 further along than what we are with our inspection
23 because we lumped a great deal of what we wanted to
24 look at here in the coming months yet this year,
25 particularly so that things were closed out. Because

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1 the latest date in the commitment letter is 2Q05.

2 MR. LEITCH: Yes.

3 MR. LOUDEN: But things were closed out.
4 And, yes, we did want to focus on the effective
5 reviews of each of those item. So that was a key
6 point. And when we set up our monitoring was that we
7 were weighted at the backend to do just as you
8 suggested; to look at the effectiveness of it. Because
9 you're right. We can follow the progress and you can
10 hit the marks. But if it doesn't fix it, it's not that
11 valuable.

12 So we are prepared to do when the time is
13 right when the licensee has completed their actions,
14 we will come in and do a more thorough completion
15 inspection that will focus on that end product, the
16 effectiveness. Were the actions that the licensee
17 took effective and sustainable?

18 MR. LEITCH: Just let me just clarify
19 that. Do you review the licensee's effectiveness
20 review or do you sometimes also do an independent
21 effectiveness review?

22 MR. LOUDEN: We do both. We look at the
23 licensee's effectiveness reviews and gauge the quality
24 of those. And if they seem to hit the mark, ask the
25 right questions. We also through our day-to-day

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1 inspections, and especially with the resident
2 inspectors on site everyday if we see or issues or
3 examples of where maybe performance is not as
4 characterized here or maybe there's some questions in
5 a certain area, certainly we would explore and use
6 that as a vehicle to dig in. That is our independent
7 look.

8 MR. LEITCH: Okay. Thank you.

9 MR. LOUDEN: Yes. You're welcome.

10 So those two special inspections were
11 completed last year. And they look at the progress
12 that the licensee was making with the confirmatory
13 action letter.

14 Next slide.

15 Within the ROP, I just wanted to point out
16 that both the human performance area and the problem
17 identification and resolution areas are considered
18 substantive crosscutting issues under the ROP. The
19 PI&R area that was identified as such in our end of
20 cycle letter in 2003 and human performance in our end
21 of cycle letter in 2004. And as I already mentioned,
22 those two items are also two of our five issues that
23 we're following up in the confirmatory action letter.

24 Next slide.

25 With regard to the human performance area,

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1 our current assessment. We have noted in the last
2 year improvement in the human performance area. The
3 licensee has focused a number of initiatives in
4 addressing various aspects of human performance; error
5 reduction techniques, briefings. And they have
6 various vehicles that they've devised to address the
7 human performance issues.

8 What we're evaluation is the frequency and
9 the significance of the errors when they do occur.

10 MR. SIEBER: Do they have performance
11 indicators that show error rates and if they do or do
12 not, how do you evaluate those?

13 MR. LOUDEN: I believe they do. I'll let
14 Jim. The question was do you have performance
15 indicators that look human performance error rates.

16 MR. SCHWEITZER: Jim Schweitzer from Point
17 Beach.

18 Yes, we do have performance indicator. We
19 track what we call like a clock reset which looks at
20 a human performance error. We have that at the site
21 level and each department has their own criteria
22 that's associated with that. And when we do have a
23 clock reset, then we do what we call a human
24 performance investigation to understand what occurred,
25 why it occurred and what corrective actions we need to

1 put into place.

2 MR. SIEBER: Typically, how long does your
3 clock run before it resets? Is that hours, days,
4 weeks?

5 MR. SCHWEITZER: It varies through
6 departments. For engineering right now we're just
7 about 14 days between, that's been on a steady
8 increase.

9 The site clock reset is running close to
10 100 days I believe right now between clock resets.

11 Some other department like maintenance is
12 working on trying to develop better plans. They're
13 running about 3 days to 4 days between a clock reset
14 in that department.

15 MR. SIEBER: That's not too good, right?

16 MR. SCHWEITZER: No. Three to 4 days is
17 not good there.

18 We look at a great number of different
19 levels of things from procedure issues getting on the
20 run, work order. The level we set the threshold very
21 low within the department so that we take those as
22 learning opportunities there to figure out what to do
23 so we do not challenge the site clock reset.

24 MR. LEITCH: Now the criteria.

25 MR. SIEBER: And so --

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1 MR. LEITCH: Excuse me, Jack. Go ahead.

2 MR. SIEBER: And the site clock has a much
3 more liberal allowable problem area than the
4 departmental?

5 MR. SCHWEITZER: The site clock, each one
6 has defined criteria.

7 MR. SIEBER: Right.

8 MR. SCHWEITZER: It defines specific
9 criteria to reset the clock. For the site it's at a
10 much higher level than the departments. So for a
11 procedure, a violation or not following the procedure
12 correctly would be a clock reset for a department. IF
13 it had no consequential issues or problems that
14 affected the plant, it would not be a clock reset. If
15 it was a procedure violation that resulted in a plant
16 transient, then would be resetting the site clock from
17 it.

18 MR. LEITCH: So the criteria for
19 successfully accomplishing your goals here is listed
20 as less than -- or greater rather than 36 days between
21 resets of the site clock? And that number is up
22 around 100?

23 MR. SCHWEITZER: That's correct.

24 MR. LEITCH: But the maintenance clock is
25 resetting much more frequently than that. But the

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1 reason again is that the maintenance threshold is set
2 to trigger at very low values?

3 MR. SCHWEITZER: That's correct. For the
4 departments we set the threshold much lower because
5 there you're looking for learning opportunities to
6 make sure that we will correct human performance
7 issues at the very low level so they do not challenge
8 the plant.

9 MR. LEITCH: Yes. Sometimes, though, the
10 difference between a low level event and a more
11 serious event is really only --

12 MR. SIEBER: Happenstance.

13 MR. LEITCH: Yes, happenstance or luck. I
14 hesitate to say luck.

15 MR. SIEBER: Luck?

16 MR. LEITCH: The way the stars are aligned
17 or something at that time. But you know, these low
18 level events cannot be disregarded either. And, you
19 know, with maintenance clock resetting like every four
20 days, that seems to be of a concern. And I guess you
21 are concerned about it.

22 MR. SCHWEITZER: That is a concern from
23 the plant. And like I said, each one of them we do
24 take the learning opportunity from. Each one of the
25 clock resets will be entered into our corrective

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1 action process and we'll do the human performance
2 investigation to understand it and to look at the
3 significance of it. And there are -- in the
4 maintenance department and the departments that are
5 not meeting their actual goal, they are developing
6 long term plans. They're going back and looking at
7 what are the common cause and why are they not being
8 effective in improving the overall human performance
9 within those departments. They have human performance
10 steering teams that are established that are made up
11 of various levels within the department including
12 individual contributors to help.

13 MR. LOUDEN: And that is how we use the
14 information from the performance indicator to gauge
15 the significance, if they are significant events or
16 not.

17 And also, for the clock resets I parallel
18 that to like the corrective action with condition
19 reports, the corrective action program reports that
20 are generated. You could have a large generation rate,
21 but if you're not hitting the mark or if you're not
22 identifying the right level or threshold of issues,
23 then it's not improving anything.

24 So not just looking at the clock either
25 resetting frequently or not, we also look at the

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1 actual issue. And then once it's entered into the
2 corrective action program, then how are the corrective
3 actions established and are they effective.

4 MR. SIEBER: Let me ask this: You're from
5 Region III, right?

6 MR. LOUDEN: Yes, sir.

7 MR. SIEBER: And there are several plants
8 in Region III that use the clock concept?

9 MR. LOUDEN: I'm aware of several, yes.

10 MR. SIEBER: Okay. So without naming
11 names, how does the thresholds at Point Beach match
12 the threshold levels at some of these other plants
13 where I've worked in Region III?

14 MR. LOUDEN: The last plant I was at is
15 the only one I would have any real reference to. And
16 I don't see anything that different at Point Beach
17 than what I'd seen. But I can't get into specifics. I
18 don't have recent information to do any type of true
19 comparison.

20 MR. SIEBER: Okay. Okay. I'll withdraw
21 the question.

22 MR. LOUDEN: Okay.

23 MR. LEITCH: One of the things that I
24 always use to judge the effectiveness of the
25 corrective action program is how many of the items

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1 that are being recorded there are identified by the
2 line organization versus what I would call external
3 organization, that is the QA, the NRC, INPO, offsite
4 review committees and so forth. Do they have such an
5 indicator to show what the percentage of that is?

6 MR. LOUDEN: I believe you do. I believe
7 you do.

8 MR. LEITCH: How is that behaving?

9 MR. SCHWEITZER: Yes. Jim Schweitzer at
10 Point Beach.

11 We do have an indicator. We call it our
12 self-identification ratio. We look at the site to make
13 sure that as a site we are identifying our own issues.
14 And also on a department level we will look to make
15 sure that each department is identifying issues within
16 their department. And we have benchmarked that against
17 the industry and looked at what percentage we expect
18 to be within. Like within engineering, the industry
19 standard is like 30 to 40 percent as identified by
20 engineering. We've been running in the 60 percent
21 range.

22 MR. LEITCH: And I think that's a very
23 important indicator to show the overall health of the
24 corrective action program. The line employees, you
25 know, the in-line people really believe in it and are

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1 entering things into the corrective action program.
2 And if they do that, probably the problems are being
3 solved. I mean, after a while people won't put stuff
4 in if nothing's happening as a result of it. So I
5 think it's healthy to see a high percentage of self-
6 identified items in the program.

7 CHAIRMAN BONACA: One question I have was
8 could you comment on, you know, you identify areas who
9 needed improvement. And could you comment on the site
10 review committee, the quality organization? I mean,
11 what are those organizations? How effective were they
12 or do you find there are problems there, too?

13 MR. LOUDEN: Are you asking the site or
14 like offsite safety committees?

15 CHAIRMAN BONACA: Yes.

16 MR. LOUDEN: Is that what you're asking?

17 CHAIRMAN BONACA: That's right. Like
18 reorganization. I mean, clearly when you have these
19 kinds of problem go corrective actions it means also
20 that the oversight organizations goes which are
21 specific, like Appendix B and the general view are
22 also probably defective somehow or they just didn't
23 see the problem themselves. It relates to the question
24 that Mr. Leitch raised, I mean, about self-
25 identification on the part of the site.

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1 MR. LOUDEN: Not specifically called out
2 in the CAL, but part of the licensee's commitment
3 letter where they broke down the various area. One of
4 the areas where they acknowledged that they needed to
5 place some improvement on was within the nuclear
6 oversight area. And the way we've approached that is
7 to gauge the actions that the licensee is taking going
8 forward. And we have seen improvement in the NOS
9 organization which you commonly known as the quality
10 assurance organization. We have seen improvement in
11 that area with regard to the types of people who are
12 assigned to that department and the overall activities
13 that the organization does. And the responsiveness
14 that the audited organization has to QA findings.

15 I don't know, Jim, if you wanted to offer
16 anything from that action plan item.

17 MR. SCHWEITZER: Jim Schweitzer, Point
18 Beach.

19 We developed an overall action plan to
20 improve our nuclear oversight because we did recognize
21 that we missed opportunities with that department to
22 identify issues and problems, and to help drive them
23 to resolution.

24 What we did is improve the -- we took some
25 individuals out of the line organizations, higher

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1 level individuals, to put them into that organization.
2 We initially pulled an SRO, who is an ops supervisor
3 and put him into that organization. There was an RP,
4 radiation protection supervisor that went into that
5 organization. We pulled from the NMC fleet, too, a
6 recent NOS manager a recent NOS manager was the ops
7 manager at Palisades. Looking for that good strong
8 leadership and ability.

9 We also revamped the program and developed
10 what we call a problem identification report which
11 takes the issues and drives them more into identifying
12 what the problem is, working with the line
13 organization to come to those conclusions. So we've
14 driven more ownership to the understanding and
15 resolution of the issues found by NOS into the line
16 organizations.

17 That's been very effective in resolving
18 some of our QA significant issues. We had a number
19 that have been open for a long period of time,
20 increased sit attention to them. And the added
21 improvements of NOS has been able to drive those to
22 resolution in much more timely fashion.

23 CHAIRMAN BONACA: Yes. I'd like to ask
24 also a question about the commitments which are
25 referenced in the CAL. Have they been fulfilled on

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1 time? I mean, there were commitments and schedules
2 for those, and what's your assessment?

3 MR. LOUDEN: A majority of them are being
4 met on time. There are a few that are going to run
5 beyond the original date as described in the cover
6 letter for the -- the confirmatory action letter.

7 The licensee was required to notify us of
8 any items that were not going to meet the dates. And
9 they have submitted, I believe it's two letters, to us
10 that have described a few of the action plan items
11 that were not going to meet the original commitment
12 dates.

13 CHAIRMAN BONACA: Now on your assessment
14 letter of March 2, 2005 --

15 MR. LOUDEN: Yes.

16 CHAIRMAN BONACA: -- indicates that
17 corrective action program still has problem. I mean,
18 one problem identified in the third quarter and fourth
19 quarter. How does it jive with the second bullet there
20 where you say the corrective action program is sound?

21 MR. LOUDEN: Okay.

22 CHAIRMAN BONACA: I don't understand that
23 message.

24 MR. LOUDEN: All right. I'll try to
25 explain.

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1 The purpose of the bullet there, the
2 corrective action program is sound, what I'm trying to
3 differentiate here is the program, meaning the design
4 program, the process, the procedure, what is being
5 written up and used not only at Point Beach but I
6 believe this is a fleet wide program for NMC. So what
7 I'm trying to differentiate here is the program itself
8 is sound as a program. It has all the elements and the
9 components that one would want in a good corrective
10 action program, meaning the identification piece, the
11 reviews and the management oversight of the program
12 and various components like that. That is what I was
13 trying to define there, was just the program itself.

14 The issue that you're referring to in the
15 letter and that we've discussed with the licensee is
16 on the implementation aspect of that program. And in
17 particular, the areas that we're looking at continuing
18 to monitor closely within the corrective action
19 program are the timely resolution of issues when
20 they're identified. And, again, have the issues been
21 properly reviewed for extended condition and not just
22 so limited focused on the one particular problem, but
23 also trying to understand where else could similar
24 problems occur.

25 CHAIRMAN BONACA: So how good are their

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1 root cause evaluations in your judgment?

2 MR. LOUDEN: Well, the way we're
3 evaluating it is right now we've had no findings or
4 issues, particularly with root cause evaluations.

5 One of the things that the licensee is
6 gauging the root cause -- or their corrective action
7 program on is their own grading of root cause
8 evaluations and corrective actions. And, Jim, do you
9 want to comment on what you do for root cause
10 evaluations?

11 MR. SCHWEITZER: Jim Schweitzer, Point
12 Beach.

13 For root cause evaluations we do have a
14 complete instruction manual that's set up on how to do
15 a root cause evaluation. Individuals need to be
16 qualified to that. Teams are established for it. And
17 we have developed the charter. The charter does come
18 back to either our corrective action screening review
19 committee or to our corrective action review board.

20 A sponsor is assigned as a management
21 sponsor.

22 For improvements in the process of it we
23 do do periodic reviews of the status of the root
24 cause, how it's progressing, any difficulties or
25 problems. And then in the final root cause, all root

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1 cause do go to our corrective action review board
2 that's made up of senior managers on site. And those
3 are reviewed and detailed. And then we have a grading
4 system that we apply to it.

5 In addition to that we have follow-up
6 items that all the actions that we call corrective
7 actions to prevent reoccurrence come back to the
8 corrective action review board after they are
9 completed for review and effectiveness reviews that
10 are done also come back.

11 So we have a way of looking at the quality
12 of the product as it's being prepared, when it's
13 issued and then we have follow-up actions to make sure
14 that the actions were effective.

15 MR. LOUDEN: And we independently review
16 root cause evaluations. And I think that two of the
17 areas that I just mentioned that we're still looking
18 at are sometimes there are questions that we have with
19 their root cause evaluations that fall into that area.
20 A number of times we will ask questions that dig into
21 a little deeper. How broad is this problem? Has the
22 overall extended condition been captured on this issue
23 or not? So we still have questions on that.

24 And we're looking at this program very
25 closely. WE're planning on doing another problem

1 identification and resolution inspection in September
2 of this year. And the focus of that inspection within
3 the baseline inspection procedure will be to look at
4 the timeliness of the actions taken, the overall
5 quality of root cause evaluation and casual issues
6 like that.

7 CHAIRMAN BONACA: Because I mean that's a
8 critical window, the quality of the corrective action
9 program, how effective is their evaluation of the
10 issue, they prevent the reoccurrence. I mean, that
11 should tell you something.

12 And, you know, from the representation
13 it's clear that you have a program with all the
14 elements in place. The question is how far do you go
15 into the implementation and how well those themes are
16 coming up with the fundamental causes.

17 MR. LEITCH: Is PRA a factor in
18 determining which corrective actions get a full root
19 cause analysis?

20 MR. SCHWEITZER: Jim Schweitzer, Point
21 Beach.

22 MR. LEITCH: Let me ask the question. I
23 assume you categorize levels of corrective actions to
24 determine severity or importance. And I guess my
25 question is do you use PRA in determining which ones

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1 are of the highest significance and therefore require
2 a root cause analysis? I don't think you do root
3 cause analysis on every corrective action?

4 MR. SCHWEITZER: No, we don't. We do not
5 specifically use PRA to make the evaluation, but we do
6 look at safety significance.

7 Every morning we do a screening of all of
8 the corrective actions that were initiated within the
9 last 24 hours. And they are categorized from alpha
10 down through a delta category. We have specific
11 criteria for each of those categories based on safety
12 significance of the issue.

13 And all of our alpha level significance do
14 receive a root cause evaluation. Bravo is made based
15 on the discretion of the screen team and typically at
16 least receive what we call an apparent cause
17 evaluation.

18 MR. ROSEN: So the alphas would include
19 components in systems that are highly risk
20 significant?

21 MR. SCHWEITZER: That's right.

22 MR. ROSEN: For instance, aux feedwater
23 problems you had now would be considered alpha
24 problems now?

25 MR. SCHWEITZER: Yes, they were. In fact

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1 there were two root causes that were done on the aux
2 feedwater issues.

3 MR. ROSEN: So in a sense you do use the
4 output of the PRA from a risk significant standpoint
5 to inform your decisions about how much review you do
6 of each of these?

7 MR. SCHWEITZER: Yes. All the members are
8 cognizant of the PRA, the highest risk significant
9 systems. So we are aware of that and that helps in
10 the overall decision.

11 MR. ROSEN: Now let me come back to your
12 point on the slide here. We understand what you mean
13 I think now why the corrective action program is
14 sound. But the rest of that sentence still puzzles
15 me. "However, some areas are still in need of
16 improvement." Is that a comment about the program
17 itself or the implementation of --

18 MR. LOUDEN: It's actually meant to be the
19 implementation piece.

20 MR. ROSEN: Oh, okay.

21 MR. LOUDEN: That was the intent. I
22 understand how you interpreted that. But the intent of
23 the bullet was to make a separation and then
24 transition into the implementation aspect.

25 MR. ROSEN: While I've got you, on your

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1 earlier slide on the five areas of concern, you had an
2 item on engineering operations interface, which I'm
3 interested in. Can you say a little more about that?
4 I don't think you said much. What was the nature of
5 that concern?

6 MR. LOUDEN: The nature of the concern,
7 the specific concern in the 950003 report I believe
8 had to do with communications and understanding
9 between the engineering and the operations department
10 for certain offsite or grid issues. And there were
11 also some issues raised that the inspectors noted
12 between an understanding of certain fire protection
13 instructions that the engineering department had
14 versus the understanding that the operators had.

15 MR. ROSEN: For instance, the fire
16 brigade?

17 MR. LOUDEN: I don't think it was fire
18 brigade, but I don't recall the exact issue. But it
19 was a communications type of issue of two
20 organizations that had different points of what was
21 being done. So our observation was that to be more
22 effective, and it spilled over into the operability
23 determination process. This is an evaluation process
24 I'm sure many of you are familiar with. When a system
25 is identified as a potential operability question, an

1 evaluation can be done.

2 The two groups that are highly dependent
3 upon on discussing and being on the same page with
4 each other, are the engineering and the operations
5 group in resolving such an issue. That is an example
6 of an area where we identified and had questions that
7 we would encompass under the engineering/operations
8 interface. And we have seen improvement in that area.

9 The licensee early on just in 2004 just
10 after the issuance of the confirmatory action letter
11 implemented what they called the Operational Decision-
12 Making Issue process. And it takes into account the
13 various aspects of the organizations involved to get
14 to the bottom of an issue.

15 And I don't know, Jim, if you wanted to
16 talk about what ODMI process is?

17 MR. SCHWEITZER: Jim Schweitzer, Point
18 Beach.

19 ODMI process, as Mr. Louden mentioned, is
20 to help us make operational decisions. What it is is
21 to a little more regimentally step us through making
22 those decisions, get the right individuals involved so
23 that it's not being made purely from an engineering
24 perspective, from a maintenance perspective or from an
25 operations perspective.

1 So what it does it lays out kind of what
2 the issue is, what's the immediate risk, what's the
3 long term risk, what are some of the possible
4 solutions and then it goes through a ranking process
5 to make sure that everybody understand what the issue
6 is, how we're addressing it in a logical way to step
7 through it.

8 A couple of other things that Pat
9 mentioned a little bit on operability determination.
10 That's an area that we worked on to really establish
11 a good relationship between engineering and
12 operations. To understand and develop the
13 communications up front when there is an issue that's
14 being identified by engineering to get the operational
15 perspective, knowledge put into it to make sure that
16 operations knows what the issue is. They're not
17 caught by surprise when we come to resolving it. And
18 to drive it through a very regimented process that we
19 have for documenting the operability determination,
20 the basis for it, the requirements that are out there.
21 Our internal review and then an SRO review and
22 acceptance.

23 So a lot of the interface and the things
24 that we put in place, a lot of them are processes to
25 help drive that interface. The operability determine

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1 was one, the ODMI is one, and then as mentioned
2 earlier our design review board for modifications is
3 another one.

4 As we go back to one of the red findings
5 associated with aux feedwater, one of the lessons
6 learned we got out of that from our root cause is that
7 we did not have all those perspectives. Okay. We
8 were trying to solve one specific issue and did not
9 look at all the operational issues associated with it.
10 So that's now why we require that for all safety
11 related modifications that we do have this review
12 board to set up. That all the members are dedicated
13 and required to review, would sign that they've
14 reviewed and accepted and understand what we were
15 doing as far as a modification. That's been very
16 effective for us. It's been in place for I think
17 almost two years now.

18 MR. ROSEN: Is that true of ODMI as well?

19 MR. SCHWEITZER: For ODMI, yes, will
20 identify all of the stakeholders that are part of that
21 decision.

22 MR. ROSEN: No. I was asking about how
23 long it's been in place?

24 MR. SCHWEITZER: ODMI has been in place
25 for almost a year now I believe.

1 MR. ROSEN: So on your next slide, Mr.
2 Louden, you have a statement that there's been
3 progress made on all five of the confirmatory areas?

4 MR. LOUDEN: Yes.

5 MR. ROSEN: And can you tell me what
6 progress there is in the engineering operations
7 interface that you mean there? Just the OMDI process
8 or have you seen specific examples where it's been
9 used and been effective?

10 MR. LOUDEN: What is meant there is that
11 we have seen improvement in performance. And the
12 performance piece of that is with the way the OMDI has
13 been implemented, not just the fact that they
14 developed one and put it on the books. But it has been
15 implemented.

16 We've seen resident inspectors who spend
17 a lot of time working with operators and observing
18 things in the control room.

19 Have seen improvement in the responsive of
20 engineering to operational issues.

21 So not only have we seen changes that
22 they've made programmatically, but we see it day-to-
23 day with actual face-to-face interactions is the
24 intent of the improvement there.

25 We're next slide. Okay.

1 Yes. The five areas we have seen
2 improvement in all the five years. There are varying
3 degrees of improvement within the five areas.

4 I want to make sure I answer your question
5 on the state of the corrective action program. The
6 corrective action program, our assessment of it, it is
7 adequate right now as implemented. I mean, it is
8 functioning. And if we ever had a concern with the
9 functionality or the ability of the corrective action
10 program to identify real issues, well that is a
11 criteria that we would have to then reevaluate. In
12 0305 we would have to then step back and reevaluate
13 should the NRC take other actions or additional
14 actions when it concerns a raise regarding the
15 wholeness of the corrective action program.

16 Our focus --

17 CHAIRMAN BONACA: Another question.

18 MR. LOUDEN: Yes, sir?

19 CHAIRMAN BONACA: That's not the message
20 I get from the annual assessment letter. It sounds
21 somewhat different. That's why I asked that question.

22 MR. LOUDEN: Okay. Our focus this year,
23 and our real focus throughout has been not on just a
24 checkoff type approach to actions taken, but we're
25 focused on lasting improvements. So our focus going

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1 forward is not only assessing what actions have taken
2 and has there been short term success, but we're also
3 going to be focusing on the sustainability of the long
4 term effectiveness of the actions. And that's what
5 we're going to be looking at going forward here this
6 year.

7 CHAIRMAN BONACA: Good.

8 MR. LOUDEN: That completes my prepared
9 remarks.

10 MR. LEITCH: Could you outline for me, I
11 think we've alluded to this but just again quickly,
12 what's the sequence for closing out the CAL? Does the
13 licensee come to the NRC and say we're done with all
14 this stuff and then you go in and inspect or how does
15 that work? And what is the relationship of closing
16 the red findings to closing the CAL?

17 MR. LOUDEN: I can describe what I have
18 scheduled, and it's all based on the licensee's
19 completing given action at a given time.

20 MR. LEITCH: Right.

21 MR. LOUDEN: And as the licensee completed
22 an area and that area is done, say all the action
23 plans, what they refer to as action plans, for a given
24 area are complete they send us a letter, basically.
25 Here's the way the process works. They send us a

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1 letter that identifies which packages are complete and
2 they tie it to whatever action plan it is. If it's a
3 human performance one or if it's a nuclear oversight
4 or engineering, or whatever.

5 We will then go in and we're going to then
6 do inspections in each of the five areas --

7 MR. LEITCH: Yes.

8 MR. LOUDEN: -- to look at not only the
9 completeness of the actions taken, but then to do an
10 assessment of the overall effectiveness of those.
11 That's what I have planned for inspections scheduled
12 out through this coming summer. Given if the licensee
13 is complete in the areas, that's the way we'll go
14 through it.

15 MR. LEITCH: But these red findings are
16 still open?

17 MR. LOUDEN: Yes.

18 MR. LEITCH: And they're open because of
19 the more systematic issues that are outlined in the
20 CAL?

21 MR. LOUDEN: That's correct.

22 MR. LEITCH: So when the CAL closes the
23 red findings kind of dramatically close?

24 MR. LOUDEN: My understanding of 0305 is
25 that they could be considered separate. The only tie

1 that I am aware of in the program is the red findings
2 would be tied to where the licensee would be within
3 the action matrix.

4 We could -- you know, you could have a
5 situation where you could say the specific problems or
6 whatever problems you're assigning to be closure
7 criteria for the red finding could occur, but we could
8 still have issues elsewhere in the CAL. And it could
9 remain open. I guess that's the scenario I'm trying to
10 paint here.

11 Where we're going, I can't rally speculate
12 on the timing of what will be with what. But it will
13 be -- right now the current schedule we have are to do
14 completion inspection, come in and look at the CAL
15 closeout actions. And then decisions will be made at
16 that time what's the order or how will things be
17 closed or will they be closed at that time.

18 MR. LEITCH: Okay.

19 CHAIRMAN BONACA: Any other questions by
20 members? If not, I thank you very much for your
21 presentation. It was informative. And I appreciate
22 your coming to inform us.

23 MR. LOUDEN: Okay. Thank you.

24 CHAIRMAN BONACA: Thank you.

25 I just have one final question, actually,

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1 I forgot to ask you. You have inspectors doing this
2 review. You also had inspection from the region
3 inspecting licensee renewal commitments. I mean, you
4 participated in that way. Do these teams talk to each
5 other?

6 MR. LOUDEN: Yes. Our regional -- all the
7 teams that have been onsite at Point Beach both
8 represented from the region and from headquarters have
9 been in direct discussion with the senior resident
10 inspectors. They discuss what areas they're looking
11 into to try gain insights from the residents. Are
12 they aware of any certain issues? So, yes, they do
13 talk.

14 CHAIRMAN BONACA: There is communication?

15 MR. LOUDEN: Yes, sir.

16 CHAIRMAN BONACA: Okay. So then we can
17 move to the next presentation. I believe that's from
18 the applicant.

19 MR. JOHNSON: Chairman Bonaca, would you
20 like us to start or would you -- would you like us to
21 start at this point. I think we all have the paper of
22 it.

23 CHAIRMAN BONACA: You can start referring.
24 We have slides.

25 MR. JOHNSON: Good afternoon. I'm Doug

1 Johnson, I'm the Director of License Renewal Projects
2 at Nuclear Management Company.

3 Here from Nuclear Management Company this
4 afternoon are Jim Knorr. Jim is our Project Manager
5 for the Point Beach license renewal project.

6 Also Jim Schweitzer. Jim is the Director
7 of Engineering at Point Beach.

8 And also here from NMC are the core
9 members of the Point Beach license renewal project
10 team. And that includes John Thorgersen, Mark
11 Ortmyer, Bill Herrman, Brad Fromm, Todd Mielke and
12 Steve Schellin.

13 MR. SIEBER: There's been reference to the
14 fleet of plants that are operated by NMC. What plants
15 are in the fleet, for the record?

16 MR. JOHNSON: The Nuclear Management
17 Company currently operates Point Beach, obviously,
18 Kewanee Nuclear Power Plant, Monticello Nuclear Power
19 Plant.

20 MR. SIEBER: Prairie Island?

21 MR. JOHNSON: Prairie Island, Duane
22 Arnold.

23 MR. SIEBER: Palisades.

24 MR. JOHNSON: And Palisades.

25 MR. SIEBER: Okay.

1 MR. JOHNSON: In fact, from Palisades here
2 this afternoon is Darrel Turner and Bob Vincent. They
3 are the Project Managers for the Palisades license
4 renewal project.

5 We're also expecting, hopefully shortly,
6 Doug Cooper is our senior Vice President. And we are
7 expecting that he will join this meeting shortly.

8 And Jim Knorr will present an overview of
9 the Point Beach license renewal project?

10 MR. KNORR: Okay. Good afternoon. My name
11 is Jim Knorr. I'm the Manager of the license renewal
12 project for Point Beach.

13 As Doug was saying, we have an operating
14 company that operates Point Beach. It's Nuclear
15 Management Company, LLC. Their headquarters are in
16 Hudson, Wisconsin. And the owner of the plant is We
17 Energies. You probably know them as Wisconsin Energy,
18 which you can find on the market. So Nuclear
19 Management Company is the operator and We Energies is
20 the owner.

21 We're located in a small township on the
22 west shore of Lake Michigan, Two Creeks, Wisconsin.

23 Westinghouse two-loop PWR. Our rated
24 power at this point is 1540 megawatts thermal. And the
25 rate of electrical output is 538 megawatts electric.

1 We have four emergency diesel generators.
2 We have a 25 megawatt combustion turbine.

3 CHAIRMAN BONACA: Okay. Just a second.
4 The four emergency diesel generators, are they two per
5 units?

6 MR. KNORR: Actually, they are -- our
7 plant is licensed to operate with two diesels. The
8 four diesels, any one of the four diesels, and correct
9 me if I am wrong here, Steven, but anyone of these
10 four diesels can serve any one of the safety-related
11 loads on the site.

12 MR. SCHELLIN: Both safety-related.

13 MR. KNORR: Both safety-related diesels,
14 right, can serve any one of the --

15 CHAIRMAN BONACA: So there are only two
16 safety-related diesels? I'm trying to understand.

17 MR. KNORR: No. All four are safety-
18 related diesels.

19 CHAIRMAN BONACA: Okay.

20 MR. SCHWEITZER: Our design is such we
21 initially had a plant that had only two safety-related
22 diesels, alpha and bravo train that were common to the
23 site.

24 CHAIRMAN BONACA: To the site.

25 MR. SCHWEITZER: We added two more diesel

1 generators, but when we added them we maintained the
2 flexibility for the alpha, like the alpha emergency
3 diesel generator to supply either Unit 1 or Unit 2
4 alpha bus or both processes.

5 CHAIRMAN BONACA: But right now you have
6 two dedicated to one unit, two to the other one,
7 they're interconnected?

8 MR. SCHWEITZER: Normal lineup is to have
9 one diesel dedicated to each bus on each unit.

10 CHAIRMAN BONACA: Okay.

11 MR. SCHWEITZER: One diesel to the alpha
12 bus on Unit 1, one diesel to the alpha bus on Unit 1,
13 one diesel to alpha, one diesel to bravo on Unit 2.

14 MR. ROSEN: So that the diesels can start
15 in the required start time on either safety bus?

16 MR. SCHWEITZER: That is correct.

17 MR. KNORR: That's correct.

18 MR. ROSEN: There will be safety-related
19 power to either safety bus?

20 MR. SCHWEITZER: Yes.

21 MR. KNORR: Yes.

22 CHAIRMAN BONACA: So if you do have an
23 event at plant one, you start all four diesels if you
24 have lose of offsite power?

25 MR. SCHWEITZER: If you'd have total loss

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1 of offsite power, yes, you would start all four
2 diesels because you'd get the under voltage on all of
3 the buses.

4 CHAIRMAN BONACA: Okay. If you need,
5 however, emergency systems on one unit, you would
6 start only two? I'm trying to understand how the
7 logic works. And two will be standby?

8 MR. KNORR: That's correct.

9 CHAIRMAN BONACA: I would expect you don't
10 run all four of them.

11 MR. SIEBER: Well, it sounds the same as
12 a regular plant that put the cross ties as an
13 afterthought.

14 CHAIRMAN BONACA: Yes.

15 MR. SIEBER: Here the cross ties were
16 designed in at the original construction. And I
17 presume you operate with cross ties open? That would
18 be the normal operation position?

19 MR. SCHWEITZER: Yes. Normally a diesel
20 would be dedicated.

21 MR. SIEBER: So if you get a loop on one
22 unit, you get two diesels? If you got a loop on the
23 whole plant, you get four?

24 MR. SCHWEITZER: Correct.

25 MR. SIEBER: And anyone of them could

1 supply both buses on both units? But to get
2 redundancy you'd two?

3 MR. SCHELLIN: This is Steven Schellin,
4 the electrical lead for license renewal.

5 I think the key point is that each diesel
6 has the capacity to supply both units safety loads on
7 a single train, alpha train or bravo train.

8 MR. SIEBER: Right.

9 MR. SCHELLIN: And as you stated, we have
10 them aligned so that one diesel is on the Unit 1 alpha
11 train and it's corresponding twin diesel is on the
12 alpha train of the other unit. And similar for bravo.
13 And so if you had an accident or some event that
14 caused one unit to have a need, two of those diesels
15 would start based on the logic from that unit.

16 If you had a loss of offsite power, all
17 four diesels would start and you would have twice the
18 capacity needed to serve the safety loads on both
19 units available via the diesels.

20 MR. SIEBER: And I presume the tie
21 breakers are voltage chasers, right?

22 MR. SCHELLIN: They're manual.

23 MR. SIEBER: They're manual?

24 MR. SCHELLIN: Operated from the control
25 room.

1 MR. SIEBER: Not voltage chasers?

2 MR. SCHELLIN: Correct.

3 MR. SIEBER: Okay. So if a diesel doesn't
4 start with that bus tie open, you have to have an
5 operator action in order to --

6 MR. SCHELLIN: Yes.

7 MR. SIEBER: -- save the unit?

8 MR. SCHELLIN: That's to prevent an event
9 from one unit from taking the diesel from the other
10 unit --

11 MR. SIEBER: And possibly --

12 MR. SCHELLIN: -- without some judgment
13 being made.

14 MR. SIEBER: Yes.

15 CHAIRMAN BONACA: So just to finally
16 connect it completely, you have a lock on one unit.
17 One diesel will be sufficient to power all that
18 division of -- that you need.

19 MR. SIEBER: Yes.

20 CHAIRMAN BONACA: Okay.

21 MR. SCHELLIN: Correct.

22 CHAIRMAN BONACA: You don't need to --
23 okay. Thank you.

24 MR. SIEBER: Who owns the combustion
25 turbine? Is that the system operator or the plant

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1 operator?

2 MR. KNORR: The combustion turbine can be
3 started by the plant, but also I believe there's a
4 capability to operate at that and start it remotely.

5 MR. SIEBER: I presume that's the system
6 wide blackstart device?

7 MR. SCHWEITZER: It is credited at this
8 time for station blackout for us, correct.

9 MR. SIEBER: Okay.

10 MR. SCHWEITZER: Starting of the gas
11 turbine would be at the direction of our system
12 controller going through the control room. It is
13 operated and controlled by onsite personnel.

14 MR. SIEBER: Okay.

15 MR. KNORR: Okay. Our ultimate heat sink
16 is Lake Michigan. It is a once through cooling
17 system.

18 Our containment is a post-tension steel
19 reinforced concrete containment with a steel liner.

20 And we operate right now with 18 month
21 fuel cycles.

22 I think it would be interesting for this
23 Committee to understand what our operating experience
24 is for those passive pieces of equipment that we have,
25 and what I included in this slide were the two events

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1 that we've had over the years of Point Beach operation
2 which are the larger pieces of passive equipment that
3 we have seen some failures in.

4 In 1975 in February of '75 Unit 1 had a
5 steam generator tube rupture. The cause was
6 intergranular stress corrosion cracking. Early in the
7 life of that steam generator we used a phosphate
8 chemistry. And since, of course, we have not used
9 that. But nonetheless that was the detail there.

10 In 1999 we also had a feedwater heater
11 shell failure. That heat exchanger we had heard of
12 some operating experience about a month or so prior to
13 this event happening. And we were in the process of
14 evaluating an operating experience and about ready to
15 include that heat exchanger into our flow-accelerated
16 corrosion program when in fact the feedwater heater
17 did fail. So it was due to some steam impingement and
18 some flow accelerated corrosion on the shell.

19 This is a slide that talks a little bit
20 about our current performance. And I know that Pat
21 Loudon talked at length about this, but all of our
22 performance indicators at this time, NRC regulator
23 oversight process, are green. And as you know, we have
24 a couple of red findings related to the aux feedwater
25 design that were issued in 2003.

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1 It's important to understand that our
2 plant in case of Unit 1 has been operating almost for
3 a complete year as we sit here today. But the 18
4 month capability factor is at an 87 percent range.
5 The last automatic trip was in July of 2003.

6 And in the case of Unit 2 we're in a
7 refueling shutdown at this point. And it's 18 month
8 capability factor is about 89 percent. And it's last
9 auto trip happened also in July of 2003.

10 MR. ROSEN: Was there something about July
11 2003 that's special?

12 MR. KNORR: That was a bad month.

13 MR. ROSEN: Was it weather related?

14 MR. KNORR: No, it was not weather
15 related. Both of them happened to be equipment
16 failures. In the case of Unit 1 it was a voltage
17 regulator on a motor generator set for the rod drive
18 system. And on the case of Unit 2 it was a failure of
19 a main feed pump. In both cases failure of some
20 active pieces of equipment.

21 Okay. I want to talk a little bit about
22 the major improvements to capital investment that
23 we've made in the plant over the years.

24 New steam generators were installed at
25 Point Beach for both units. In Unit 1 it was 1984 and

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1 in Unit 2 it was 1997.

2 CHAIRMAN BONACA: What kind of steam
3 generators?

4 MR. KNORR: These are Westinghouse.

5 CHAIRMAN BONACA: Alloy 600?

6 MR. KNORR: In the case of Unit 1 it's
7 Alloy 600 with additional hardening for the Alloy 600.
8 And in the case of Unit 2 it's Alloy 690 for the
9 tubes.

10 CHAIRMAN BONACA: Okay.

11 MR. KNORR: Okay?

12 CHAIRMAN BONACA: How is performance of
13 Unit 1 versus Unit 2?

14 MR. KNORR: Frankly, both steam generators
15 in both units are in very good shape. We've had very
16 little in the way of tube plugging on both unit steam
17 generators. Most of it is due to original construction
18 flaws that we've had.

19 MR. SCHWEITZER: The other is wear at the
20 anti-vibration bars. That's all we're seeing in Unit
21 1 at this time. There have been no other indications
22 from express corrosion intergranular attack. It's just
23 a handful of tubes that have been plugged on Unit 1
24 associated with the anti-vibration bar wear.

25 MR. KNORR: The water chemistry seems to

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1 be very successful with both units.

2 CHAIRMAN BONACA: How much piping
3 replacement have you had for FAC?

4 MR. KNORR: I'm afraid I can't answer that
5 question. Jim, can you --

6 MR. SCHWEITZER: FAC replacement? Nearly
7 all of our secondary side extraction lines have been
8 replaced with stainless steel. So all of the steam
9 extraction lines have been replaced. Some of our vent
10 lines we've replaced. We have a little bit of our
11 service water lines with stainless steel in some
12 areas.

13 MR. ROSEN: Go ahead.

14 MR. SCHWEITZER: It was fairly aggressive
15 a number of years ago with the FAC program and
16 inspection in the extraction steam, the main steam
17 area. If we continue program right now, and I replace
18 components as their life is determined to be not going
19 to -- the life will not get to the next refueling
20 outage.

21 MR. ROSEN: This replacement of the steam
22 generators on Unit 1 in 1984 --

23 MR. KNORR: That's correct.

24 MR. ROSEN: And you're saying that you
25 have still no defects. That's 21 years.

1 MR. KNORR: That's correct.

2 MR. ROSEN: And what is the T_{hot} on that
3 unit?

4 MR. SCHWEITZER: Five ninety-eight.

5 MR. SIEBER: No, that's not T_{hot} .

6 MR. SCHWEITZER: Or five ninety-eight.
7 We're just below 600. We're below the --

8 MR. ROSEN: Are both units the same?

9 MR. SCHWEITZER: Yes, both units are the
10 same.

11 MR. SIEBER: And these are mill annealed
12 tubes now?

13 MR. KNORR: For Unit 1 they're annealed,
14 yes. And for Unit 2 they are --

15 MR. SCHWEITZER: Thermally Alloy 690.
16 United 1 600 thermally treated tubing. And Unit 2 is
17 Alloy 690.

18 MR. SIEBER: What kind of tube support
19 plates? Are they broached holes or just drilled
20 holes, or stainless?

21 MR. SCHWEITZER: They are the quatrefoil
22 broached holes.

23 MR. KNORR: Right.

24 MR. SCHWEITZER: Quatrefoil broached
25 holes.

1 MR. KNORR: Okay. We have replaced --

2 MR. SIEBER: The chemistry is the four
3 balance?

4 MR. KNORR: It's hydrazine for the
5 secondary system.

6 MR. SIEBER: Yes. Molar ratio balance.
7 Yes. That was Westinghouse's or EPRI's I guess it
8 was, the last one I remember anyway, new chemistry
9 regiment.

10 MR. KNORR: I can't directly answer that.
11 I know that chemistry does look at the molar ratio.
12 I'm not sure how that's factored into the chemistry
13 control.

14 MR. SIEBER: Sort of like a little arsenic
15 is good for you, right?

16 MR. KNORR: It could be.

17 MR. LEITCH: This feedwater heater shell
18 that failed, did you replace that shell or repair it?

19 MR. SCHWEITZER: We repaired that shell.

20 MR. LEITCH: Yes.

21 MR. SCHWEITZER: It was in a localized
22 area the steam extraction comes in. We also determined
23 that material properties of that heat exchanger are a
24 little bit different because the identical heat
25 exchangers on Unit 2 did not show the same wear. And

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1 all the heaters now in that area are in our flow-
2 accelerated corrosion program for continued
3 monitoring.

4 MR. LEITCH: Okay. Right.

5 MR. KNORR: We replaced the split pins for
6 both units in the mid-'80s. And I need to vary that
7 explanation a little bit.

8 In the case of Unit 1 all the split pins
9 were replaced. In the case of Unit 2 we replaced just
10 the susceptible pins, and I think there were four
11 total. However, Unit 2 has just gone through a
12 complete split pin replacement about two or three
13 weeks ago. So all the split pins are new on Unit 2
14 and we've seen no evidence of wear or problems with
15 Unit 1.

16 In the late 1980s we did an upflow mod.
17 What that did is change the direction of flow past the
18 baffle former plates. We installed our two additional
19 diesels, which we talked about a little while ago, in
20 1994. And in 1998 we actually replaced the Unit 2
21 baffle bolts in a large portion of the baffle bolts.

22 MR. SIEBER: Why did you add two diesels?
23 You don't need them for your license.

24 MR. SCHWEITZER: That was really from a
25 PRA risk aspect. When we looked at it, that gave us

1 the most significant reduction in core damage
2 frequency by adding the two diesels.

3 MR. SIEBER: Okay.

4 MR. SCHWEITZER: So it was an upgrade
5 safety net.

6 MR. SIEBER: A safety-related diesel is
7 about what, \$10 or \$20 million? They're not cheap.
8 So you did it for the safety of your PRA?

9 MR. SCHWEITZER: Yes.

10 Steve, did you want to comment?

11 MR. SCHELLIN: Well, I guess two
12 additional items. One, at that point in time there
13 were a number of nuclear plants that had been canceled
14 and there were some diesel generators that just
15 matched ours that were pretty inexpensive, except for
16 refurbishing and shipping them.

17 MR. ROSEN: You should have got four or
18 five.

19 MR. SCHELLIN: The second item is that if
20 we had a single diesel that went into a LCO, we had
21 seven days to repair it before we had to take both
22 units down. And now with four diesels we do not have
23 that problem so that we can do a major overhaul or a
24 repair or an upgrade without impairing the safety
25 aspects of the units and continue to operate.

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1 MR. ROSEN: Do you do maintenance online?

2 MR. SCHWEITZER: For the power break
3 diesel the maintenance is done on line.

4 MR. SCHELLIN: Yes. Yes, we do.

5 MR. SIEBER: Thank you.

6 MR. KNORR: You're welcome.

7 The Unit 2 baffle bolt replacement was
8 done in 1998. We found little or no difficulty with
9 those baffle bolts. We did find a small number with
10 cracking, but did not see any reason to go on into
11 Unit 1.

12 In the case of low pressure turbines, we
13 had a change out of our low pressure turbine sets and
14 we now have an integral hub so we don't have to
15 concern ourselves with loose part -- or not loose
16 part, but missile issues with those turbines.

17 We installed a new training building and
18 a new engineering building in 1998.

19 And some DC upgrades were completed in the
20 mid-'80s and mid-'90s with new batteries and some DC
21 busses, a new swing battery and bus and a new
22 nonsafety-related battery set that was installed in
23 the mid-'90s as well.

24 MR. LEITCH: Does your new training
25 building have a plant-specific simulator?

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1 MR. KNORR: Actually, our old training
2 building has a two unit plant specific simulator where
3 both units are actually simulated.

4 MR. SCHELLIN: Actually, it's in our north
5 service building, which was new at the time.

6 MR. KNORR: Which was new and it was
7 called our training building earlier. That portion
8 was training at the time.

9 MR. SCHELLIN: We have the only two units
10 simulator in the world.

11 MR. KNORR: Yes.

12 MR. LEITCH: Yes, that's right.

13 MR. SIEBER: When you talk about the
14 replacement of batteries, did you replace them just
15 because they're like car batteries and they wear out
16 or did you replace them to increase the capacity?

17 MR. SCHWEITZER: In this situation we
18 actually added additional batteries to the station,
19 another complete battery system. Again, to provide
20 additional backup and capability. And the swing
21 battery was installed so that we could actually do
22 testing, the discharge testing of the battery online
23 without affecting the unit.

24 There is still periodic replacement of the
25 batteries themselves. And in fact, within the last

1 year we replaced all the battery cells in two of our
2 safety-related battery systems.

3 MR. SIEBER: Yes, you have to replace them
4 all at once. You know, you can't just add cells?

5 MR. SCHWEITZER: You can replace some of
6 them during the time but what you get --

7 MR. SIEBER: In a single battery he has to
8 replace -- you can cut cells out, but you can't put a
9 new cell in without messing it up.

10 MR. SCHELLIN: On our DC system we run 125
11 volts with between 59 and 60 cells.

12 MR. SIEBER: Yes.

13 MR. SCHELLIN: Plus we fold a couple of
14 spare cells so that if we happen to have an individual
15 cell failure, we can do a replacement. And the --

16 MR. SIEBER: Well, you cut it out so you
17 have another cell.

18 MR. SCHELLIN: Right. And the two new
19 batteries that we put in the mid-'80s were after TMI.
20 In the original plant design we had an alpha and bravo
21 battery that served like the diesels, each unit, a red
22 and blue train of instrumentation. But our white and
23 yellow train were served by motor generator sets. So
24 the motor generator road through any small cycle
25 interpretations but not loss of offsite power. So

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1 post-TMI we put in white and yellow batteries. And
2 then, as Jim said, the swing safety-related batteries
3 so that we can take a battery out of service and do a
4 complete discharge test to match our safety response
5 profile.

6 MR. SIEBER: So as far as coping time is
7 concerned, you're a long time plant or a short time
8 plant?

9 MR. SCHELLIN: Short.

10 MR. SIEBER: Short?

11 MR. SCHELLIN: We're short.

12 MR. KNORR: We're a four-hour coping
13 plant.

14 MR. SIEBER: Okay. So that remains, I
15 won't say a vulnerability because there's a lot of
16 plants like that, but --

17 MR. KNORR: Right.

18 MR. SIEBER: -- an area where your PRA
19 would tell you about it. Okay. Thanks.

20 MR. KNORR: Right.

21 Next slide.

22 We did upgrade some portions of the -- in
23 fact a good portion of the service water system in the
24 late 1990s.

25 For the second time we actually replaced

1 our plant process computer in the year 2000.

2 DR. SHACK: Was that because you had a MIC
3 attack or something like that in the service water --

4 MR. KNORR: In the service water system.

5 MR. SIEBER: In the process computer.

6 MR. ROSEN: It hadn't spread to the
7 process computer.

8 MR. SCHWEITZER: It was associated with
9 that, but it was also to give us a much more
10 redundancy and capability in our service water system.
11 Point Beach service water system is a common system
12 for both units. And it's basically a ring header
13 serving both units. There are a number of components
14 within there that were very difficult to maintain,
15 would require two unit outages to maintain. So what
16 we did is we did several modifications that provided
17 some redundancy and some additional flexibility to
18 allow us to do better maintenance on the system. A
19 number of the valves had never been maintained since
20 startup because of the design of the system. And when
21 we had added additional flow paths and valving, we
22 could continue to do maintenance.

23 MR. KNORR: Okay. We did redesign our
24 intake structure. Removed the super surface section
25 of it and we lowered it to below the surface.

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1 New containment fan cooler heat exchangers
2 were replaced over a number of years in the early
3 2000. So we now have all brand new containment fan
4 cooler heat exchangers.

5 The reactor vessel head are going to be
6 replaced this year. Unit 2 is the spring of this
7 year. Unit 1 is the fall of this year.

8 We're also scheduled for aux feedwater to
9 replace the motor driven auxiliary feedwater pumps,
10 both motor and pumps, in the years 2006 and 2007.

11 MR. ROSEN: So you've already done a Unit
12 2 reactor vessel head replacement?

13 MR. KNORR: We're nearing completion of
14 that outage.

15 MR. ROSEN: Did you have to put a hole in
16 the containment to get it in?

17 MR. KNORR: No, we did not. Our equipment
18 hatch is large enough to get the head to.

19 DR. SHACK: Did you have any cracking or
20 was this a preventative measure?

21 MR. KNORR: Jim Schweitzer?

22 MR. SCHWEITZER: This was more of a
23 preventative measures. We have inspections of both
24 heads a couple of times. We did have to cut out some
25 thermal shelve to get adequate inspection. We did

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1 have an indication on our Unit 1 at last outage that
2 caused us to do a repair of that nozzle. Further
3 evaluation with the vendor and better research
4 identified that the indication came from an area that
5 was an original manufacturer repair. It just gives us
6 an indication that looked very much like a crack and
7 we were unable to inspect it.

8 So it's really looking at the avoidance
9 going forward for doing those inspections and some
10 improvements in the head that we got also, that will
11 allow us to do our outages more efficiently.

12 MR. KNORR: Any other questions here?
13 Okay.

14 Just to go through some real quick slides
15 here on application background.

16 We did submit in February of 2004. The
17 current licenses like expire in 2010 and 2013.

18 We did use the standard 2003 LRA format
19 that you have seen for the last couple of meetings
20 here with Farley, ANO, Cook and Millstone. And we
21 have expanded the content of that. I'm sure you all
22 have read, especially in our program section, with the
23 additional information for all the ten elements for
24 all of the programs. That was a change that we thought
25 would make it easier for the reviewers to actually

1 review each of our programs as well the inspection
2 teams.

3 MR. LEITCH: Just a curiosity question.
4 Most of the plants that we see are further from
5 license expiration, further out than ten years, than
6 five years, which is the case with Unit 1 here. Is
7 there some particular reason for that? Was there some
8 uncertainty about whether to proceed or --

9 MR. KNORR: No, there was not. Our asset
10 owner was in the process of getting the okay from our
11 Public Service Commission in the state of Wisconsin
12 for some other fossil units. And they asked us to
13 delay the review for -- or at least the submittal for
14 about two years. That's the only reason.

15 MR. LEITCH: Okay. Thank you.

16 MR. KNORR: Sure.

17 The NRC used the new review process, which
18 you've seen for the last couple of applications as
19 well. So we're no different there.

20 As far as aging management programs, we
21 have 26 total. All of them are common to both of our
22 units. Twenty-one of them are existing programs and
23 five of them are new. A number of them have
24 exceptions and clarifications to the GALL programs.
25 And I just wanted to talk about a few of the

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1 exceptions to give you some examples of what those
2 might be.

3 We did use different or later versions of
4 codes and standards. We expanded the program, in some
5 cases, to scope beyond GALL and in those cases we saw
6 some exceptions there.

7 We did use later NRC guidance or
8 precedents that we had seen from other licensees. And
9 that resulted in some exceptions.

10 Because of our Unit 2 vessel issue, we did
11 install an additional capsule there for the extended
12 life so that we actually have a sample of all our weld
13 material to look at once we get near the 60 year
14 fluence. This particular capsule is located in a times
15 three location, so that it will be seeing fluence a
16 lot faster than the actual vessel.

17 The vessel internals program we have
18 committed to in our application and in responses to
19 RAIs that we will be looking at the EPRI program and
20 we'll be submitting that program for review and
21 approval once we'd looked at what EPRI is
22 recommending, and will incorporate that into our
23 program. And look for NRC approval some 24 months
24 prior to period of extended operation.

25 And in the SER commitments area, you'll

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1 see this data actually as a commitment.

2 Instrumentation circuits. We are using an
3 alternate program here of cable testing. And in the
4 case of medium voltage cable, we have already retested
5 all of our medium voltage cable. And for all those
6 inaccessible medium voltage cables. And the testing
7 technique that we're using is one that we believe is
8 successful. It's one that we can use while we're
9 actually on line.

10 MR. SIEBER: So is it just a Megger test
11 or--

12 MR. KNORR: No, it's not a Megger test.
13 It's a -- Steve, you want to help me out here?

14 MR. SCHELLIN: It's partial discharge.

15 MR. KNORR: It's a partial discharge test.

16 MR. SIEBER: Tell me what that is.

17 MR. KNORR: Steven?

18 MR. SCHELLIN: The test is an inductive
19 examination of the harmonics that reflect the partial
20 discharge that may be present during the operability
21 or during the operation of the actual cable.

22 MR. SIEBER: Thank you.

23 MR. ROSEN: Well, when you have a program
24 to submit greater or equal to 24 months prior to the
25 period of extended operation, and your period of

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1 extended operation you enter in five years from now?

2 MR. KNORR: That's correct.

3 MR. ROSEN: What will you do if the
4 reactor vessel internals program is not available in
5 2008, let's say? Do you have a backup plan? I mean,
6 normally this question doesn't arise because people
7 don't enter the period of extended operation period in
8 as short a time as you will.

9 MR. KNORR: We're really no different than
10 other licensees in this area. I think most of the
11 commitments in the past have been identical of a
12 program to be issued to the NRC for prior approval, 24
13 months prior.

14 MR. ROSEN: Yes, I understand your
15 commitment's the same. But the timing is different in
16 the sense that you will need it sooner than most other
17 plants.

18 DR. SHACK: You're 24 months plus.

19 MR. KNORR: I understand. Okay.

20 I believe our indication that, you can
21 help me out, Mr. Fromm here, that we're expecting EPRI
22 to come up with the suggested programs by the end of
23 next year, I understand, 2006.

24 MR. FROMM: This is Brad Fromm, NMC at
25 Point Beach.

1 We are actively working with EPRI MRP and
2 we're keeping a close eye on the Ginna plant. The
3 Ginna plant has a very similar commitment and they are
4 license expires a little sooner than ours.

5 MR. ROSEN: So you'll both in trouble
6 then? Is there a backup plan? Will you develop your
7 own program or is there --

8 MR. KNORR: I can't --

9 MR. ROSEN: What you use for EPRI is an
10 instant.

11 MR. KNORR: I can't speculate, sir. I just
12 don't know. I would suspect that we'd have to --

13 MR. SCHWEITZER: Yes, we need to take that
14 for an action.

15 MR. KNORR: We'll have to take that for an
16 action. We can get back to you.

17 MR. SCHWEITZER: To develop what we need
18 to have for a contingency.

19 CHAIRMAN BONACA: I had a question about
20 inaccessible medium-voltage cables. I thought from the
21 application that you were only testing those in
22 adverse environment?

23 MR. KNORR: That is correct. That's our
24 commitment to do that into the future. However, we
25 have tested all the cables, the inaccessible cables

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1 and all the medium-voltage cables. Is that right,
2 Steven?

3 MR. SCHELLIN: Yes. We did a baseline on
4 all of the cables and our commitment in the future is
5 to test a sample that's representative of all of the
6 manufacturers and all the typical cable constructions
7 that we have, but look at the cables that are in the
8 most adverse environment.

9 CHAIRMAN BONACA: Now, since you're only
10 testing some, do you have a plan of what you'll do if
11 you find some degradation in some of them?

12 MR. SCHELLIN: We are developing that.

13 CHAIRMAN BONACA: In your sample?

14 MR. SCHELLIN: We are developing that, but
15 it would be an expansion of testing.

16 CHAIRMAN BONACA: Still focusing on the
17 ones in adverse environment or addressing all of them?
18 I mean, GALL says you should test them all.

19 MR. KNORR: Well, we would expand the
20 sample based on the testing that we've just completed.
21 And if there's indication that it's more than just
22 those in the adverse conditions, we would obviously go
23 on to those cables that are outside of that
24 population.

25 CHAIRMAN BONACA: What you are saying that

1 essentially you are going to not test those not in
2 adverse environment unless you find one of them at
3 some point failing? You're waiting for that to
4 happen?

5 MR. KNORR: I think that's what I've just
6 said.

7 Steven?

8 MR. SCHELLIN: We are going to test a
9 sample of the cables in the adverse environment.

10 CHAIRMAN BONACA: Right.

11 MR. SCHELLIN: We tested all of the
12 cables, many of which are accessible not underground.
13 Those we do not see that they have a challenge to the
14 cable because of their environment. But we will be
15 testing a sampling of those that are underground
16 inaccessible, exposed to water. Because we assume
17 that if they're underground, they're exposed to water.

18 CHAIRMAN BONACA: Yes. I was reading
19 somewhere in a inspection report where they found
20 inadequate and untimely corrective action related to
21 flooding of manholes containing safety and non-safety
22 related cables. Have you corrected that deficiency?

23 MR. SCHELLIN: We are working on that
24 problem. We have instituted two items at the current
25 time. One is inspection and pumping of the manholes

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1 on a periodic basis that depends upon the watering
2 ingress into the manholes that started out on
3 almost a daily basis and has gone to about once a
4 week. And the second is we have a couple of engineers
5 that are working on a water mitigation system and
6 looking at a couple of options to try and dewater some
7 of the manholes, which is a little bit difficult but
8 they're working on it.

9 CHAIRMAN BONACA: Now of these cables are
10 more important than others. So do you have also some
11 strategic thinking about how you're going -- are you
12 in selecting samples, for examples, you're saying that
13 you're going to select a sample. Are you choosing the
14 most -- since they're all in a challenging
15 environment, are you just selecting on the basis of
16 risk associated with losing that cable?

17 MR. SCHELLIN: We have a limited number of
18 cables that are in a challenged environment. None of
19 them are safety-related.

20 CHAIRMAN BONACA: Okay.

21 MR. SCHELLIN: They are, however,
22 important to us economically because they are tied
23 into our offsite power source. And those are the ones
24 that we are testing.

25 CHAIRMAN BONACA: Okay.

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1 MR. SCHELLIN: And for each phase we have
2 multiple conductors for the phases, so the failure of
3 a single conductor while a tragedy, will not take out
4 the power for that phase.

5 CHAIRMAN BONACA: Thank you.

6 MR. KNORR: The next slide gives you an
7 indication of where we are in effective full power
8 years for both of the units. The reason that Unit 1
9 and Unit 2 are sort of a little odd to you, Unit 1 is
10 the EFPY as of the last outage. We do the official
11 calculations as of the last outage. As of today, as
12 I said earlier, Unit 1 has been operating for almost
13 a full year. So the actual number for this is 26.7,
14 but that's the number that we had as of April last
15 year when we had the outage for Unit 1.

16 Unit 2 is up to date, 26.2 is the expected
17 full power years.

18 One of the things that we've done here at
19 Point Beach for the numbers that you're seeing in our
20 application, is we've assumed a 95 percent capacity
21 factor. We believe that's a much higher capacity
22 factor than most of the rest of the licensees have in
23 the past. And, as you can see, for Unit 1 and Unit 2
24 the numbers are as 51 and 53 for the two units.

25 The capability factor, if you remember

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1 right from an earlier slide, is more in the high 80's.

2 CHAIRMAN BONACA: You're referring to
3 power uprate here?

4 MR. KNORR: Yes, we are. And really that
5 has nothing to do with the EFPY. I think that's where
6 you were going with that?

7 CHAIRMAN BONACA: No. My question on
8 power uprate is that you made some statement in your
9 application that you took consideration of the
10 conditions of power uprate?

11 MR. KNORR: Absolutely.

12 CHAIRMAN BONACA: And for example, you
13 concluded that scoping is not effected?

14 MR. KNORR: That's correct.

15 CHAIRMAN BONACA: What about steam dryers,
16 just a question? I mean, how do you reach those
17 conclusions that there was no effect? I mean, did you
18 look at other power plants which have gone for an
19 uprate or uprate and decided that, you know, they
20 didn't experience any need for additional expansion of
21 scoping, or did you draw those conclusions?

22 MR. KNORR: Well, our understanding is
23 that, for instance, Ginna is going for a power uprate.
24 And I think they came to the same conclusion there for
25 their plant.

1 In our case, the steam generators in our
2 case are designed for a much higher power level than
3 we are now operating at.

4 CHAIRMAN BONACA: Yes.

5 MR. KNORR: All of the materials inside
6 the steam generator are in scope. So there would not
7 be any change by going to 1678 as opposed to 1540.

8 MR. SCHWEITZER: Is the answer, Jim, that
9 we really looked at it and even with the thermal
10 uprate that everything that we would need to be
11 inspecting is already within the inspection correct?

12 MR. KNORR: That's correct.

13 MR. SCHWEITZER: The steam generator, the
14 secondary side, the steam separators, the steam lines,
15 heat exchangers are all within the program already.

16 MR. KNORR: Right.

17 MR. SCHWEITZER: So there was not
18 additional inspections required by the thermal uprate.

19 CHAIRMAN BONACA: Yes. My raising the
20 question with regard to the steam dryers was not
21 accidental. What I mean is that, you know, for BWRs
22 we saw that there was an issue there.

23 MR. KNORR: Yes.

24 CHAIRMAN BONACA: Of course, there was
25 substantial power uprate. And then the result of it

1 is that, you know, it has been included as a component
2 in the scope of license renewal.

3 MR. KNORR: In our case we had already
4 included all of those materials. The structures,
5 components that we had identified as being needed for
6 power uprate had already been included in scope with
7 our original scoping for license renewal.

8 CHAIRMAN BONACA: Okay.

9 MR. LEITCH: I meant to ask you when you
10 were talking head replacement.

11 MR. KNORR: Yes?

12 MR. LEITCH: I read some issue that you
13 had with respect to the polar crane being able to lift
14 the new head.

15 MR. KNORR: Yes.

16 MR. LEITCH: Could you tell us a little
17 bit about the resolution of that issue and was it a
18 age related problem with the polar crane?

19 MR. KNORR: We actually had a phone
20 conversation last week with one of the licensing
21 reviewers who asked exactly those same questions.
22 The--

23 MR. LEITCH: We didn't collaborate.

24 MR. KNORR: I understand that. I
25 understand that. But that was good.

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1 We were asked that same question as to
2 whether or not there was any change in the current
3 licensing basis, for instance, because of the head
4 lift issues with the polar crane.

5 The new head is slightly heavier than the
6 old head, but is still well within the capacity of our
7 crane. There are no aging issues that are different
8 because of this crane.

9 One of the issues that you have to look at
10 for the crane is the number of lifts that you actually
11 are allowed to make by the crane that might go beyond
12 the capacity. And there are no plans to do any lifts
13 beyond the capacity of the crane.

14 So our reviewer, at least the NRC's
15 reviewer, appeared to be okay with our answers there.
16 But we don't know of any issues from that head lift
17 issue that have to do with the crane itself.

18 MR. SIEBER: Who is the manufacturer of
19 the crane?

20 MR. KNORR: I'm afraid I don't know.
21 Mark?

22 MR. ORTMAYER: It's Crane Manufacturing.

23 MR. SIEBER: Crane Manufacturing?

24 MR. ORTMAYER: Yes. Mark Ortmayer, NMC.
25 It's CMS, Crane Manufacturing and Service

1 Corporation.

2 MR. SIEBER: Okay. Thanks.

3 MR. ORTMAYER: You're welcome.

4 MR. SCHWEITZER: Jim, maybe I could just
5 provide a little bit clarification on our issue that
6 we have right now.

7 It's not an issue with the crane itself.
8 This goes back to NUREG-0612 control and lifting of
9 heavy loads. And under phase 2 of the NUREG it
10 required the licensees to be looking at load drop
11 analysis, what would occur if you dropped head, do you
12 have a single failure proof crane; a number of
13 analysis.

14 Our crane is not single failure proof. We
15 did a load drop analysis at that time, determined that
16 there would be damage from dropping our head from the
17 highest level. And we sent that into the NRC at that
18 time.

19 There was no further follow-up at that
20 time, but we did have it on the record back from 1982.

21 During the replacement of our new head
22 questions came up about load drop analysis because the
23 head is slightly heavier. We started to go back and
24 research, and looked within our record. Determined
25 that we did make this submittal back in 1982. So that

1 does become part of our licensing basis, although it
2 was never reviewed and never incorporated into our
3 FSAR. So it brought out the issue associated with
4 whether we had an 10 CFR 50.73 echo issue in
5 incorporating it into our FSAR.

6 We looked at that, and we believe that we
7 needed a license amendment to incorporate it into our
8 FSAR. And that's what we're working through with the
9 NRC right now.

10 We have our own internal hold on the head
11 until we resolve those issues. And the biggest thing
12 we're working through right now is the '82 analysis
13 was fairly simplistic and only went to the point of
14 saying that from a static condition if you drop the
15 head, your supports would fail. Therefore, you would
16 have some significant damage to the direct coolant
17 system piping. The analysis never went any further to
18 truly quantify what that is, and that's what we're
19 kind of working through right now.

20 We're looking at a long term analysis if
21 we do a full, what's called a elastic-plastic analysis
22 of the reactor coolant system, which I believe has
23 only been done at one site. It's a about a three to
24 four month analysis to step through that. So we're
25 looking at other options right now in trying to come

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1 up and do a better evaluation of the extend of the
2 damage. And we're working with the staff here at NRR
3 on that.

4 MR. LEITCH: So you're actually not
5 lifting the new head until this issue is resolved, is
6 that --

7 MR. SIEBER: They've got to.

8 MR. SCHWEITZER: That is correct, until
9 it's resolved. It's an internal hold on it right now.
10 But it's until the issues are resolved and we have
11 agreement between NMC and Nuclear Regulatory
12 Commission.

13 MR. LEITCH: Was that a critical path item
14 right the moment?

15 MR. SCHWEITZER: Yes, it is.

16 MR. KNORR: Yes, it is.

17 MR. ROSEN: No, but you've already done
18 that on one of the units, right?

19 MR. SCHWEITZER: No. We've not replaced
20 a head.

21 MR. ROSEN: Oh, I thought you had already
22 replaced one.

23 MR. SCHWEITZER: Unit 2 in the refueling
24 outage right now is the first replacement.

25 MR. ROSEN: Okay.

1 MR. SCHWEITZER: Unit 1 will be in the
2 fall.

3 DR. SHACK: What changes will you make for
4 the uprate?

5 MR. KNORR: For the reactor vessel head?

6 DR. SHACK: No, for the power uprate?

7 MR. KNORR: We will be doing -- the major
8 changes we're going to be making is in the case of
9 main feed pumps, we need more capacity. So we'll have
10 to replace our main feed pumps.

11 The high pressure turbine is another area
12 that we will have to make some changes and have to go
13 to a slightly larger -- or different design of high
14 pressure turbine.

15 Those are the major changes that we're
16 going to be making. I don't --

17 DR. SHACK: Will that change T_{hot} ?

18 MR. SIEBER: It probably will.

19 MR. KNORR: I believe slightly, yes.

20 MR. SCHWEITZER: Yes. There is a slight
21 increase of T_{hot} .

22 MR. SIEBER: If you don't change the
23 coolant pumps, something's got to go up.

24 MR. KNORR: Yes. And we will be -- and
25 those differences in temperature have been

1 incorporated into our evaluation of aging within the
2 reactor itself and steam generators.

3 MR. SIEBER: Well, you're relatively low
4 temperature right now. You've got probably 8 of 9
5 degrees to go before you get into the exciting range.

6 MR. ROSEN: When you say you're going to
7 raise T_{hot} a slight increase, are you talking about the
8 8 or 9 degrees or less than that?

9 MR. SCHWEITZER: I don't know the number
10 right off.

11 MR. SIEBER: It's probably less than that.

12 MR. SCHWEITZER: I don't think it's quite
13 that high, but I don't have that number on the tip of
14 my tongue at this time.

15 MR. KNORR: I don't either.

16 MR. ROSEN: Well, it affects my feelings
17 about longevity of steam generators. It's very
18 sensitive to T_{hot} .

19 MR. KNORR: Okay. We can get that piece
20 of information and get back to you with the exact
21 temperature. I'd rather do that than speculating on
22 what it is.

23 MR. SIEBER: What's the percentage of
24 power increase that you're thinking about?

25 CHAIRMAN BONACA: Eight point seven.

1 MR. KNORR: It's a little bit greater than
2 10 percent, sir.

3 MR. SIEBER: Okay. So that's going to be
4 a ten percent increase in delta T. That tells you what
5 the temperature is going to be.

6 MR. ROSEN: If I knew the delta T.

7 CHAIRMAN BONACA: I thought you already --
8 the 1.7 percent?

9 MR. SCHWEITZER: We've also -- that's from
10 the leading edge flow meter from the feed flow. So
11 we've realized some of that percentage already.

12 CHAIRMAN BONACA: Okay. And the rest is
13 about nine percent or eight percent?

14 MR. KNORR: It's about nine percent,
15 that's correct.

16 CHAIRMAN BONACA: Yes. It can't be that
17 much in temperature.

18 MR. KNORR: The next slide I have here it
19 talks about pressurized thermal shock and upper shelf
20 energy. We can either have the discussion now, and I
21 do understand that the staff also has a discussion of
22 these particular items. If you would like to have the
23 discussion now, we can do that.

24 What I gave here is a little bit more
25 detailed than the staff's provided. But what I do

1 want to tell you is that, again, we assumed 95 percent
2 capacity factor and that full power uprate, 1578
3 megawatts thermal so that the numbers you see here are
4 assuming those things happening.

5 In the case of upper shelf energy we're
6 slightly less than 40 foot pounds. But in both units'
7 cases, when you do the equivalent margins analysis, we
8 do come in at greater than one, which is the
9 acceptance criteria.

10 In the case of Unit 1 for RT_{PTS} , we are at
11 299, which is under the 300 degrees criteria. But in
12 the case of Unit 2 we do have one weld that is greater
13 than 300 degrees at 60 years. And though we did
14 provide to the staff as well the years that we would
15 be able to operate, which is 38 -- a little over 38
16 effective full power years, which is approximately the
17 year 2017.

18 Now, the key here is the note that I have
19 at the bottom. About three years prior to that the
20 rule requires that we do one of two things. We either
21 come up with an analysis for and the criteria for a
22 fluence control program where flux reduction is our
23 goal so that prevent PTS from happening at the plant
24 or we license an alternate PTS analysis technique
25 which is the master curve is one option that we have.

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1 In either case three years prior to it in
2 accordance with 50.61, we have to go to the NRC with
3 that program and get approval.

4 CHAIRMAN BONACA: We can discuss this when
5 the staff makes it presentation.

6 MR. KNORR: Okay.

7 CHAIRMAN BONACA: However, I would like
8 just a clarification to understanding where you're
9 going. I mean, in the application you spoke of a
10 master curve.

11 MR. KNORR: That's correct.

12 CHAIRMAN BONACA: And they usually
13 approach, and I really don't know enough about it, I
14 would like to know more about that.

15 Now then you had a submittal later on that
16 said we're not going to do that. We're going to manage
17 aging by monitoring fluence and then do the second
18 that you're saying here.

19 MR. KNORR: Correct.

20 CHAIRMAN BONACA: I was confused about
21 which path you're going to take. Now you mentioned
22 again the possibility of using the master curve at a
23 later time.

24 MR. KNORR: That's correct.

25 CHAIRMAN BONACA: And so I'm confused

1 about what you want to do, and I would like to know
2 from you what the actions are. So, I mean, I know in
3 the meantime there is going to be probably a new PTS
4 rule which is not as restrictive as the current one.

5 MR. KNORR: Yes.

6 CHAIRMAN BONACA: Are you planning to take
7 advantage of that? I would like to understand your
8 strategy.

9 MR. KNORR: If we had our druthers, we
10 would like to take advantage of the new rule. Because
11 our understanding is that the acceptance criteria
12 under the new rule is more in the 325 degrees range.
13 And that's just an estimate that I've heard.

14 In the case of master curve, using the
15 actual fracture toughness measurements as opposed to
16 the correlation to Charpy V-notch, we believe that the
17 generic report put together by B&W, B&W 2308 Rev. 1
18 would result in an actual RT_{PTS} for us in the 292 to
19 295 range.

20 CHAIRMAN BONACA: Then why don't you us
21 that?

22 MR. KNORR: The reason why is because when
23 we supplied our license renewal application to the
24 staff, the generic report put together by B&W was not
25 yet approved. And so what we were doing is we were

1 relying on an unapproved report at that point. And so
2 we thought the best option for us was to just withdraw
3 that application and then go to -- the program that
4 we're doing and then leave that as an option to use
5 the master curve something later.

6 Again, so our backup here is the ideal
7 would be to use a revised rule. And the backup to that
8 would be the B&W-2308 option or master curve. And,
9 obviously, if none of those work we still have the
10 option of some other flux reduction programs that we
11 can go in. Okay?

12 MR. ROSEN: Now how this hafnium business
13 relate to that. Hafnium is suppression of flux. And
14 I understand from reading the application that you're
15 going away from that?

16 MR. KNORR: In the application we said
17 that we were going away from that. However, we have
18 made a commitment since then as part of this
19 discussion of master curve and going to a program
20 where we would say we're going to maintain hafnium in
21 there until we come up with either another flux
22 reduction program or go ahead with master curve or one
23 of the other options.

24 MR. SIEBER: I presume you're using low
25 leakage cores?

1 MR. KNORR: That is correct.

2 MR. SIEBER: And have been for a long
3 time?

4 MR. KNORR: For along time, sir. That's
5 correct.

6 MR. SIEBER: All right.

7 MR. ROSEN: Is somebody going to pull all
8 this together for us? Is the staff going to talk
9 about this?

10 MR. SUBER: Yes, I think the staff has a
11 presentation.

12 MR. ROSEN: All right. We'll wait for
13 that.

14 MR. KNORR: Okay.

15 MR. SIEBER: Okay. Thanks.

16 MR. KNORR: Earlier in the discussion this
17 afternoon during current operation discussion with Mr.
18 Louden, one of the concerns that the Committee had was
19 on commitment management. And what I wanted to do is
20 just to go over our program at Point Beach to give you
21 an idea of what we do at Point Beach.

22 First off, all of our commitments come
23 from one of two locations; either the original
24 application or they come from a request for additional
25 information response that we have submitted. And each

1 of these commitments are actually on cover letters
2 that are sent into the NRC.

3 Also, you'll find at the end of the SER
4 that was written by the staff a listing of all of
5 these commitments. Each and every one of these
6 commitments have been entered into our regulatory
7 information system, which is our commitment management
8 program and system. It is a software package that
9 tracks each and every one commitment that is made at
10 Point Beach. Not only license renewal, but all other
11 kinds of commitments as well.

12 In license renewal we realize as part of
13 our programs we're going to have to institute and have
14 control over all the changes being made to various
15 procedures, processes, etcetera, at the plant. And we
16 have also instituted a software package that
17 interfaces with the regulatory information system by
18 capturing all of those commitments as well as items
19 that we have required in each of our programs that are
20 not in the commitment system, but also our -- I'm
21 going to use the word small "c" commitments within
22 the program to make sure that we change whatever
23 procedures are there to provide activities to manage
24 the aging of the plant.

25 And those two populations of items will be

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1 issued or put into our corrective action program,
2 which at Point Beach and at the NMC, is our Team-Track
3 corrective action program.

4 Now, obviously, all of those items that
5 are in Team-Track are going to be tracked with due
6 dates to make sure that they're complete by a certain
7 date. In our case, a lot of them are prior to the
8 period of extended operation. However, the way our
9 program is set up and the way my project is set up at
10 Point Beach is that we are going to keep our group
11 primarily intact as the license renewal team, even
12 after we get our license -- and I hope we get our
13 license from your suggestions. In 2006 we will keep
14 them here and we will keep them working on the
15 implementation. And so a lot of the dates, even though
16 they might out in the 2010 time frame, we're going to
17 see a lot of that completed before the end of 2006.
18 And we'll actually implement all of those programs at
19 that point.

20 MR. ROSEN: Well, I think you said a
21 reassuring thing there, is that -- but I want to be
22 sure I understand it. Is that your team is staying
23 together. And that the commitments you make are going
24 to become an ongoing implementation activity between,
25 let's say, the end of this year and 2010?

1 MR. KNORR: Yes, that's correct.

2 MR. ROSEN: And so you're not going to
3 wait until the last moment and then to try to start to
4 implement all of these?

5 MR. KNORR: No, that's doesn't make sense,
6 sir. Two things.

7 One is I think aging management is a good
8 thing to do now. And the other is that the project is
9 set up such that we will get a lot of that work done
10 before we disband. And, obviously, there will be a
11 license renewal presence beyond the end of 2006 as
12 well which will actually manage this as well.

13 MR. ROSEN: So the procedures that
14 implement the license renewal commitments will be
15 changed in relative near term and you'll beginning
16 implementing them to kind of, as you roll forward?

17 MR. KNORR: Right. Our objective is to get
18 all those procedures marked up by the end of 2006. And
19 a lot of them already implemented during 2006. But
20 additional ones may have to go beyond that. And we'll
21 just implement them whenever the next revision change
22 is made of a particular procedure.

23 One more slide here on the corrective
24 action program. It's integral to our commitments.
25 It's a common process across the fleet, which I just

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1 mentioned, the Team-Track system that's actually
2 implementing all of these. And that's the tracking
3 system to make sure that all of this stuff is done.

4 The corrective action program is an item
5 that is taken out for each and everyone of these
6 commitments. And there are actually corrective action
7 items which are owned, by the way, by either a manager
8 of a particular department or by a manager within the
9 license renewal group. And the corrective actions have
10 to be completed before we can close the corrective
11 action program item. So a little complexity there, but
12 it helps us control our commitments as we go on.

13 One of the things that I want to make sure
14 you understand is that this Team-Track item is also an
15 integrated portion of work control process. We have a
16 computerized history and maintenance planning system
17 which tracks all of our call ups, which are the short
18 term kinds of periodic testing and things that we do,
19 inspections and so forth. And so the integration
20 between these two programs is going to help us make
21 sure that we get done what needs to be done to
22 implement our aging management programs.

23 Finally, this is just a review of some of
24 the things.

25 We did base our application on a 2003

1 template, and we talked about that earlier. And the
2 NRC review was divided into two areas; one is it
3 consistent with GALL audit process and then also a
4 review by the staff itself.

5 The safety evaluation report that you've
6 all read through, I'm sure, in detail was all based on
7 the standard review plan. And, frankly, our
8 application and the standard review plan are mirrors
9 of each other. So I'm hoping that made it a little
10 easier for the staff to go through that review and
11 actually generate the SER.

12 So any other questions we might have from
13 the ACRS? That pretty much concludes my remarks.

14 CHAIRMAN BONACA: I have a number of
15 questions.

16 One is a one-time inspection of small bore
17 piping.

18 MR. KNORR: Yes.

19 CHAIRMAN BONACA: Due to the position that
20 you have a risk-informed ISI program and that would
21 suffice?

22 MR. KNORR: Yes. That's correct.

23 CHAIRMAN BONACA: I remember that GALL
24 required that you inspect one-time inspection of
25 susceptible area irrespective of risk. And so I was

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1 kind of confused.

2 MR. LEE: This is Sam Lee from License
3 Renewal Branch.

4 The GALL basically says you need to do a
5 sample inspection for small bore piping, okay? In
6 this case about risk-informed ISI, they already doing
7 inspection for small bore piping because of risk. So
8 they already including a sample of small bore piping
9 in the ISI program.

10 CHAIRMAN BONACA: I understand that. I
11 thought that the objective, however, was to inspect
12 the most susceptible area irrespective of risk?
13 Because I mean, you wanted to see if that -- there was
14 some aging effect associated with small bore piping in
15 some susceptible locations and draw some conclusions
16 from it. And that, if I remember, was the position
17 that was taken even in GALL.

18 MR. LEE: I think to the risk-informed
19 ISI, I think they incorporated I guess the experience
20 of the -- what critical locations based on experience.
21 I think that's factored into the ISI program.

22 MR. KNORR: You speaking of the NUREG-
23 6260, the locations.

24 MR. LEE: Yes.

25 MR. KNORR: The locations? Yes, correct,

1 those are part.

2 MR. ROSEN: I think this is an issue
3 that's come up before where we've talked about
4 coherence of the regulatory program where on one hand
5 the staff accepts the risk-informed ISI program and
6 the other hand, it doesn't accept it in the license
7 renewal space. And I think there is still some
8 remaining, if not inconsistency, between those two
9 positions, at least confusion in my mind.

10 CHAIRMAN BONACA: But, see, the one-time
11 inspection in fact is intended to confirm that
12 something is not happening. I mean, that is the
13 thing, it is not to find what the problem is but to
14 confirm the conclusion that, you know, small bore
15 piping is not affected by aging problems. And so for
16 that purpose, if I remember clearly, that in other
17 applications we made a case that you would be looking
18 in susceptible locations. If you look in susceptible
19 locations and you don't see anything, you conclude
20 that in fact your consideration is appropriate, there
21 isn't -- in fact, you don't need to look any further.
22 One-time inspection is adequate. If you don't look
23 with that kind of criterion, you cannot conclude that
24 you will have not have the aging effect happening.

25 MR. CHANG: This is Ken Chang License

1 Renewal Section Branch.

2 In a couple of the telephone discussions
3 held with the applicant we reviewed their program
4 before. And risk-informed ISI was used for the small
5 bore piping. And we asked about the locations being
6 selected to do the inspection. And although my memory
7 was not good, I think that was in the order of 30 to
8 40 locations inspected. That's way above the normal
9 applicants inspected. So we are happy with that
10 response.

11 Now, the applicant may to give the precise
12 number of locations, because I only remember 30 or 40.

13 MR. KNORR: Mr. Thorgersen, you have a --

14 MR. THORGERSEN: I guess. This is John
15 Thorgersen from the Nuclear Management Company.

16 A couple of points. One is that the risk-
17 informed ISI methodology does include operating
18 experience and takes into account the aging effects in
19 mechanisms that have been seen in the industry in the
20 piping that falls within the scope of the risk-
21 informed ISI program.

22 CHAIRMAN BONACA: So you're looking also
23 for susceptible locations?

24 MR. THORGERSEN: Yes.

25 CHAIRMAN BONACA: Okay.

1 MR. THORGERSEN: And as far as the exact
2 number, I also remember that phone conversation. And
3 I'm struggling with my memory also.

4 Brad, do you remember exactly how many
5 locations it was? It was around 30 that we were
6 talking about.

7 MR. LEE: I think the ACRS is looking to
8 say are you inspecting one or two or ten or 20 or 30.
9 It's not in the 37 or 35. What I'm trying to explain
10 is there are plenty of locations being selected for
11 performing the inspection.

12 CHAIRMAN BONACA: Now I think you are
13 guessing what the ACRS is asking about. Because, I
14 mean, where in the intent of one-time inspection,
15 always one confirming that something is not happening.

16 MR. LEE: Yes. It has always --

17 CHAIRMAN BONACA: In the beginning we had
18 discussions here, I can go back to records, where I
19 was told by the staff that, yes, in fact we want to
20 make sure that they're looking at some susceptible
21 location to confirm that the effect is not happening,
22 then you can draw those conclusions about the risk
23 analysis, you don't have to do any further
24 inspections.

25 If you only do risk-informed, you don't

1 look necessarily in a susceptible location, therefore
2 you cannot draw the conclusion that you can depend on
3 the one-time inspection. That was really the basis
4 until now.

5 Now, the answer from the licensee is
6 appropriate. And it says, yes, we're looking at
7 susceptible location and that's the appropriate
8 answer. But I think in general when you look at these
9 programs, you can't change -- I'll go back to some
10 records we have completed the application and put out
11 those things.

12 I do not understand position that you took
13 on IGA/IGSCC on austenitic stainless steel. You talk
14 about 140 degrees Fahrenheit threshold. But then say
15 that -- it's let's see now, and then you say that this
16 credible effect for welds due to the controls that you
17 have on those welds, okay. And then at some point
18 there is a discussion of susceptibility that may be
19 increased by prolonged exposure to temperature higher
20 than 482 degrees Fahrenheit. I am confused about the
21 position you took on IGA/IGSCC on austenitic stainless
22 steel. Would you explain what the position is? Are
23 you going to perform inspections there or are you
24 telling me that you have no susceptible material and
25 therefore you're not inspection at all. I don't

1 understand?

2 MR. KNORR: I'm afraid I don't know the
3 answer to that, sir. Brad, can you help us with this
4 or Doug?

5 CHAIRMAN BONACA: Yes. The position you
6 took on the application on the IGA/IGSCC austenitic
7 stainless steel, it's somewhat confusing. You came to
8 the conclusion that you have not susceptible material,
9 therefore you will not perform inspections to that.
10 And then there is a discussion that speaks of --
11 ability could be increased by prolonged exposure to
12 temperate higher than 482 degrees Fahrenheit. And you
13 acknowledge that you have some materials in that
14 condition. I would have to go back to the application
15 now and see the exact location.

16 MR. FROMM: We would have to go back to
17 the application.

18 CHAIRMAN BONACA: Are you checking that?

19 DR. SHACK: I'm still searching through
20 the 1274 pages.

21 MR. KNORR: I'm sorry.

22 MR. COZENS: This is Kurt Cozens from the
23 NRC staff License Renewal.

24 Are you inquiring whether you applied
25 this to CASS materials or are we talking both about

1 SSC plus thermal aging?

2 CHAIRMAN BONACA: This was in a discussion
3 of austenitic stainless steel.

4 MR. COZENS: Because I know CASS, 140
5 degrees is indeed the threshold that we apply in GALL
6 to the stress cracking. And the 148 degrees, my
7 recollection, it may be a little fuzzy, but I was
8 thinking that was for thermal aging. And I thought
9 that only applied to CASS.

10 DR. SHACK: Yes. This doesn't make a
11 whole lot of sense.

12 CHAIRMAN BONACA: That's right. I mean I
13 was confused by the write up.

14 MR. COZENS: If we could identify --

15 DR. SHACK: You're sort of confusing the
16 embrittlement of CASS stainless with a IGA/IGSCC
17 susceptibility.

18 MR. COZENS: There could be a write-up
19 there. It's maybe not worded well. We'll have to look
20 at it.

21 DR. SHACK: Well, no. I take it back. The
22 threshold temperature of 140 is not a credible one --

23 CHAIRMAN BONACA: Bill, could you speak in
24 the microphone.

25 DR. SHACK: -- temperature which limited--

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1 boundaries to this aging at the heat effected zones --
2 I'd be a little surprised with a high carbon stainless
3 steel their welding was really all that successful to
4 do that.

5 CHAIRMAN BONACA: Anyway. Okay. So you
6 found it?

7 DR. SHACK: Yes. Right.

8 MR. ROSEN: What's the reference to that?

9 DR. SHACK: 3.0.1.4.4.

10 MR. KNORR: That's obviously a further
11 review required recommendation in 201 of the GALL.
12 That's RSP question, I presume.

13 DR. SHACK: I mean, you might have a much
14 better argument over the chemistries to which these
15 welds are imposed. Boy, I mean, I'd have a hard time
16 buying one that your welding was careful enough to
17 prevent sensitization in an ordinary stainless steel.

18 MR. KNORR: Any comments?

19 CHAIRMAN BONACA: Okay. That's my
20 question. I have other questions to the staff later
21 on.

22 MR. SIEBER: I'd like to ask one question
23 before we have the break and the licensee disappears.

24 MR. KNORR: We're not to disappear.

25 MR. SIEBER: I read someplace where you

1 had containment liner corrosion from boric acid.

2 MR. KNORR: Yes.

3 MR. SIEBER: I'm curious as to how you got
4 it, because container liner is supposed to be painted.
5 And reactor coolant when it leaks out, comes out as
6 steam. But by the time it hits the liner, it typically
7 will dry out unless the leak has been there for an
8 awful long time and the protective coating is
9 defective. Otherwise you get a pile of boric acid
10 crystals, and I'm sure curious as to how you got --
11 you know, the regular boric acid corrosion rate is 140
12 degrees, which is typical of containment.

13 MR. KNORR: Right.

14 MR. SIEBER: It is not big. And I'm
15 wondering how you would have a lot of degradation?

16 MR. KNORR: I'm going to let Mark Ortmyer
17 answer that question. He's been looking at the liner.
18 So, Mark?

19 MR. ORTMAYER: Mark Ortmyer, NMC.

20 I think that's in referring to a boric
21 acid water that was leaked onto the containment floor.
22 So it's borated primary water leaked out. We had some
23 flooding issues.

24 MR. SIEBER: Did it come out of the
25 coolant system up out of the makeup system?

1 MR. ORTMAYER: It would be part of the
2 primary coolant system.

3 MR. SIEBER: So it's --

4 MR. ORTMAYER: Refueling water.

5 MR. ROSEN: Well, no during shutdown.

6 MR. ORTMAYER: During shutdown. Yes.

7 MR. SIEBER: You know, it's not active.

8 MR. ROSEN: It depends how much you dump.
9 I mean, it sounds like it was wet.

10 MR. SIEBER: I mean, if it's hip boots in
11 there, I would think somebody would do something about
12 it.

13 MR. ORTMAYER: This was we had some
14 operating experience. These were some events that had
15 happened. I think the early '90s where we had these
16 issues.

17 MR. SIEBER: Well, it sounds like -- my
18 picture of it is that it was a hip-boots-and-umbrellas
19 kind of a deal inside containment, which is really at
20 a standard less than what I'm used to.

21 MR. SCHWEITZER: Mark, is this at the
22 interface between the lower elevation of containment
23 at the floor the containment wall liner where we've
24 had some back leakage out of our RHR suction line from
25 containment?

1 MR. SIEBER: That could be.

2 MR. SCHWEITZER: We had some boric acid
3 water, cool water get on the floor, get on the
4 interface between the concrete and the liner wall.

5 MR. SIEBER: How do you do that? You have
6 to penetrate the liner to get there, right?

7 MR. SCHWEITZER: No. Our liner is a --

8 MR. SIEBER: It's welded, right.

9 MR. SCHWEITZER: Yes. Internal
10 containment. Okay. In the lower elevation --

11 MR. SIEBER: Yes, I used to work in a
12 plant like that.

13 MR. SCHWEITZER: At the lower elevation it
14 goes down below the concrete floor.

15 MR. SIEBER: I understand it. Yes.

16 MR. SCHWEITZER: We had enough water on
17 the floor there.

18 MR. SIEBER: I worked in a plant just like
19 yours.

20 MR. ORTMAYER: That's right. There's
21 expansion cracks or control pores in the floor of the
22 concrete. And also along the perimeter. And if those
23 seals leak, then you could get borated water between
24 the concrete and the liner plate.

25 MR. SIEBER: Okay.

1 MR. SCHELLIN: This is Steve Schellin.

2 But it's not at 140 degrees at that point.

3 It's at containment ambient, which is less 105.

4 Probably much less once it's on the concrete.

5 MR. SIEBER: Maybe that's true. I

6 remember it being real hot in there during operation.

7 MR. KNORR: Thank you, Mike.

8 Any other questions?

9 CHAIRMAN BONACA: If none --

10 MR. MIELKE: This is Todd Mielke, NMC.

11 We may have a couple of answers for you

12 on the power uprate. And I was wondering -- what

13 we're looking at here is some numbers out of a

14 technical report that we have put together by the

15 Westinghouse analysis our vessel outlet T_{hot} operating

16 conditions is a maximum of 605.5. So we would operate

17 less than that.

18 Does that answer the question?

19 MR. SIEBER: Yes, it does.

20 CHAIRMAN BONACA: Thank you. Other

21 questions? If none, I think we'll take a break now.

22 We thank you for the presentation. And

23 we'll break until ten after three.

24 (Whereupon, at 2:54 p.m. a recess until

25 3:12 p.m.)

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1 CHAIRMAN BONACA: Okay, let's get back
2 into session. Now we have the presentation by the
3 staff of the SER with open items for License Renewal
4 of Point Beach and we've got Planning Units One and
5 Two.

6 MS. RODRIGUEZ: May I proceed?

7 CHAIRMAN BONACA: Yes, please.

8 MS. RODRIGUEZ: Good afternoon. My name
9 is Veronica Rodriguez, Project Manager within License
10 Renewal. I'm here today to present the SER with open
11 items for the Point Beach Nuclear Planning Units One
12 and Two.

13 As you all know, the safety evaluation has
14 been a huge team effort. Along with me, I have two
15 other Project Managers working on the project. Mr.
16 Michael Morgan, here on my right. He's going to be
17 helping me with the computer. And Mr. Gregory Suber,
18 on my left, over there, who's going to be doing the
19 presentation on Section Four and TLAs.

20 In addition, I have here on my left, Mr.
21 Kurt Cozens who's the Project Team Leader for the
22 Audit Team, and he's going to be helping me with
23 Section 3.0 and the descriptions on Aging Management
24 Programs and the Audit Findings. Also, Patricia
25 Loughed, Team Leader for the Regional Inspection, is

1 going to be presenting the findings. Most
2 importantly, I would like to recognize the presence of
3 the Staff Reviewers who are seated in the audience.
4 They will be helping me with your questions.

5 Before we get started, I would like to
6 point out that we have a lot of information to cover
7 in the presentation. I'm going to go pretty fast, so
8 please feel free to stop me at any time if you have
9 questions. Next slide.

10 Okay. As the applicant previously said,
11 Point Beach is a two-unit PWR located in the east
12 center of Wisconsin, on the west shore of Lake
13 Michigan. On February 25, 2004, the licensee
14 requested a 20-year license extension. The Unit One
15 current license expires in October 2010. The Unit Two
16 expires on March 8, 2013. The SEI with open and
17 confirmatory items was issued on May 2, 2005. It has
18 five open items --

19 MR. LEITCH: There's also an Inspection
20 Report that was issued May 2, 2005.

21 MS. RODRIGUEZ: That's correct.

22 MR. LEITCH: And I was wondering if the
23 SER includes the items surfaced -- in other words,
24 which one came first, they were both issued the same
25 date.

1 MS. RODRIGUEZ: Yeah, they were both
2 issued on the same date. And we're going to cover the
3 inspection findings after this Section 3.0.

4 MR. LEITCH: But they're not incorporated
5 in the SER?

6 MS. RODRIGUEZ: No, it's a separate
7 Inspection Report.

8 MR. LEITCH: Okay.

9 DR. KRESS: How close is Milwaukee?

10 MS. RODRIGUEZ: I'm sorry?

11 DR. KRESS: How close is Milwaukee to the
12 plants?

13 MS. RODRIGUEZ: I don't know.

14 MR. COZENS: What, about a hundred miles,
15 Jim?

16 DR. KRESS: Sixty. A good distance away.

17 MS. RODRIGUEZ: Okay. The SER has five
18 open items which we are going to discuss later during
19 the presentation. Two of them are related to agent
20 management programs and three of them are related to
21 agent management reviews. It also has 15 confirmatory
22 items and three license conditions which are the same
23 license conditions that you have seen in previous
24 applications.

25 On this slide, you can see a list of the

1 audits, site visits and inspections that were
2 performed. One that I would like to point out is this
3 is the first time that we have performed a combined
4 regional inspection on scooping, screening and AMPs.
5 It was 3-weeks of inspections; two weeks were on site,
6 one week was on the regional offices and it began on
7 March 7, 2005.

8 Moving forward with Section 2.1, Scoping
9 and Screening Methodology. Like I previously showed
10 you, the onsite audit was performed during the week of
11 June 21, 2004. The SAG had several RAIs. The three
12 RAIs are currently confirmatory items. The first one
13 relates to exposure duration term. The second one was
14 first equivalent anchor. And the third one, flow-
15 accelerated corrosion effects on (a)(2) piping.

16 CHAIRMAN BONACA: So on the first one,
17 have we clarified what it means long-term versus
18 short-term exposure?

19 MS. RODRIGUEZ: Yes, I'm going to talk
20 about the first one a little bit more. Please go to
21 the next slide, Mike.

22 CHAIRMAN BONACA: Okay.

23 MS. RODRIGUEZ: On this first confirmatory
24 item, the staff was concerned with the short-term
25 exposure duration because it was not adequately

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1 defined on the NRA.

2 On April 29, 2005 we received a letter
3 from the applicant changing their methodology. This
4 information, you don't see it in the draft SER because
5 it was received after the cutoff date of the SER,
6 which was March 31st. In this letter, the applicant
7 removed the term "exposure duration." They are no
8 longer using that. They have changed their
9 methodology and they're invoking now a new spaces
10 approach which assumes a special interaction can occur
11 if non-sanctioned components and safety related
12 components are within the same space.

13 This letter expands the scope. System
14 boundaries have been extended and the applicant had
15 identified 14 new component types within the scope of
16 license renewal. However, no new aging effects
17 mechanisms were identified.

18 CHAIRMAN BONACA: But the scope is quite
19 changed. I know in the Audit Report, a number of
20 statements by the auditors were that they could not
21 really verify the boundary because the boundary was
22 invisible, right?

23 MS. RODRIGUEZ: Yes, correct. All this
24 information is on their staff review and all of this
25 is going to be documented in the final EAR.

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1 CHAIRMAN BONACA: Okay, so the final SER
2 will have --

3 MS. RODRIGUEZ: That's correct, will have
4 more information.

5 CHAIRMAN BONACA: It will have -- we will
6 see probably more components and scope on some of
7 them.

8 MS. RODRIGUEZ: Yes, that's correct.

9 CHAIRMAN BONACA: Okay. All right.

10 MS. RODRIGUEZ: Next slide, please.

11 MR. LEITCH: In the License Renewal
12 Application, the applicant states that mitigative,
13 non-safety related SSCs can be excluded from the scope
14 if the function is maintained. I'm not sure I fully
15 understand that. Does it mean that, for example, if
16 a piece of piping could drop on a diesel and take a
17 diesel out of service, so long as the diesel -- there
18 was another diesel that that piece of piping then need
19 not need be in scope. Is that what's meant by that, or
20 perhaps I don't understand what's meant by
21 "mitigative."

22 MS. RODRIGUEZ: Right now, what they're
23 doing with this new methodology is if the non-safety
24 related pipe was within the same space as the safety
25 related pipe, all of them are going to be within the

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1 scope of license renewal.

2 MR. LEITCH: Within the same space?

3 MS. RODRIGUEZ: Yes.

4 MR. LEITCH: So in my example, --

5 MS. RODRIGUEZ: If it breaks a pipe, and
6 it's going to affect the safety related function, it's
7 going to be within the scope.

8 MR. LEITCH: Even though the function is
9 maintained with another completely separate system?

10 MS. RODRIGUEZ: If it's going to affect
11 it, it's going to be within the scope.

12 MR. LEITCH: Okay. Well, what is meant by
13 "mitigative?" Could you give me an example of the
14 mitigative function then?

15 MS. RODRIGUEZ: I'm going to call Mr. Rich
16 McIntyre to give us a couple of examples. Rich?

17 MR. SUBER: This is Greg Suber. Actually,
18 I believe that would be Chang Lee.

19 MR. COZENS: People have come and gone,
20 apparently, today.

21 MR. GALLETTI: This is Greg Galletti from
22 the staff. I think what you're reading there is a
23 general motherhood statement that we've seen in the
24 past and what they're trying to reflect is a
25 discussion of the regulation, 10 CFR 50.54(a)(2) which

1 says, "... if a non-safety related component can cause
2 a failure of a safety related component from
3 performing its intended function." So what they're
4 trying to get at there is that if the intended
5 function of the component is not -- I'll use the word
6 "failed," then that non-safety related component would
7 not have to be brought into scope. So, in other
8 words, if you had a safety related component that
9 performs an intended function, you had a failure of a
10 non-safety related component, but that failure did not
11 render the safety related component's ability to
12 perform its intended function from happening, then
13 that other component would not have to be brought into
14 scope.

15 MR. LEITCH: Okay, I understand. Thank
16 you.

17 MS. RODRIGUEZ: Okay. Like I previously
18 said, all this information is currently under staff
19 review and will be documented in the final SER.

20 Section 2.4. Scoping and screening of
21 containment structures and support. The staff
22 evaluated the LRA to determine any passive and long-
23 lived SSCs required to be within the scope of license
24 renewal were omitted. The staff found no omissions;
25 however, we haven't identified one confirmatory item

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1 in where the applicant needs to specifically identify
2 which concrete tank foundations are within the scope
3 of license renewal.

4 Section 2.2, 2.3, and 2.5, Scoping and
5 Screening of Plant Level, Mechanical Systems,
6 Electrical Instrumental and Controls. Again, the
7 staff reviewed the NRAs to determine if any SSCs
8 required to be within the scope of license renewal
9 were omitted. No omissions, no open items and no
10 confirmatory items were identified.

11 This concludes our presentation of Section
12 Two. I want to move forward with Section Three.

13 MR. LEITCH: I had a couple other
14 questions about Two.

15 MS. RODRIGUEZ: Sure.

16 MR. LEITCH: There's a couple of -- well,
17 I guess there was a revision to the License Renewal
18 Application. Most of the applicable sections were
19 changed, but there are some pieces of the License
20 Renewal Application that appear as though they need to
21 be changed that are now in conflict with the revision,
22 I think. But I'm confused by them. For example, Page
23 2-32 --

24 MS. RODRIGUEZ: Of the SER?

25 MR. LEITCH: No, of the License Renewal

1 Application. There's some discussion there about the
2 PTS TLAA, that says it's addressed in 4.2.1, but by
3 retro of the renewal, or the revision to the License
4 Renewal Application, that seems like that paragraph,
5 that comment is no longer valid. It appears to
6 contradict the revision.

7 MS. RODRIGUEZ: The PTRS is still
8 addressing Section 4.

9 MR. LEITCH: Excuse me?

10 MS. RODRIGUEZ: PTS is still addressing
11 Section 4.

12 MR. LEITCH: Yeah, but the comment that
13 the PTS TLAA is addressed in 4.2.1, the PTS TLAA is
14 not really addressed in that section anymore. It's
15 not a TLAA change for that.

16 MS. RODRIGUEZ: I don't understand. I
17 think PTS is still described in Section 4.2, correct?

18 MR. COZENS: Are you addressing the fact
19 that if they use the current regulatory structures
20 that you don't do an analysis per se?

21 MR. LEITCH: Yeah.

22 MR. COZENS: And you wait for the
23 regulatory structure to take the lead?

24 MR. LEITCH: Right.

25 MR. COZENS: Versus justifying continued

1 operations once you exceed a screening criteria?

2 MR. LEITCH: Right.

3 MR. COZENS: I think that's something you
4 might want to look at.

5 MS. RODRIGUEZ: Okay. We can do that.

6 MR. LEITCH: Also, I think on Page 1.3 of
7 the License Renewal Application, there are some
8 statements made there that appear now to be in
9 conflict with the revision to the License Renewal
10 Application.

11 MR. COZENS: Which pages were those?

12 MR. LEITCH: Page 1.3, the first
13 paragraph, 1-3, the first paragraph.

14 MS. RODRIGUEZ: Okay. I'm making a note.
15 Shall we continue?

16 DR. WALLIS: While we're on this slide, I
17 noticed that the applicant made many commitments, I
18 think there in one of the appendices?

19 MS. RODRIGUEZ: Yes, that's correct.

20 DR. WALLIS: -- to enhance these programs
21 or develop programs, a whole list of programs to be
22 enhanced or developed or some other term like that.
23 And this gives the impression that a great deal of
24 work needs to be done to improve these programs.

25 MR. COZENS: We have a slide on that.

1 DR. WALLIS: When is it that it's actually
2 checked that these really are improved up to the
3 required standard and how is it done and why isn't it
4 done before license renewal?

5 MS. RODRIGUEZ: Some of these programs are
6 not still implemented and before --

7 DR. WALLIS: How do we know they're going
8 to be implemented? It's just some sort of commitment
9 for the future.

10 MR. COZENS: The slide after this one, I
11 believe, is where I start and I believe that's the
12 first slide to talk about that.

13 DR. WALLIS: And you're going to tell us
14 all about this?

15 MR. COZENS: I'm going to talk to it, yes.

16 DR. WALLIS: But isn't this -- when is it
17 that someone says these commitments have been suitably
18 fulfilled?

19 MS. RODRIGUEZ: Before the period of
20 extended operation --

21 DR. WALLIS: So there's another check
22 there --

23 MS. RODRIGUEZ: -- we do perform
24 inspections --

25 DR. WALLIS: -- where you do a very

1 thorough inspection --

2 MS. RODRIGUEZ: -- to make sure they are
3 implementing the commitments.

4 DR. WALLIS: That's when we know that
5 these commitments were fulfilled?

6 MS. RODRIGUEZ: I'm going to let Patricia
7 --

8 DR. WALLIS: That would seem to be a very
9 important part of this whole process.

10 MS. RODRIGUEZ: Yes.

11 DR. LEE: This is Sam Lee. I guess you're
12 looking at Appendix 8, that's the Commitment List?

13 DR. WALLIS: Right.

14 DR. LEE: That will actually be taken out
15 and put into the inspection -- I guess, the IP 71.0 --

16 DR. WALLIS: Well, it seems to be just as
17 important as what you've been doing in this report.

18 DR. LEE: Right now, the inspector
19 inspects the programs that are in place. So, if the
20 Appendix say that those ones are not in place, then
21 they will do it before Year 40. Then we also have the
22 license condition on the license to make sure that
23 this is carried out and that they'll inform us when
24 the commitments are completed. And then the
25 (inaudible 3:26:52) will go out. So you have what

1 they said in some of these programs. In this case,
2 they actually put them in place before 2006. If they
3 do all that, they'll tell us in 2006 and then the
4 Regional Inspector can go out and check.

5 DR. WALLIS: And the ACRS doesn't look at
6 that? So we're sort of taking it on faith that you're
7 going to do this job right?

8 MS. RODRIGUEZ: Well, all these
9 commitments become part of the license basis and the
10 region performs inspections to make sure they're
11 implementing correctly.

12 DR. WALLIS: It just concerns me that
13 we're being asked to sign off on something which has
14 a whole lot of commitments and we don't have any
15 checks on how well these commitments are fulfilled.

16 CHAIRMAN BONACA: Agreed. That's why we
17 raised this question at the beginning of the meeting
18 with regard to the current ROP condition of the
19 licensee and what does it say about these promises
20 that we have right now. We have a lot of promises and
21 we don't have enough verification. The verification
22 will happen at another time and we think an applicable
23 comment to be what do you need to do at that time to
24 verify that, in fact, the commitments are being
25 implemented. So that's an issue.

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1 MR. ROSEN: Of course, there is no bar on
2 us having a subcommittee meeting and asking for the
3 staff to come back and tell us as long as we remember
4 to ask.

5 DR. WALLIS: Well, maybe with some of
6 these license renewals, if we have a memory that long,
7 we may want to --

8 MR. ROSEN: This may be the right one
9 because we only have to remember for two years.

10 (LAUGHTER.)

11 MR. ROSEN: We don't have to remember for
12 20 years. Some of us may still be on the Committee.

13 DR. WALLIS: That's a good point.

14 MR. SIEBER: We need a commitment control
15 system.

16 MS. RODRIGUEZ: Okay, let's move on.
17 Section Three, Aging Management Review Results. This
18 slide shows you how Section Three is organized. It
19 has seven sections. Next slide.

20 Section 3.0, the applicant's use of the
21 GALL Report. The applicant had identified a total of
22 26 Aging Management Programs, 21 of those are existing
23 programs, five are new programs. Twenty-two programs
24 are consistent with the GALL risk assessments or
25 enhancements and four are plant specific programs or

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1 programs not consistent with the GALL. In Section
2 3.0, the staff has identified two open items and two
3 confirmatory items related to the Aging Management
4 Programs. With this, I would like to turn the
5 presentation over to Mr. Kurt Cozens, Project Team
6 Leader for the Audit. He'll be presenting selected
7 AMPs and the audit findings.

8 DR. WALLIS: I'm sorry, on Page 9 you talk
9 about the number of programs.

10 MS. RODRIGUEZ: Yes.

11 DR. WALLIS: Well, the student answered 26
12 questions, but how well did he do?

13 MS. RODRIGUEZ: Kurt is going to talk
14 about that.

15 DR. WALLIS: You're going to tell us how
16 well these programs are managed?

17 MR. COZENS: What I am going to tell you
18 is whether or not they satisfied the criteria of
19 54.21(a)(3), which is to develop a program that is
20 capable of managing aging affects such as the
21 (inaudible 3:30:09) --

22 DR. WALLIS: Another concern I have is the
23 existence of a program doesn't tell me anything about
24 how good it is.

25 MR. COZENS: You are correct. At this

1 point in time, we are approving the program. It is
2 the responsibility of the region to perform
3 inspections just as if it was for any other program
4 commitment that an applicant might make, whether it be
5 for licensing or something else for operations, that
6 the region has the responsibility for reviewing
7 whether or not that commitment is adequately
8 implemented. It is the same case here.

9 DR. WALLIS: So this is another part of
10 the license renewal process, is this reliance on the
11 region to do a thorough job of looking at the
12 programs?

13 MR. COZENS: Oh, absolutely. Absolutely.

14 MR. SIEBER: This is basically the same
15 process that you would use for new plant licensing.

16 MR. COZENS: New plants and existing
17 plants that are not looking at license renewal. Any
18 time you have a program commitment or commitment to
19 generic letter or bulletin or anything that you say,
20 "I'm going to do something," and you give one level of
21 detail, the region has the responsibility to look at
22 the implementation of it. The same here.

23 MR. SIEBER: So this isn't different than
24 what the practice has been in all kinds of areas?

25 MR. COZENS: That is correct.

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1 DR. WALLIS: So, it's conceivable that
2 although it looks as if this -- not necessarily this
3 plant -- some plant has a license renewed, it's quite
4 conceivable that they do such a lousy job of actually
5 implementing these programs that the region comes back
6 before they actually start up the new period of
7 license and says this isn't good enough?

8 MR. COZENS: What happens is -- what is
9 taken away from a renewed license, the new part of it
10 is the commitment to implement programs necessary to
11 manage the aging. Should the applicant make those
12 commitments under the FSAR and the region go out and
13 find out that they're not adequately implementing
14 those programs, they are subject to enforcement
15 action. So, it is a checks and balances --

16 DR. WALLIS: But they still have the
17 license?

18 MR. COZENS: They still have a license,
19 but they could be found in non-compliance.

20 DR. WALLIS: So, there's no, there's no
21 threat that you won't get your license renewed because
22 you haven't done what you promised to do?

23 CHAIRMAN BONACA: There is the actual
24 matrix.

25 MS. RODRIGUEZ: Right.

1 DR. WALLIS: But they still get the
2 license. It's when they get the license renewed that
3 they go through that.

4 MS. RODRIGUEZ: Yes.

5 MR. SIEBER: They get the renewed license
6 before the commitment to have the program.

7 MS. RODRIGUEZ: The ROP takes over.

8 MR. COZENS: That's correct. The
9 commitments aren't required to be implemented until
10 after the applicant license is granted.

11 MR. ROSEN: Is there an SDP in the ROP for
12 a significance determination process in reactor
13 oversight program for license renewal?

14 MR. SIEBER: No.

15 MR. ROSEN: So what would you cite
16 against? What color would it be and how would you
17 figure it out?

18 MS. RODRIGUEZ: I'm going to refer that to
19 Patricia.

20 MR. LOUGHEED: Hi, this is Patricia
21 Lougheed. I'm one of those inspectors in the regions
22 that's going to be responsible for implementing this
23 in the long-term. Basically, no, there is not an SDP
24 for license renewal. When it is the period of
25 extended operation, they will be expected to conform

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1 to the same requirements as they are prior to the
2 period of extended operation. If they don't meet
3 their commitments, that would probably be coming under
4 what we would call "traditional enforcement" and we
5 would go to the Enforcement Policy to determine the
6 significance of those actions. It would not be
7 assigned a color, as one said, but would be assigned
8 a severity level. It would depend upon exactly what
9 was not met and to what extent it was not met, but it
10 would not just be ignored or forgotten.

11 DR. WALLIS: This is what puzzles me a
12 bit. It's the same requirement as before the period of
13 extended operation and yet, in order to get this
14 license renewal, they have to upgrade their AMRs, so
15 it's not the same requirement if they're not going to
16 have some upgraded programs. So, why is it the same
17 requirement as before? It doesn't seem to be quite
18 consistent.

19 MR. LOUGHEED: What it is is they're
20 required to have -- they're required to make their, to
21 keep their commitments and in terms of what we will
22 look at, it is going to be functionality of the
23 equipment, and continued operation of the equipment,
24 which is what the significance determination process
25 looks at. In terms of not keeping a commitment, we

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1 will look at that to determine how significant they're
2 not keeping the commitment was. If it's just a case
3 of, for example, one procedure didn't get updated,
4 that might be minor. If it's a case where an entire
5 program did not get implemented, that would be more
6 major. You know, it's kind of hard to make a judgment
7 now when we don't know what it will be. But we will
8 be looking at -- right now, they have commitments that
9 were put in place like after TMI, after various other
10 events, because of generic letters. In those cases,
11 they will give us commitment and they'll say, oh, by
12 year "X", we are going to have this program in place.
13 So we go out and we look, after year "X", and verify
14 that the programs are in place. This is not going to
15 be any different than those types of commitments,
16 while we will continue to do our inspections and
17 continue to look at what they are doing to make sure
18 that they are operating safely.

19 MS. RODRIGUEZ: Okay.

20 MR. SIEBER: I have another question, and
21 you can correct me if I have a misimpression, but in
22 looking through a bunch of LRA applications and SERs,
23 I recall numbers of Aging Management Programs higher,
24 you know, in the 30's as opposed to her to the tune of
25 20, is that, first of all true for this kind of a

1 plant, and if so, what's the difference?

2 MR. COZENS: Let me address that question.
3 The packing of an Aging Management Program is up to
4 the applicant and how they propose to meet it and it
5 probably relates back to the actual existing programs
6 they have in their plants. As a general rule of
7 thumb, we do not request that the applicant redefine
8 its programs if its program is, indeed, adequate. So,
9 as you say, some renews have had probably up into the
10 40's. I can think of one recently that may have had
11 that high. But as long as they can demonstrate that
12 the criteria that they say are consistent with GALL,
13 let's say, are met within one of their programs,
14 however they group these programs, then that would be
15 defined as meeting the consistency criteria and would
16 be considered acceptable. So, it's just a matter of
17 choice on how broad these programs can be. It's
18 again, all the attributes necessary to manage aging
19 affects would be captured in one of these.

20 MR. SIEBER: So a licensee AMP may have
21 several GALL attributes?

22 MR. COZENS: Oh, absolutely, yes.

23 MR. SIEBER: Okay.

24 MR. COZENS: This is not new or unique to
25 this application. It's always been that way.

1 MR. SIEBER: Okay. Thank you.

2 MR. COZENS: It varies.

3 MR. SIEBER: Well, the umbers struck me.

4 MR. COZENS: Yes.

5 MS. RODRIGUEZ: Let's go to --

6 MR. SIEBER: I thought maybe since it was
7 a two-loop plant, they only had to --

8 MR. COZENS: No.

9 (LAUGHTER.)

10 MR. SIEBER: -- two-thirds of the aging
11 management to do.

12 MR. COZENS: It's just a matter of choice.

13 As I said, we are going to talk about this
14 -- as a matter of fact, I believe Jim Knorr also
15 touched on this. As they said, the format of the
16 application that the applicant used was, I believe,
17 Rev. 3 of NEI 95-10 in the Reg. Guide 1.188. But they
18 did one additional thing that had a lot of benefits,
19 but it caused some challenges also. Basically what
20 the applicant did in its application is they took
21 their basis documents and added into the application
22 the bulk of what was in their basis documents and said
23 why are these programs adequate. From a
24 reviewer/auditor point of view, this is very
25 beneficial to us because all of the information is

1 contained largely in the application. We did not have
2 to go to far a field. Another intended consequence
3 that was also talked about here, is -- I believe Dr.
4 Wallace had actually mentioned this -- is the fact
5 that in the area of enhancements, they did two things.
6 They had two meanings of the word "enhancements." One
7 which we would typically review and one which fits
8 more in the category of what the region would expect.
9 The first definition that was pretty much used was the
10 concept that an enhancement was an action that was
11 necessary on an existing program that they were
12 crediting that they needed to implement prior to the
13 period of extended operation to make that program
14 consistent with GALL. That's the minority of
15 activities that were performed under the terminology.
16 The bulk, if not the vast majority, of areas where
17 they called these things enhancements were those
18 actions they needed to do to take an acceptable
19 program and actually implement it in the plant. And
20 they made quite a few enhancement commitments on that
21 characterization. Those areas that while we actually
22 did agree these were good and proper things to do, they
23 should be done, the implementation procedures that,
24 one, may not have been written yet, two, we don't
25 necessarily know if it's all the activities that they

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1 need to do to make certain the implementation of this
2 program as defined to satisfy the regulations, is
3 robust enough. Those things cannot really be reviewed
4 until they actually do implement these programs to see
5 how they're being done. Again, that falls back on the
6 responsibility of the region to oversee these
7 commitments, to have these programs in the
8 implementation phase of it.

9 Therefore, when it was the things that
10 region will be looking at in the future, we, the
11 Project Team, did not review those. We classified
12 them as "Administrative," meaning directly that they
13 are to be looked at in the future by the region as
14 they saw fit. So you will see some write-ups in the
15 slides that are shown and also in the draft SER that
16 talk about enhancements that are administrative and we
17 not reviewed by the audit staff. The reason is it was
18 premature. It wasn't in our scope of activities. So
19 those are on the table. They are part of the
20 applications and they are things that we'll need to do
21 to make certain that their programs are appropriately
22 implemented, but it is not in the scope of the audit
23 and review.

24 DR. WALLIS: Does this mean that the bar
25 gets raised when you get a new license, that before

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1 you have a new license, you can get by with the
2 programs you have now; after you have it, you have to
3 have an enhanced program which is requiring something
4 which was not required before?

5 MR. COZENS: The entire scope of license
6 renewal is, indeed, at that, exactly what you speak
7 to. The concept of license -- the Part 54 Rule is
8 that we are trying to make certain that the aging
9 effects that are existing have an Aging Management
10 Program that's sufficient to manage that aging effect.
11 That may mean that there is augmented inspections
12 that are necessary to be done, such as in the area of
13 the ASME Code where we talked about augmented
14 inspections that are necessary. There are things
15 above and beyond the CLB that are not required by the
16 current regulations, that because of the Part 54, the
17 applicant has to take extra steps. So, yes.

18 Next slide. Here's a classic example.
19 This is actually representing three that are asked --
20 pressure boundary, ASME Code, pressure boundary,
21 containment and supports. The applicant had a large
22 number of exceptions that they proposed to take with
23 regards to these and they based the acceptability of
24 these exceptions on the relief request. Quite
25 frankly, the staff does not consider the existence of

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1 an existing relief request that's been approved by
2 staff, sufficient to make a determination whether or
3 not an Aging Management Program is sufficient. A
4 classic example: approximately 50 percent of the
5 relief requests are granted on hardship. That doesn't
6 mean that you're managing your aging. You need to
7 look further. You need to come up with a technical
8 justification as to why it is. The same thing, many
9 of the relief requests probably don't need exceptions
10 because they're not something explicitly necessary to
11 managing -- for the aging program. And that's
12 something that has to yet be sorted out.

13 DR. WALLIS: Do these exceptions keep
14 going after license renewal?

15 MR. COZENS: The relief requests or the
16 exceptions?

17 DR. WALLIS: The exceptions. Are they
18 stopped after license renewal or do you have to do
19 something --

20 MR. COZENS: No, the exceptions become
21 applicable at the period of extended operation
22 beginning. Therefore, the period of extended
23 operation where you -- because the programs that you
24 need in place to manage the aging affect are for the
25 period of extended operation. You could define an

1 Aging Management Program that's not necessary to meet
2 current regulations, but is necessary to meet Part 54
3 and the period of extended operation. So you are
4 looking beyond that. So, quite frankly, when anybody
5 has a relief request in the future that goes into the
6 period of extended operation and it affects an Aging
7 Management Program, that should be examined for that
8 also.

9 CHAIRMAN BONACA: I thought that there was
10 an unusually high number of relief requests on this
11 side.

12 MR. COZENS: Yes, so did we. This is the
13 first application we had seen that they had cited so
14 many. I think there was 18 or 19 of them.

15 CHAIRMAN BONACA: Yes.

16 MR. COZENS: That is currently an open
17 item. We have had a significant number of discussions
18 with the applicant, trying to work through this, but
19 the bottom line is did we check with OGC. Yes, they
20 can take an exception to these GALL AMPS, but those
21 exceptions must be based upon technical arguments,
22 supporting why the Aging Management Program will,
23 indeed, be robust enough to managing the aging affect.

24 CHAIRMAN BONACA: Okay.

25 MR. COZENS: And that's still an open

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1 item. I might note that the ISI, risk informed ISI
2 Program, is one of these relief requests. That's
3 still an open item. It is not a closed item at this
4 point in time.

5 So, although I've seen some information on that, that
6 is something that we need to get closure on, including
7 the affect that you are, indeed, managing the aging
8 effect and that you are looking at the most likely
9 cases where you would be seeing some aging occurring
10 and it wouldn't balance selection between one or more
11 components that you may choose to do a one-time
12 inspection. It makes more sense to choose the one
13 that has more risk informed, if you're looking at
14 apples and apples.

15 DR. WALLIS: So these relief requests must
16 be based on technical arguments, which will not be
17 resolved until these new national programs are in
18 place?

19 MR. COZENS: No. No, that's not correct.
20 The sheer existence of a relief request, we do not
21 consider as a sufficient technical argument. So they
22 need to come in today when we review their AMPs and
23 build their case today --

24 DR. WALLIS: Build their technical case
25 today.

1 MR. COZENS: These AMPs have not yet been
2 accepted.

3 CHAIRMAN BONACA: Give us an example.

4 MR. COZENS: They have one relief request
5 where they were granted relief based on basically
6 hardship for inspecting three heat exchangers. They
7 chose -- their basis was hardship plus the technical
8 argument that they could chose the lowest heat
9 exchanger because it had the hottest temperature
10 associated with it. That doesn't quite answer my
11 question on all the aging effects. We've lost the
12 trail on stress corrosion cracking. There may be an
13 argument there, but yet we haven't received that. We
14 haven't walked through the discussions enough to know
15 whether or not we will find that sufficient.

16 MR. ROSEN: Well, that's because the
17 dominant failure mechanism may be flow related rather
18 than temperature related.

19 MR. COZENS: Those are something to
20 consider. You have to look at the aging effects we're
21 trying to manage on those specific ones. They also
22 need to be submitted with a specific citation of which
23 GALL element -- what are they not inspecting versus
24 what are they doing. We need them to have very
25 explicit criteria of where are you taking it? What

1 are you taking exception to? Not the more global
2 thing where you have a relief request which is in the
3 category of, I was granted a relief request and I find
4 that acceptable. I want to continue that. That just
5 doesn't quite give us the argument that we need to
6 examine it. So, again, these remain open.

7 Also, on these particular apps, there were
8 CASS thermal aging statements that were made, I
9 believe, with the Class 1, 2, 3 AMP, where they had
10 proposed as the basis for the aging management, a
11 leak-before-break argument. Staff felt that that was
12 possibly not the right argument because it violates
13 one of the tenants of the Aging Management Program
14 that you are assured that the function component was
15 maintained during the period of extended operation.
16 And if you're committing leaking, that does not
17 support that logic. Therefore, we wrote an RAI to the
18 applicant and asked them to clarify how that would do
19 that. In the process, the applicant has decided that
20 they will be performing a flaw tolerance methodology
21 or an enhanced volumetric inspection and that would,
22 indeed, make them consistent with the GALL AMP. This
23 is now a confirmatory item. We're waiting for this
24 formal response to come back to us.

25 Next slide, please. In the Buried Service

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1 Monitoring Program, this is an existing program of
2 buried piping. It manages the external surfaces of
3 carbon steel, low-alloy steel, cast iron buried
4 components, the emergency power, service water and
5 fire protection systems. In performing our review, an
6 RAI was issued which asks some questions concerning
7 the fire pipe that was buried. It asked the question
8 of whether or not it was possible that some of the
9 piping was not, indeed, coated. The applicant came
10 back and stated that the piping was installed pursuant
11 to an industry standard which may have allowed
12 insulation without coating if the soil was not
13 aggressive.

14 They had done at least one inspection on
15 buried piping where they did find that particular
16 piping was coated, but that it only had a very light
17 -- not a very light -- a light coating --

18 DR. WALLIS: Was it still coated after
19 being excavated?

20 MR. COZENS: Yes, sir. It had a light
21 coating of material on it.

22 DR. WALLIS: Don't they also have to
23 repair the -- I mean when you excavate the pipe, don't
24 you scratch off some of the coating?

25 MR. COZENS: That is, indeed, one of the

1 concerns of having to mandate an excavation. But
2 where they did do this particular one, they found that
3 the coating was there and there was no --

4 DR. WALLIS: It's hard to know exactly
5 when you're going to hit that pipe when you're
6 excavating.

7 MR. COZENS: That's a challenge, that's
8 true. One would have to evaluate what caused that
9 break if that happened in the mandate.

10 But anyway, after 14 years of service, the
11 applicant demonstrated that the coating was there.
12 There was no external degradation and reconfirming
13 that the soil was not an aggressive soil as defined in
14 the GALL AMP. I think later in this presentation, we
15 have some actual numbers of what the soil compensation
16 chemistry is.

17 The applicant has committed to do a one-
18 time inspection of the buried fire protection pipe
19 prior to the period of extended operation. A
20 susceptible section of the fire protection piping will
21 be chosen for this inspection prior to the period of
22 extended operation. However, if they should have an
23 opportunity to do an opportunistic inspection, they
24 will credit that because they are already there. As
25 you say, if we're there.

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1 The applicant also committed to performing
2 an inspection of the buried piping systems at least
3 once every ten years during the period of extended
4 operation and also if there were an opportunity for an
5 opportunistic inspection, they would credit that. The
6 staff found that this response was acceptable.

7 The Cable Condition Monitoring Program
8 actually encompasses three GALL AMPS, one of the
9 opportunities we talked about. It managing aging and
10 conductor insulated materials on cables and other
11 electrical insulation materials that are, we're told,
12 in adverse local environments caused by heat,
13 radiation and moisture.

14 There are three AMPS, the first one which
15 is where E1 out of the GALL report is the electrical
16 cables and connectors -70 to a 54.49 (phonetic
17 3:52:37) qualification program. This AMP, the
18 applicant did not identify any exceptions, nor did the
19 staff find any to the GALL AMP. We found that AMP,
20 indeed, was consistent with the GALL AMP.

21 In the E2 and E3 GALL AMPS, the applicant
22 identified two exceptions to each of these AMPS. This
23 program only addresses non-EQ instrument circuits,
24 whereas the GALL AMP was addressed for all non-EQ
25 instrument circuits. The staff found that this

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1 exception was reasonable and acceptable. The Point
2 Beach electrical cables associated with radiation
3 monitoring are either environmentally qualified or
4 installed in areas that are not subject to adverse
5 local conditions, high temperature, high radiation
6 situations. And so the audit team found that that
7 exception was acceptable.

8 In the E2 AMP, the applicant also took
9 exception to the suggestion of the testing of the
10 nuclear instrumentation cable being defined in the
11 tech spec that the -- the surveillance and the tech
12 spec. Currently, the Point Beach AMP does not have
13 this in its tech specs, but there's a commitment to
14 have the cable periodically tested in accordance with
15 the procedures. We found that as long as this testing
16 was, indeed, being performed that we felt that that
17 was reasonable and appropriate. So the staff found
18 these exceptions also acceptable.

19 In E3, which is the medium voltage cable,
20 medium voltage, inaccessible cable, the applicant, in
21 its initial application took exception to the
22 definition of "significant moisture." The GALL AMP
23 defines "significant moisture" as exposure to moisture
24 more than a few days. In the application, the
25 applicant had proposed an alternate definition which

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1 would have been exposure of more than a few years.
2 The staff was a little uncomfortable with this
3 particular definition that was proposed by the
4 applicant and issued an RAI requesting clarification
5 on how that definition could be technically supported.
6 As a result, in their response, the applicant, because
7 they are already testing, choosing to test every ten
8 years, as one of the criteria that would have been
9 defined in the GALL, chose to accept the definition
10 for "significant moisture" as defined in GALL, they
11 are not considered consistent with GALL. So staff
12 found that acceptable, as well as their commitment
13 where we asked for clarification. When we read the
14 application on this particular AMP, the wording on
15 whether they were inspecting or not, we weren't quite
16 certain what was being said, and so the applicant,
17 although they had, I believe, always intended to
18 perform their inspections on a ten year frequency,
19 clarified that it was their intent and the staff found
20 that acceptable.

21 In the Flow-Accelerated Corrosion Program,
22 this is an existing program. There was a confirmatory
23 item associated with it. When, in the application,
24 the applicant identified how they were performing this
25 particular program and what their thresholds were for

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1 minimal wall and things of this nature, the write-up
2 wasn't real clear and crisp to us and so we -- with
3 support of also -- I want you to know that Region III
4 also helped us out in this area, we asked for
5 clarification of their program. After receiving that,
6 we concurred that the program was appropriate and have
7 agreed that their definitions of how they're achieving
8 definitions of minimum wall calculations for the ASME
9 Code and when they will perform and expanded
10 inspection, should they go below a certain minimum
11 wall, we found those definitions acceptable.

12 MR. LEITCH: The criteria is still
13 different for safety related and non-safety related?

14 MR. COZENS: Yes, that is correct.

15 MR. LEITCH: I'm a little surprised at
16 that since, in addition to the nuclear safety
17 implications of this, it is also a personnel safety
18 implication. I'm just a little surprised that there's
19 less restrictive criteria when the personnel hazard
20 could be as great. It's perhaps not a regulatory
21 issue directly, but it certainly is a safety issue.
22 Personnel safety, not a nuclear safety. I was just
23 surprised that that differentiation was made. But
24 that may be more of a comment to the licensee than to
25 the NRC.

1 DR. CHANG: This is Ken Chang. Maybe I
2 can explain. The Class 1 and Class 2 has the required
3 wall thickness or code required minimum wall
4 thickness. They are the same. But at which condition
5 the sample, the measuring sample in each will be
6 expanded, the Class 1 and Class 2 and Class 3, is very
7 different. But as far as the calculation, the
8 definition of minimum wall, it's all the same.

9 MR. LEITCH: But the rejection criteria --

10 DR. CHANG: It's not a rejection criteria.
11 It is that -- if you find the minimum wall -- the
12 measurement of the wall is only 60 percent of the
13 minimum wall thickness, then you expand the sample for
14 the Class 2 and Class 3.

15 MR. LEITCH: Non-safety related?

16 DR. CHANG: Non-safety related, non-safety
17 related, I'm sorry. But the Class 1, the safety
18 related piping does not have that luxury. Your
19 comment is right. Relating to whether the pipe is
20 going to have the strength to take the pressure, take
21 the loading, safety or non-safety, is the same. They
22 shouldn't be two different numbers.

23 MR. LEITCH: Yes. This is a real issue.
24 We've heard some people in power plants with these
25 kinds of failures and I'm just, as I said, we hurt

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1 them just as bad whether it's safety related piping or
2 non-safety relating piping that fails. Just an
3 editorial comment, I guess.

4 DR. WALLIS: The safety of the public and
5 the safety of the workers are different things.

6 MR. COZENS: I'd like to now talk about
7 the One-Time Inspection Program. This is a new
8 program which the applicant has identified as being a
9 decisional GALL report. During the process of
10 performing our review, we noted that the
11 identification of aging management methods based on
12 aging effects was not cleanly linked. We couldn't
13 quite tell when you have this aging effect, which one-
14 time inspection might you perform. So during our site
15 visits, we had discussions with the applicant and they
16 voluntarily chose to identify for a given type of
17 aging effect what form of aging management would be
18 likely to be performed on this particular location.
19 That resulted in a new table being added to the
20 application in a docketed response, and also, I will
21 note that this particular format of linking the aging
22 effect with the Aging Management Program is now
23 proposed to be added to the updated GALL report. We
24 think that's a good enhancement that we'll carry
25 forth.

1 MR. LEITCH: A question about this. In
2 the inspection report on both Pages 12 and 19, it
3 makes a comment about the One-Time Inspection Program,
4 and for that matter, the Boraflex Monitoring Program.

5 MR. COZENS: Maybe we should let the
6 region address that. Patricia?

7 MS. LOUGHEED: Do you want to finish your
8 question?

9 MR. LEITCH: Sure. Basically --

10 (LAUGHTER.)

11 MR. ROSEN: Perhaps you could answer any
12 question you like.

13 MR. LEITCH: It basically says that with
14 certain changes, these programs will be acceptable.
15 I'm not sure how that is documented. I guess my
16 primary confusion is that this inspection report is
17 dated the same date as the SER. Does the SER
18 incorporate these exchanges, or if not, how is that
19 commitment tracked?

20 MS. LOUGHEED: For the record, my name's
21 Patricia Lougheed again. I'm the Region III
22 Inspector. No -- in some cases, the SER did
23 incorporate some of the items in our inspection
24 report. In other cases, it didn't. It kind of
25 depended on where a particular reviewer in NRR was at

1 the time that the Inspection Report was drafted and
2 the amount of interface between our inspectors in NOR.
3 Basically though in terms of coordination, I am
4 keeping in very close contact with the NOR staff and
5 the items that are listed as open items in my
6 Inspection Report are going to be open items that will
7 need to be followed up on even if they are not in the
8 SER, as part of the third inspection, if at no other
9 time, that we will be doing prior to the start of
10 license renewal.

11 MR. LEITCH: So at the end --

12 MS. LOUGHEED: At the end, I --

13 MR. LEITCH: -- when we have a final SER,
14 these will all come together?

15 MS. LOUGHEED: That's my responsibility,
16 to make sure that they will all come together, yes.

17 MR. LEITCH: Thank you.

18 MR. SUBER: This is Gregory Suber. Just
19 to piggyback on what Ms. Loughheed said, in fact, for
20 the Boraflex Monitoring Program that you were talking
21 about, we've already received a letter that fulfilled
22 the commitments that were talked about in the
23 Inspection Report and those items are actually closed
24 now and you'll see it in the next phase of the
25 presentation.

1 MR. LEITCH: Thank you.

2 MR. COZENS: Also during our review, on
3 site, we had some discussions about and concerning the
4 ability of detecting fouling that affects heat
5 transfer and we did conclude that the use of ASME
6 Section V, Visual Inspections, was one suitable means
7 of detecting fouling that could indicate that there
8 is, indeed, fouling or, therefore, the lack of
9 anything that we would have visually inspected would
10 be confirmation that it would be not a degraded
11 condition as far as heat transfer goes.

12 In the process of defining what was an
13 acceptable method for managing the various aging
14 factors, the initial thought on selective leaching of
15 cast materials was that the applicant believed that a
16 visual inspection may be sufficient to characterize
17 whether or not leaching was occurring. The staff, and
18 in the GALL report, it states that we do not believe
19 that it is an acceptable way of detecting leaching and
20 an RAI was issued to the applicant requesting the to
21 clarify how they would detect selective leaching using
22 the visual inspection methodology. In their response
23 to that RAI, the applicant has committed to performing
24 hardness testing.

25 MR. ROSEN: I'm not sure I understand.

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1 This is in what kind of piping?

2 MR. COZENS: Cast, cast iron.

3 MR. ROSEN: Cast iron piping. And they're
4 going to do a hardness test on the outside of the
5 piping?

6 MR. COZENS: This is -- valve bodies, I
7 believe and it will be on the wetted surface --

8 MR. ROSEN: On the wetted surface.

9 MR. COZENS: -- that are accessible, that
10 you can get to. There are multiple ways of performing
11 hardness tests. Some of them are very micro-hardness
12 testers that you can detect changes.

13 MR. ROSEN: On cast iron piping, so when
14 they open up a system?

15 MR. COZENS: Yes. Yes, you can't do it
16 while it's operational, of course.

17 MR. ROSEN: You mean, you'd be testing the
18 outside and it wouldn't tell you anything.

19 MR. COZENS: Unless it's very severe.

20 MR. ROSEN: Right.

21 (LAUGHTER.)

22 MR. ROSEN: Now, do you understand
23 metallurgically what's happening?

24 MR. COZENS: yes.

25 MR. ROSEN: That when you test hardness on

1 the inside of a system that's being leached, this
2 carbon steel, that you have correlations between
3 hardness and, say, yield strength of the material? I
4 assume these -- some of these piping are safety
5 related and have to withstand seismic and other
6 loadings?

7 MR. COZENS: Yes. As far as that, you
8 would be looking for a degradation of the hardness of
9 the material because you would be basically hardness
10 testing on a honeycomb surface.

11 MR. ROSEN: I'm trying to understand what
12 a hardness test would tell you about the piping's
13 capabilities.

14 MR. COZENS: It's not a measurement of
15 leaching; it's a measurement of the correlation to
16 degradation of loss of basically material which would
17 have been leached away. So if you hardness-test on a
18 surface that has leaching on it, you're basically
19 punching through air. So you would see a significant
20 degradation in the hardness.

21 MR. ROSEN: Is this a standard test?

22 MR. COZENS: This is what GALL is actually
23 set up to do.

24 MR. ROSEN: I mean this is out of the
25 ASTM?

1 MR. COZENS: No, I don't believe this is
2 in the ASTM. I don't believe ASTM has addressed
3 leaching. To my recollection, it hasn't.

4 So this was a test that was selected
5 because it was capable of determining the degradation
6 of the material quality.

7 MR. ROSEN: Well, wouldn't it be more
8 accurate to take a section of the pipe out and to
9 actually break it or in some way do a strength test on
10 it. I mean just trying to relate hardness to the
11 structural properties --

12 MR. COZENS: The situation would be that
13 if one concluded that there was leaching occurring,
14 then the corrective action program would kick in on to
15 the next steps. That is, is the mechanism present or
16 not because we are under one-time inspection mode
17 where we have either an aging effect that, quite
18 frankly, we're not certain is indeed occurring, so
19 we're trying to confirm is there any indication that
20 it might be occurring --

21 MR. ROSEN: Well, yes, but simply taking
22 out a piece of the pipe and sectioning it and
23 preparing it for metallurgical examination would tell
24 you a whole lot more than a hardness test.

25 MR. COZENS: That's a true statement.

1 That requires a destructive testing, which when you
2 don't know that it's existing, it's kind of difficult
3 to --

4 MR. ROSEN: But this is a one-time
5 inspection we're talking about, right?

6 MR. COZENS: It's a one-time inspection.

7 MR. ROSEN: I have questions about this,
8 the technical adequacy of such a test. I mean, you
9 might do it and conclude that the piping is, in fact,
10 structurally sound, when, in fact, it's not. Unless
11 you had some sort of database that relates hardness to
12 strength.

13 MR. COZENS: The test is not intended to
14 make a determination of whether the component was
15 capable of performing that service. The test is
16 intended to identify whether or not the aging
17 mechanism exists. Just a screening test. Should you
18 find leaching, then you have a whole bunch of other
19 engineering decisions to make.

20 DR. SHACK: Yes. If you've just leached
21 a surface layer, you can detect that, presumably. It
22 indicates that the mechanism is occurring. After
23 that, you know, you've got a bigger set of decisions
24 to make.

25 MR. ROSEN: Is this one piece of pipe at

1 one place?

2 MR. COZENS: No, it's several different --
3 I think it would be more than one location. I don't
4 think it's only one. I don't know offhand exactly.

5 MR. ROSEN: Well, what systems have cast
6 iron in them that we're talking about here?

7 MR. SIEBER: Fire.

8 MR. COZENS: Fire protection, yes. Maybe
9 the applicant could -- my memory isn't that good on
10 the 1200 line items.

11 MS. RODRIGUEZ: What components --

12 MR. COZENS: Which systems have the
13 potential material in them?

14 MR. KNORR: This is Jim Knorr again. It's
15 fire protection piping that is cast in some cases.
16 Not only the piping, but the valve bodies in some
17 cases.

18 MR. COZENS: It's the valve bodies that
19 would be tested when they're open.

20 CHAIRMAN BONACA: Yes. Go ahead.

21 MR. COZENS: The next slide is also on
22 one-time inspection because the applicant had noted
23 one exception. That in the one-time inspection AMP
24 and GALL incorporates the inspection of small bore
25 piping, they had not included the small bore piping in

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1 their scope for the one-time inspection. So they took
2 an exception. However, they did note that the one-
3 time -- that the inspection of small bore piping
4 would be performed per their risk informed ISI. As I
5 have noticed before, the exception to that program is
6 still an open item, but under that program, they
7 would, indeed, be performing a biometric inspection
8 which is critical for the inspection of small bore
9 piping and that based upon some input that I have had,
10 although we have not formally received or accepted,
11 they do, I believe, incorporate into their
12 consideration of risk informed inspections the aging
13 mechanisms, their locations, and the materials that
14 would be subject to this degradation.

15 The half, as I said, were Administrative,
16 as a matter of fact, all of these slides that I have
17 up in this particular case, are all (inaudible
18 4:11:50) and there were two open items, and these are
19 actually probably akin to the AMR line items that I
20 think are going to be mentioned later. That there
21 were some heat exchangers which the AMRs had only
22 credited what the water chemistry program, and there's
23 an RAI that is out which we have not closed out as of
24 yet that asks the question why is there not some sort
25 of verification of this water chemistry program as we

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1 might have expected under the GALL guidance and not
2 just looking at it to confirm that the monitoring
3 program of the water chemistry, did get a water
4 chemistry program is sufficient, and so we are looking
5 to close that out in the future. We've already had
6 some discussions on that and may have a resolution,
7 but we need to see that when it comes in.

8 That concludes my remarks.

9 MS. RODRIGUEZ: Okay. Continuing with the
10 AMPs, the Bolting Integrity Program is an existing
11 program consisting consistent with the GALL report.
12 The applicant had identified exceptions to the GALL.
13 Here is where we have one open item. The Bolting
14 Integrity Program relies on recommendations from
15 several guidance documents, including EPRI documents
16 and NUREGs. The applicant wants to take exceptions to
17 some of these documents, but they haven't stated
18 specific exceptions and the staff requested the
19 applicant to submit the exceptions and their details
20 for NRC review and approval.

21 Next slide. This one --

22 DR. SHACK: They asked for an exception
23 without telling you what the exception was?

24 MS. RODRIGUEZ: They haven't explained
25 what documents they want to take exception to.

1 DR. WALLIS: And the enhancements have
2 nothing to do with the exception?

3 MS. RODRIGUEZ: The enhancements are
4 Admin.

5 DR. WALLIS: These Admin enhancements,
6 what does that mean? It simply means that they do a
7 better job of administrating the program or that
8 should change a lot of things?

9 MS. RODRIGUEZ: They're usually --

10 MR. COZENS: As I explained earlier in my
11 slides, the bulk of the enhancements that were
12 identified were implementation attributes of the
13 program and what we're performing is the program
14 review here. The region will be --

15 DR. WALLIS: That means doing something
16 more times than they did before, or something like
17 that?

18 MR. COZENS: You have a program, one
19 program, but you may have many implementing documents
20 and so that's the next phase of taking the defined
21 program, which has acceptable boundaries, and taking
22 it to the next phase. That's done in the future and
23 the region has responsibility to confirm it and
24 monitor implementation and with other commitments.

25 MS. RODRIGUEZ: Patricia, do you want to

1 add something?

2 MS. LOUGHEED: This is Patricia Lougheed.
3 To go back on the exception, this is one of the things
4 that we did look at through the inspection and at the
5 time that the application had gone in, the applicant
6 had not looked through the EPRI documents to be able
7 to define precisely which areas they were taking
8 exception to. During the inspection, they actually
9 did do that and came up with several specific areas
10 where they basically refined the exception. I know
11 that that has been submitted to NOR and is under
12 review now.

13 MS. RODRIGUEZ: Thanks. Okay, this
14 concludes the AMP subscriptions. We're going to
15 continue with the AMRs. Section 3.1, Reactor Vessels,
16 Internals, and Reactor Coolant Systems. We have one
17 open item, which was previously discussed by Kurt with
18 regard to steam generator loss of material evaluation
19 where the applicant uses the Water Chemistry Control
20 Program as the only AMP for managing loads of
21 material. There is no program to validate the
22 effectiveness of this water chemistry.

23 One more thing that is worth mentioning in
24 this light is that the applicant has committed to
25 submit the reactor vessels internal programs for NRC

1 review and approval two years prior to entering the
2 period of extended operations, which is what you have
3 seen in previous applications.

4 Section 3.3, (inaudible 4:16:10). We also
5 have one open item similar to the previous one
6 discussed regarding component cooling water cracking
7 evaluation. Again, the applicant uses the Water
8 Chemistry Control Program as the only AMP for managing
9 loss of material.

10 Next slide. Section 3.5, Containment,
11 Structures, and Component Supports. In Section 3.5,
12 we have one open item related to the containment liner
13 and loss of material evaluation. The staff has
14 requested the applicant to submit procedural
15 descriptions, repair guidelines, and acceptance
16 criteria for identifying corrective actions when loss
17 of material is observed.

18 In Sections 3.2, 3.4 and 3.6, the staff
19 has not identified any open items or any confirmatory
20 items.

21 DR. WALLIS: Do you really lose material
22 from a containment liner?

23 MS. RODRIGUEZ: I'm sorry?

24 DR. WALLIS: Do you really lose a
25 significant amount of material from a containment

1 liner?

2 MS. RODRIGUEZ: For this --

3 MR. SIEBER: If you work on it.

4 DR. WALLIS: If you work on it, you can.

5 MS. RODRIGUEZ: For this specific open
6 item, we were talking about some areas that had some
7 drilling and the staff is getting information on that.

8 DR. WALLIS: This is drilling?

9 MS. RODRIGUEZ: Yes.

10 MR. ROSEN: This was an attempt to take
11 samples or something? There was somewhere they said
12 46 percent wall loss.

13 MS. RODRIGUEZ: That's correct. Those
14 specific --

15 DR. WALLIS: Forty-six percent wall loss
16 in a containment liner?

17 MS. RODRIGUEZ: Yes.

18 DR. WALLIS: That's a lot of material.

19 MS. RODRIGUEZ: Yes, that's why it's an
20 open item.

21 MR. ROSEN: Not surface area, you put them
22 at a depth.

23 DR. WALLIS: But even depth --

24 MS. RODRIGUEZ: Jim, do you want to say
25 something?

1 MR. KNORR: This is Jim Knorr. A number
2 of years back, and I'm trying to remember, I think
3 it's in the late '80's, there was a question as to
4 whether or not there was any water getting in
5 underneath the concrete base pad, and of course,
6 there's a liner underneath that. So, Point Beach took
7 it upon themselves to drill into the concrete and
8 apparently were not careful enough and we actually
9 drilled into the liner and that's what you're seeing
10 here. We identified this as an effect that we had to
11 evaluate and so we used it and gave you all the
12 information in the application or in response to an
13 RAI. That's what happened here. If you've got any
14 specific questions, I can try and answer those.

15 MR. SIEBER: Did you pass a leak rate
16 test?

17 MR. KNORR: Yes, we have passed a number
18 of integrated leak rate tests since then. Because it
19 was, again, what .4 -- forty percent of wall
20 thickness? I think it was the worst case.

21 MR. LEITCH: I was getting this mixed up
22 with the erosion of the borated water. These are two
23 different issues?

24 MR. KNORR: Totally two different issues.

25 MR. LEITCH: I see.

1 DR. WALLIS: Presumably, it's a very local
2 thing. They didn't drill everywhere, did they?

3 MR. KNORR: That is correct, sir.

4 MR. ROSEN: They got the guy who was doing
5 it, by the way.

6 CHAIRMAN BONACA: So, now we have a
7 license to do inspections?

8 MS. RODRIGUEZ: Okay. This concludes my
9 part of the presentation. I'm going to turn the
10 presentation over to Gregory Suber and Ms. Patricia
11 Lougheed.

12 MR. LOUGHEED: Hello. This is the official
13 part of my presentation. My name is Patricia
14 Lougheed. I am the Region III Lead Inspector for
15 License Renewal. Basically, we did a 3-week
16 inspection which was a combined scoping and screening
17 in aging management. This is something new.
18 Previously, they had been separate inspections. And
19 we also, because of the timing of the Unit 2 outage,
20 also had an opportunity to go back a couple weeks
21 later and take a look inside the containment, areas
22 that would not normally be accessible during power
23 operation. I've got kind of a, in the next slide,
24 actually, if you'll notice, there are actually six
25 inspectors. The last person was only on the

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1 inspection for the first week of the three. I'm going
2 to make a plea that, for all the powers that be, as
3 you've heard, there's a number of activities that are
4 very important in license renewal that require a
5 regional inspection, and we do continue to get our
6 staffing cut, so anyone that has any power to keep it
7 going, I'd appreciate it. I'd like to keep my team
8 together.

9 MR. SIEBER: You're in the wrong place.

10 MR. LOUGHEED: I know.

11 MR. SIEBER: There's no power at all.

12 MR. LOUGHEED: I'm going to mention it.

13 It is a concern of ours, too, because we do recognize
14 the number of things that are on our plates in terms
15 of actually doing the inspections, after the license
16 is granted.

17 For scoping and screening, we looked at
18 the electrical, structural and mechanical systems. We
19 did a lot of time out in the plant, actually looking
20 to see what was in conjunction, especially for the
21 (a) (2), the non-safety interfacing with safety. We
22 spent a lot of time looking at that. We found that,
23 as far as we could tell, the majority of systems were
24 appropriately scoped. We did not find any non-safety
25 systems that should have been in scope and weren't.

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1 At the time we did our inspection, the applicant had
2 not completed its re-review of the (a)(2) systems, so
3 as that is an open item under the SER, the region is
4 standing ready that if the NOR needs additional onsite
5 inspection, we will be glad to do it.

6 In terms of the Aging Management Program,
7 we reviewed 16 of the 26 Aging Management Programs.
8 We also looked at two time-limited aging analyses
9 programs. I've got on the next slide the number that
10 we did. Again, we interfaced strongly with NOR to try
11 and make sure that we were looking in the areas where
12 the NOR reviewers had questions and where we could
13 provide additional information.

14 We concentrated on looking at what the
15 plant was doing right now, what the programs actually
16 were. We looked at what the history was and what their
17 operating experience was. And we --

18 CHAIRMAN BONACA: A question I have is
19 you've reviewed a number of the programs and, as you
20 know, there is also a separate effort taking place led
21 by Pacific Northwest National Lab --

22 MR. LOUGHEED: Right.

23 CHAIRMAN BONACA: -- that also did
24 inspections. Do you coordinate at all with them
25 because I see the dates are different.

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1 MR. LOUGHEED: It has not happened so far
2 and, quite honestly, our budget does not allow for us
3 to really coordinate strongly with the audit teams.
4 The difference --

5 CHAIRMAN BONACA: But that's more that the
6 timing -- I mean, I guess doesn't allow you to do
7 that, but wouldn't it be useful?

8 MR. LOUGHEED: Yes, I agree it would be
9 very useful.

10 CHAIRMAN BONACA: Because it seems to me
11 that you're performing an inspection and they're
12 performing an inspection, and you're looking at
13 similar things when you're looking at the programs,
14 and you could certainly be more efficient if you did
15 see or communicated the results.

16 MR. SUBER: Actually, what we do is we
17 kind of rely on the Project Manager to fill that gap
18 and to make sure that there is some communication
19 between what the staff is doing, with PNNL being part
20 of the staff, and what's occurring at the regional
21 inspection. In fact, in this case, I was the PM and
22 I went out and I participated in the regional
23 inspections and I brought with me a whole wealth of
24 knowledge of everything that occurred during the in-
25 house staff review as well as during the audit. So,

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1 that synergy is built up, but it's in a separate way.
2 Patricia doesn't directly interface with PNNL, but our
3 Project Managers do.

4 MR. LOUGHEED: Yes.

5 CHAIRMAN BONACA: Yes, but it's also the -
6 -the report from Battelle is April 11, 2005. So it's
7 also really recent. So, the integration happens at
8 the end as insights and I was just wondering --

9 MR. LOUGHEED: In this particular case,
10 that's true. They did happen very close together.
11 We're trying, as we go on, to get better overlap so
12 that we aren't duplicating -- and I don't think we did
13 a lot of duplication. I think that what the region
14 looks at is more the implementation and more the
15 operating history so that we know that, as you
16 commented about the enhancements and whether -- how do
17 we know that these commitments are going to be met.
18 You know, those are the sorts of things that the
19 regions are looking into, how exactly is the
20 applicant, in their role as licensee, holding the
21 current operating license, how are they actually
22 performing now? What are their plans for the future?
23 You know, what is the actual condition of their plant?
24 So, we spend a lot more time out in the plant looking
25 at things and looking at current operation, and I

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1 think that's where our difference is.

2 CHAIRMAN BONACA: Right.

3 MR. LEITCH: Patricia, I notice --

4 DR. WALLIS: There is some overlap, and
5 then you could have a check, don't you agree.

6 MR. LOUGHEED: Yes, it would be good.

7 DR. WALLIS: Don't you deliberately have
8 some overlap as a check?

9 MR. LOUGHEED: We don't currently have --
10 currently, right now, we rely on the Project Manager
11 and we were very glad to have Mr. Suber here because
12 he provided excellent overlap.

13 DR. WALLIS: So he looks at the two and
14 sees that they are compatible?

15 MR. LOUGHEED: That's correct.

16 DR. WALLIS: He makes sure they don't
17 overlap so he doesn't have any conflicts, is that what
18 he does?

19 (LAUGHTER.)

20 MR. LOUGHEED: He did an extraordinary job
21 making sure that we looked at the right things.

22 DR. WALLIS: Did he look at overlaps?

23 MR. SUBER: When Patricia set out her
24 agenda -- of course, there was some overlap. And we
25 didn't, per se, try to avoid overlapping reviews.

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1 There was some redundancy in -- and I don't see that
2 as an inefficiency. I see it as -- like you're saying
3 -- I see it as an --

4 DR. WALLIS: Did they agree when they both
5 did the same job? Did they get the same results?

6 MR. SUBER: Actually, we got more
7 commitments with respect to the Boraflex Monitoring
8 Program when we reviewed the program under the
9 regional inspection. We actually found some problems
10 that weren't picked up during the PNNL review and we
11 obtained several additional commitments. And they
12 were also issues with the same program that were
13 raised by members of the staff. So we did, we looked
14 at the same things, and we garnered additional
15 commitments for that particular program.

16 MR. LOUGHEED: Well, we kind of picked up
17 where they left off. We looked at what their -- we
18 didn't have their audit report, but we had their
19 questions and the responses to those questions.

20 DR. WALLIS: So you enhanced their report?

21 MR. LOUGHEED: So we kind of -- yes,
22 that's a good word for it. Kind of picked up from
23 where they left off.

24 MR. LEITCH: Patricia, I noticed that
25 there are three systems here: aux steam, chemical and

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1 volume, and feedwater system, where the comment is
2 made that the proposed boundaries are not yet
3 complete.

4 MR. LOUGHEED: That was correct at the
5 time of the report. The applicant was still re-
6 viewing the (a)(2) non-safety systems interacting
7 with safety and they had not, at the time of our
8 inspection, fully determined where those boundaries
9 were going to be. They have, since the time of the
10 inspection, sent in a response to NOR and which gave
11 the final boundary locations and everything. That is
12 being reviewed now.

13 So we were just trying to say that we felt that the
14 approach that they were taking appeared to be correct,
15 but because it wasn't finalized, we weren't going to
16 bless it off ahead of time.

17 MR. LEITCH: It just seems fairly late in
18 the process. This inspection was just done within the
19 last month or two. It just seems to me to be quite
20 late in the process for establishing the boundaries.

21 MR. LOUGHEED: I agree, and I think that is
22 something that the applicant has really struggled
23 with.

24 MR. SIEBER: But they just recently
25 changed their approach, too.

1 MR. LOUGHEED: Yes.

2 MR. SIEBER: So that sort of accounts for
3 the delay.

4 MR. ROSEN: Well, that was pretty late in
5 the process, too.

6 MR. LOUGHEED: Yes.

7 MR. LEITCH: I noticed a similar comment.
8 It says, "Some additional non-safety related
9 components needed to be placed in scope." That's says
10 that the inspection report is dated 5/2/05.

11 MR. LOUGHEED: Right.

12 MR. LEITCH: Has that been resolved?

13 MR. LOUGHEED: I believe Jim Knorr --

14 MR. KNORR: This is Jim Knorr again. We
15 have since responded. We completed our methodology
16 description and sent that in to the NRC and also sent
17 them changes to the application which describe the
18 additional items that are in scope, as well as adding
19 an additional system, which I think was discussed
20 earlier in one of the slides.

21 CHAIRMAN BONACA: All right.

22 MR. LEITCH: Again, it seems late, but --

23 MR. LOUGHEED: I am sure that everyone
24 would agree with that.

25 Basically, going back to the Aging

1 Management Programs, one of the issues that we
2 determined required additional work was in the one-
3 time inspection program. Basically, the applicant had
4 not yet developed the program sufficiently for us to
5 determine the adequacy in terms of the number of
6 samples and the locations of those samples. At the
7 end of the inspection, they agreed that they would be
8 submitting that to NRR once it was decided upon and
9 that we would then perform further review if
10 necessary.

11 MR. ROSEN: Is that before the SER?

12 MR. LOUGHEED: I believe that is before
13 the SER.

14 MR. KNORR: This is Jim Knorr again.

15 MR. ROSEN: I hope so.

16 MR. KNORR: What we have done is verbally
17 committed to Patricia and to Mr. Suber here that our
18 plans are to complete our identification, our
19 methodology, our sample selection, and give that to
20 the NRC for their review prior to the end of the
21 summer. It's turned out to be a rather lengthy
22 process and we're in the process of doing that right
23 now and it should be complete by the end of the
24 summer, prior to that final SER.

25 MR. ROSEN: Okay.

1 MR. LOUGHEED: That basically concludes my
2 portion. Greg?

3 MR. LEITCH: Patricia, just before you
4 leave, I was wondering -- I'm still a little confused
5 about this corrosion of the Number Two containment
6 liner. You had an opportunity to look, to go inside
7 that containment. I'm not talking about where they
8 drilled inadvertently the hole, but I mean this
9 corrosion from the borated water. Is that still
10 evident or has that been repaired?

11 MR. LOUGHEED: That has been repaired and
12 we did have an inspector go in and look as close as he
13 could at the containment liner. His review,
14 basically, if I remember correctly, was that he did
15 not see any overall corrosion; that it was a very
16 limited problem that has been fixed.

17 MR. LEITCH: Okay, thanks.

18 MR. SUBER: Good afternoon, everyone.
19 Once again, my name is Gregory Suber and I'm going to
20 do an overview for Chapter 4.

21 The applicant submitted seven sets of
22 TLAA's in this application. Point Beach identified
23 three TLAA's for reactor vessel internals, neutron and
24 (inaudible 4:33:58). They were pressurized thermal
25 shock, upper shelf energy and P-T limits.

1 The applicant's use of the 53 EPFY is
2 based on an assumed 95 percent capacity factor from
3 the latest cast results and projected through the
4 period of extended operations.

5 The applicant provided the PTS values you
6 see here. The staff performed independent
7 calculations and those values are also displayed on
8 the slide. Note that the PTS value for the limiting
9 material for Unit 2 is projected to exceed the
10 screening criteria in 2017. It should be noted that
11 these values are based on a conservative fluence
12 projection. For example, the calculated values do not
13 credit the use of hafnium absorbers. And I would
14 just like to take a second to make one comment about
15 the master curve. The applicant did submit a master
16 curve, but the staff was unable to review it and
17 facilitate the schedule, so the applicant took an
18 alternative means to satisfy the rule.

19 CHAIRMAN BONACA: I appreciate your
20 clarification. It wasn't clear to me.

21 MR. ROSEN: But he did take credit for the
22 hafnium?

23 MR. SUBER: They did take credit for the
24 hafnium, yes. No, no, in the calculation, no.

25 DR. WALLIS: Why are these values so

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1 different from the two units?

2 MR. SUBER: Mr. Neil Ray?

3 MR. RAY: Hi, this is Neal Ray with
4 Materials Chemical Engineering Branch. The
5 fundamental difference between -- these two vessels
6 are, as you know, pretty much identical in terms of
7 design and engineering.

8 DR. WALLIS: The chemistry is the same?

9 MR. RAY: No, the chemistry is not the
10 same.

11 DR. WALLIS: Okay. That's the answer
12 then.

13 MR. RAY: Well, in order to answer you in
14 more detail, the chemistry is also fairly close.
15 However, Unit One vessel is the measured fracture
16 toughness or measured RTNDT, the initial RTNDT,
17 whereas Unit Two does not. So, the margins are
18 significantly higher for Unit two and that's why one
19 is 299 and the other one is 3 --

20 DR. WALLIS: It's being more conservative?

21 MR. RAY: Yes, it is.

22 DR. WALLIS: It's not physically
23 different; it's just a way of calculating?

24 MR. RAY: No, that is not true because
25 Unit Two, where is the Lindy 80 weld, the kind of

1 generic B&W weld, and so we have to use the center
2 division for the initial opportunity is much higher,
3 whereas Unit One, the initial opportunity are measured
4 and that's why you --

5 DR. WALLIS: The difference is the way in
6 which you calculate it?

7 MR. RAY: You can say that, yes.

8 DR. WALLIS: One's realistic and one is
9 conservative?

10 MR. RAY: No, that's the way it is.

11 (LAUGHTER.)

12 DR. WALLIS: That's a wise answer.

13 MR. SUBER: So consistent with the Triple
14 I Management option in the rule, and the EDO memo to
15 the Commission dated May 27, 2004, the applicant has
16 committed to, and the staff has accepted a plan to
17 meet the PTS requirements of the rule, which include
18 continued use of a low-leakage loading fuel pattern,
19 continued use of hafnium in Unit Two --

20 DR. WALLIS: All of this doesn't make it,
21 does it?

22 MR. SUBER: Pardon me?

23 DR. WALLIS: All of this stuff doesn't
24 make it?

25 MR. SUBER: No.

1 DR. WALLIS: You still have to do
2 something else?

3 MR. SUBER: That's probably true.

4 MR. KNORR: That is correct. This is Jim
5 Knorr again. Even with all of this, Unit Two does not
6 make it.

7 DR. WALLIS: So what do you do, shut down
8 for a few years or what?

9 MR. KNORR: The rule requires, 50.61
10 requires us three years prior to reaching our
11 acceptance criteria, to either come up with a way to
12 reduce the flux or to again, as I mentioned earlier,
13 to license an additional or different analysis
14 technique such as (inaudible (4:38:03), or the third
15 option, which is our preferable one, is to wait for
16 the rule change, which we expect in the next few years
17 which will take the acceptance criteria up above 320
18 to 25 degrees.

19 DR. WALLIS: Would thermal annealing get
20 you through if you did that?

21 MR. KNORR: We did list that as one option
22 in our application. I do not expect that we would use
23 that option, but I think the answer is yes, if we
24 chose to anneal, that could do it.

25 MR. SIEBER: Put charcoal in there.

1 DR. SHACK: But the 2017 again doesn't
2 improve the effect of the hafnium absorbers, so if
3 they continue to run with the hafnium, they could --

4 MR. SUBER: They'll get past that.

5 MR. KNORR: It would be slightly past
6 that, only slightly.

7 DR. WALLIS: Analysis will come.

8 MR. LEITCH: I have a question about --
9 maybe it's back to Slide 30. The limiting weld, that
10 intermediate to lower shell circumferential weld. I'm
11 looking at a report, BAW-2467 NP, and Page 11 of 44,
12 shows a weld that I guess is intermediate to lower
13 shell and it's called Weld SA 1484. Is that just a
14 different numbering system?

15 MR. MITCHELL: This is Matthew Mitchell.
16 Section Chief, Materials and Chemical Engineering
17 Branch, NRR. There are a number of designators that
18 go with these welds. The designator you see on the
19 screen is actually the weld wire heat number that was
20 used to manufacture the weld. The designator, I
21 think, you're reading is a weld specific type
22 designator, so it's a nomenclature difference. It has
23 a different meaning from the weld wire heat number.

24 MR. LEITCH: Okay, but we're talking about
25 the same weld. Now, immediately above that weld, in

1 this report, there's a weld that's called -- it's just
2 referred to as "CE Weld." And it's not discussed in
3 this report. Were some of these welds made by CE and
4 other welds made by other than CE, like B&W?

5 MR. SUBER: I'd have to defer to the
6 applicant.

7 MR. KNORR: This is Jim Knorr again. The
8 answer is yes, the Unit Two vessel was initially
9 started by Babcock & Wilcox and they did not complete
10 it and then we went on to have Combustion Engineering
11 actually complete the vessel and its welds.

12 MR. LEITCH: I see. Now, this report
13 seems to be silent on that CE weld. Do we know that
14 that weld is not limiting? I mean this report doesn't
15 discuss the CE weld.

16 MR. RAY: This is Neil Ray again. To
17 answer your question, the answer is yes. This one,
18 72442 is a limiting weld and it is the same weld as
19 you said SA1484. It is just two different ways of
20 nomenclature.

21 CHAIRMAN BONACA: So it is a CE weld?

22 MR. RAY: No, this is a B&W.

23 MR. LEITCH: But let me just be sure I --
24 you have looked at the CE weld and it is not limiting?

25 MR. RAY: That is correct, yes.

1 MR. SUBER: Okay. So that brings us to
2 upper shelf energy. Both units at Point Beach are
3 below the acceptance criteria for upper shelf energy.
4 The estimated value is approximately 35-foot pounds.
5 The applicant has performed an equivalent margin
6 analysis that satisfies the Performance Review
7 Authority 50 requirement. The staff has previously
8 accepted this methodology for the reviews of Surry and
9 Ginna.

10 In addition, the staff has also performed
11 independent analysis that confirm that the applicant's
12 conclusions are valid and that the analysis is
13 projected through the period of its operation.

14 DR. WALLIS: The actual upper shelf energy
15 is 35-foot-pound?

16 MR. SUBER: The approximate, yes. It's
17 approximate.

18 DR. WALLIS: So even though it seems to be
19 such a long way from the acceptance criteria, by doing
20 some other analysis, you can make sure it's okay?

21 MR. SUBER: Yes, sir, doing the equivalent
22 margin analysis. The staff verified that it was okay.
23 Actually, they verified that the --

24 DR. WALLIS: How bad can they get and
25 still meet the equivalent margin analysis?

1 MR. SUBER: Okay, that's an interesting
2 question.

3 MR. MITCHELL: This is Matthew Mitchell
4 again. The staff has not attempted to evaluate how
5 bad a particular weld could be.

6 DR. WALLIS: When you do the analysis, you
7 can tell how close you are.

8 MR. MITCHELL: You can get an idea, but it
9 is also, in part, dependent upon the transients, the
10 geometry of the vessel, the wall thickness, the rates.
11 There are a number of other factors which may be
12 vessel-specific, which could have influences on the
13 EPFM analysis that supports the EMA.

14 DR. WALLIS: So when you do analyses, do
15 you say if it's bigger than 30, it's okay? You must
16 have some number you find?

17 MR. MATTHEWS: No, the equivalent margins
18 analysis is actually a J-integral-based approach that
19 --

20 DR. WALLIS: A different approach
21 altogether?

22 MR. MATTHEWS: Yes. It's a much more
23 detailed --

24 DR. WALLIS: Based on this antique test of
25 busting things?

1 MR. MATTHEWS: Yes, not directly. It's
2 based upon knowing more about the actual fracture
3 toughness properties and doing a more refined analysis
4 to support alteration to the lower upper shelf energy
5 values.

6 DR. WALLIS: So it's really a better, more
7 thorough analysis?

8 MR. MATTHEWS: Yes.

9 MR. SUBER: The staff evaluated the
10 applicant's TLAAs associated with metal fatigue and
11 found that the analysis have been projected to the end
12 of the period of extended operation.

13 Similarly, the TLAAs associated with
14 fracture mechanics were also projected to the period
15 of extended operation.

16 DR. SHACK: Can we just go back to the
17 environmental assisted fatigue? How do they do that
18 since they don't have a real fatigue analysis for the
19 31.1 piping?

20 Mr. Mark Hartzman did that review.

21 MR. HARTZMAN: Can you repeat your
22 question, please? This is Mark Hartzman from
23 Mechanical Engineering.

24 DR. SHACK: They don't really have an
25 analysis that gives them usage factors and such for

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1 their piping.

2 MR. HARTZMAN: That is correct. What they
3 do is they determine the number of cycles for which
4 they can -- which would be below 7,000.

5 DR. SHACK: But then how do you do the
6 environmentally assisted fatigue analysis?

7 MR. HARTZMAN: It doesn't enter into the
8 picture, basically in some cases. In other cases,
9 they actually have done a fatigue, a Class 1 fatigue
10 analysis.

11 DR. SHACK: So they do enough Class 1
12 fatigue analyses to match up with the INEL for those
13 particular joints, is that the idea?

14 MR. HARTZMAN: That is correct.

15 MR. SUBER: Okay. Thank you.

16 The predicted final effective pre-load
17 exceeds the minimum required pre-load at 60 years, so
18 the analysis remains valid through the period of
19 extended operation.

20 DR. WALLIS: Could we go back to the other
21 one about the fracture mechanics, about this pump
22 flywheel which is going to operate for longer? Does
23 it -- is it more likely to fracture as it gets older?

24 MR. SUBER: Yes, the pump flywheel?

25 DR. WALLIS: So what's the mechanism that

1 you're checking here when you do this analysis?

2 MR. SUBER: Okay, I believe Mr. Steingass
3 did that review.

4 MS. RODRIGUEZ: That was Neil Ray.

5 MR. SUBER: Oh, it was Neil Ray. Sorry.

6 MR. RAY: Yes. What is the question
7 again, please?

8 DR. WALLIS: I'm assuming as it gets
9 older, it's more likely to fracture, is that true?

10 MR. RAY: Actually --

11 DR. WALLIS: If not, you don't need to do
12 any analysis.

13 MR. RAY: Right. That's pretty much true.
14 The reason being is for 32 EFPY, there was a history
15 behind it and when that was first observed, to have
16 heard that kind of inspection, Westinghouse did a
17 generic analysis for 32 EFPY, meaning for the current
18 license and then when they got the license renewal
19 stuff coming, so they again re-analyzed it for 60
20 years with limited cycles. How many cycles are start
21 and stop. In that --

22 DR. WALLIS: So this is a fatigue-type
23 failure?

24 MR. RAY: That is correct, yes. And they
25 did, in this assumption, there are 6,000 cycles and we

1 verified with the applicant the estimated cycles they
2 are anticipating. And they responded by saying a
3 maximum of 600, which is well below the Westinghouse
4 estimate of 6,000.

5 DR. WALLIS: Thank you.

6 MR. SUBER: The projected and minimum
7 values in kips for tendon are displayed for 40 and 60
8 years. This slide uses Unit Two data because Unit One
9 values were even greater than Unit Two.

10 DR. WALLIS: So the acceptance criteria
11 you're checking these against?

12 MR. SUBER: Pardon me? The projected,
13 yes.

14 DR. WALLIS: What do I learn from these
15 numbers, that they are bigger or less than something?

16 MR. SUBER: Yes, you learn the projected -
17 -

18 DR. WALLIS: The minimum is the required.

19 MR. SIEBER: Stronger than the minimum.

20 DR. WALLIS: So they're going to be bigger
21 than 594?

22 MR. SUBER: Correct. The applicant will
23 manage the aging effect of Boraflex using a Boraflex
24 Monitoring Program. Based on the staff's review, and
25 the regional inspection, the applicant committed to

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1 revise its program and the commitments were received
2 in a letter dated April 1, 2005. Therefore, these
3 confirmatory items were closed out. I just wanted to
4 make a note that in general the information that you
5 see in the SER reflects the information that the staff
6 -- that the applicant submitted up to and including
7 March 31st. Of course, they've had subsequent
8 correspondence come in, and so some of these items
9 that you see as confirmatory items are now closed out.
10 And the Boraflex Monitoring Program was one example of
11 that.

12 The applicant's EQ Program is consistent
13 with GALL and is adequate for the period of its
14 operation.

15 This concludes the staff presentation and
16 I would like to thank you for your time and for your
17 attention.

18 MR. LEITCH: Going back to this TLAA on
19 PTS.

20 MR. SUBER: Yes, sir?

21 MR. LEITCH: I guess I'm coming away with
22 the conclusion that every one that we've looked at
23 thus far, when we've agreed to extend the license for
24 20 years, we not only give them permission to run for
25 another 20 years, but it looks as though they can run

1 for another 20 years.

2 MR. SUBER: Correct. This is the first
3 plant that didn't have --

4 MR. LEITCH: But in the worse case, what
5 we're saying is permission or license to run for 20
6 years doesn't necessarily assure operation for 20
7 years?

8 MR. SUBER: Correct. Correct, the PTS --

9 MR. LEITCH: We've got this hurdle, 20.17
10 that we've got to get over, one way or the other, and
11 that issue is not directly resolved now. There may be
12 ways to do that, but today, that issue is not
13 resolved. Is that a correct summary of that issue?

14 MR. SUBER: Yes, sir, it's a fair
15 characterization.

16 MR. LEITCH: Okay.

17 DR. WALLIS: Is there an expectation that
18 there will be a new PTS rule which will make it be
19 okay in the next 20 years? Is that the expectation?

20 MR. SUBER: Well, that's conjecture and I
21 can't really comment on that.

22 MR. ROSEN: You probably wouldn't want to
23 invest a lot of money in that.

24 MR. SUBER: Well, they have several ways
25 of making the rule. Either they can submit their

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1 master curve, have that approved and accepted, and
2 meet the requirements of the rule, or they can hope
3 and pray that the --

4 DR. WALLIS: You'd better be sure the
5 master curve gets into the record right because it
6 sounds like "massacre" to me.

7 (LAUGHTER.)

8 MR. SUBER: That's because it's too close
9 to 5:00 o'clock.

10 (LAUGHTER.)

11 CHAIRMAN BONACA: Is the BAW report on the
12 master curve under review right now?

13 MR. SUBER: I believe it is.

14 MR. MITCHELL: This is Matthew Mitchell
15 again. Yes, we are still review BAW-2308. We expect,
16 hopefully, to bring that review to conclusion in the
17 not-too-distant future.

18 CHAIRMAN BONACA: Okay.

19 MR. MITCHELL: So, I believe we have
20 crossed all the appropriate hurdles and gotten all the
21 appropriate questions answered. It's just a matter of
22 finishing the review at this point.

23 CHAIRMAN BONACA: Okay, good.

24 MR. MITCHELL: I would, if I could
25 interject, I would address Dr. Wallace's observation

1 regarding the potential future revision of the PTS
2 rule. As the ACRS is certainly aware there's been a
3 great deal of work done by the NRC's Office of
4 Research to provide an appropriate technical basis for
5 NRR to consider using to initiate rule-making to
6 revise 50.61. However, in the context of an
7 applicant's approach to using the Triple-I option for
8 a License Renewal Application, we've emphasized, an
9 applicant should base its application on factors which
10 are within its control, not factors which are left to
11 the staff to complete. So that is why you should see
12 an emphasis on exercising the (b)(4) and (b)(7)
13 criteria from 50.61 or 50.66, Thermal Annealing, which
14 is related to (b)(7), within the application. So, if
15 we do, indeed, see this same approach taking in the
16 future by other applicants, you can expect to see a
17 similar type of discussion in those applications.

18 DR. WALLIS: So your conclusion is that
19 everything is fine?

20 MR. SUBER: Our conclusion is that the
21 application, with the exception of the open items, is
22 satisfactory to the staff.

23 CHAIRMAN BONACA: Any other questions for
24 the staff?

25 (NO RESPONSE.)

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1 CHAIRMAN BONACA: If not, I would like to
2 go around the table and get some --

3 DR. SHACK: Could I -- I haven't looked
4 at this B&W report. Is this terribly restrictive as
5 far as the amount of available you have to have for
6 particular welds or is this something that's more
7 generically applicable?

8 MR. MITCHELL: The BAW-2308 report
9 provides -- it's an approach which, if the members are
10 familiar with the Kewanee Application, which was the
11 first successful use of the master curve technology,
12 it's a bit different than that. Framatome/AREVA has
13 chosen to take an approach where they reset the
14 initial RTNDT values based upon master curve data and
15 then couple that to the use of Charpy-based
16 surveillance results to adjust for the affects of
17 radiation on the materials. The approach addresses
18 both specific heats of Lindy 80 weld wire, Lindy 80
19 welds, as well as provides generic values which could
20 be used for other Lindy 80 welds which were not made
21 from the specific heats which were addressed by the
22 report. So, it has a generic applicability to Lindy
23 80 materials that could be rather widespread.

24 MR. LEITCH: One confusion I have, and I'm
25 not sure if we're referring to the same B&W report.

1 I'm referring to one that's called 2487 NP. This
2 seems to say that if you go through with the power
3 upgrade, eliminate the hafnium, 53 effective full-
4 power years, everything's okay. I don't know if
5 that's -- I mean, that seems to me to be the
6 conclusion that this report draws, yet, having that
7 conclusion, then we seem to back away from that.

8 MR. RAY: This is Neil Ray again. Let me
9 try to address your question and comments. No, we are
10 not. The point, as Jim Knorr mentioned, is that Units
11 One and Two vessels are so, so embrittled that if you
12 look at Reg. Guide 1.99, Rev. 2, beyond 2.5 times
13 tentative or 19, it is pretty much saturated. So the
14 question you are raising --

15 MR. ROSEN: It's pretty much what?

16 MR. RAY: Saturated. All the shift
17 doesn't seem that dramatic. So what happens is even
18 if they take out the hafnium absorber, but just keep
19 it there, it is pretty much immaterial. The reason --
20 let me emphasize, the reason they committed to keep
21 it, because in the PTS rule it says that you must do
22 some flux reduction program. Since they're exceeding
23 the screening criteria, there is no justification or
24 not that they can take out the hafnium absorber. But
25 for practical reasons, there is no reason whatsoever

1 to keep the hafnium absorber there.

2 MR. LEITCH: That helps explain my
3 confusion.

4 MR. KNORR: This is Jim Knorr from Point
5 Beach. I would like to add a little bit to this. I
6 have a feeling that the report that you're looking at
7 is the upper shelf energy equivalent margins analysis?

8 MR. LEITCH: Yes.

9 MR. KNORR: Okay. That is not a PTS
10 report.

11 MR. LEITCH: Right, yes.

12 CHAIRMAN BONACA: Okay. If there are no
13 further questions, I thank the presenters, and I would
14 like to just (inaudible 4:57:55) the meeting. The
15 first issue is tomorrow, we'll have the staff, and I
16 believe the licensee, actually he is Senior Vice
17 President of Operations of the site, has asked to make
18 a brief presentation to the Full Committee, five to
19 ten minutes. The other presentation is going to be
20 from Region III, pretty much the one we had today. It
21 is to address some of the concerns that the Committee
22 has expressed regarding performance, the ROP
23 performance of the site. So that will be dealt with
24 tomorrow. We'll have a presentation and it will be a
25 full communication to the Committee. What -- and we

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1 understand also the format of those presentations,
2 again, will be Region III.

3 What I'd like to do now is focus more on
4 the fundamental elements of license renewal, what we
5 have heard today, go around the table and see if there
6 are any specific insights you would like to
7 communicate. So, we will start with you, Jack.

8 MR. SIEBER: Okay. In general, it would
9 appear that the application and the FCR are properly
10 done. My own feeling is I do have a concern with this
11 licensee and it has to do with the confirmatory action
12 letter and the most recent ROP findings in that it
13 identifies issues related to problem identification
14 and resolution, and to me, that's the heart of license
15 renewal. You have a lot of new programs, a lot of
16 things that have to be done prior to entering the
17 period of extended license, and it requires good
18 commitment tracking, good problem identification and
19 good resolution. Right now, I lack the confidence
20 that all of those elements are there. I think it's an
21 issue that we need to discuss and perhaps address. I
22 need, personally need a greater degree of confidence
23 than I now have based on what I've read, to believe
24 that all the commitments that are being made will be
25 fully and correctly implemented.

1 CHAIRMAN BONACA: Okay. Thank you. Bill?

2 DR. SHACK: I'd sort of walk away with the
3 impression that this is a lower quality license
4 renewal application and assume, with all the
5 precedents that people have, that I would have thought
6 that no questions have to be answered, that just seem
7 to be RAIs asking for sort of basic information,
8 rather than in some cases, clarification. Again, some
9 of the open issues seem to be more fundamental than
10 some of the other open issues that we've come up with.
11 So I'm just a little bit surprised that at this state
12 of the game, this doesn't strike me as one of the best
13 License Renewal Applications that we've seen.

14 DR. WALLIS: Was it one of the worst?

15 DR. SHACK: No.

16 DR. WALLIS: Not one of the worst.

17 DR. SHACK: No, I think in some ways, it
18 was. I mean, this notion that you have exceptions
19 that you haven't defined. I just don't recall that
20 kind of a situation coming up before and, as I say,
21 some of the RAIs just -- I don't know what the License
22 Renewal Application staff rejections looked like, but
23 this just doesn't strike me as one of the -- as I say,
24 early on, it's clear that we had some confusion over
25 scope and issues and things like that and one could

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1 understand it, but this is a lot of experience to
2 build on here.

3 CHAIRMAN BONACA: Well, that's a good
4 observation in some respects. Also, our experience in
5 reviewing this has been one of some hardship. I mean,
6 we've been bombarded by paper and paper that has
7 revised existing partial application, providing
8 additional information, et cetera, to the point where,
9 you know, for somebody like ourselves, like for me,
10 operating from my home, reviewing this much
11 information was confusing and conflicting somewhat.
12 So, that is not only the applicant. I think to the
13 parties it seems like the application was more rushed
14 and the SCR, too. There was some pressure in it.
15 That is just a judgment, but I don't know.

16 Graham?

17 MR. LEITCH: Well, license renewal, we
18 thought, was getting a more straightforward matter.
19 It seems to me they were all very well prepared and
20 didn't raise many questions. This application seemed
21 to raise more questions than usual, bucking this
22 trend, as my colleagues have said. I was impressed by
23 how many commitments there seem to be, which were to
24 dependent upon the staff making the proper evaluations
25 in the future, and checking that the commitments were

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1 really properly fulfilled.

2 I was, on the other hand, quite pleased
3 with the way the staff responded to questions today.
4 I thought the staff generally did a good job and gave
5 me more reassurance and in spite of these concerns,
6 things were actually under control. That's something
7 new I don't think my colleagues have said yet, but
8 maybe they don't agree with me. I thought the staff
9 did a very good job today.

10 I think the Committee has to figure out
11 how far we can decouple the license renewal from the
12 present performance of the plan. I know they are
13 supposed to be separate, but there comes some point
14 when they cannot be separated out. So that's
15 something we have to figure out as a committee, I
16 think, how to handle that on our level.

17 CHAIRMAN BONACA: Thank you. Tom?

18 DR. KRESS: Well, I think we have to be
19 responsive to the staff's request that we keep in mind
20 that they are constrained to separate the performance
21 from the license renewal. I think that's part of the
22 license renewal rule. I don't see how we can really
23 buck that. Even though I agree, there certainly are
24 performance issues. I just don't -- I think they have
25 to be handled by the oversight process and not be part

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1 of license renewal.

2 That said, I think I was given -- like
3 Graham, I think the staff's presentation did give me
4 some reassurance today that they did a good review and
5 that the commitments are there for the aging program
6 and the regions know what these commitments are and
7 know how to inspect for them. So I did get some
8 reassurance there.

9 The one thing that bothers me about every
10 -- not this particular one, but all of our license
11 renewal reviews that we do, we are more or less just
12 doing a bit of an audit of what the staff does. But
13 my concerns in license renewal generally involve the
14 environmental impact segments. We don't review those
15 at all. I have no idea what the environmental impact
16 of the changing condition at this site over the
17 timeframe is because we just don't review that. That
18 bothers me. I don't know what to do about it, but I
19 think we should, in the future, include that as part
20 of our reviews.

21 DR. WALLIS: Are you thinking
22 environmental impact other than safety?

23 DR. KRESS: Well, I'm thinking about
24 mostly safety, but there are other impacts that would
25 be of concern to me.

1 DR. WALLIS: But you're thinking mostly of
2 safety?

3 DR. KRESS: yes. That's all I have.

4 CHAIRMAN BONACA: Graham?

5 MR. LEITCH: Well, regarding the quality
6 of the application, I think there's a subtle issue
7 here regarding the timing of the inspections and the
8 timing of the issuance of the SER. I think if the SER
9 wasn't frozen exactly when it was, that is, this SER
10 with open items, I think a number of these issues
11 would have been resolved and would have been presented
12 more clearly, had the SER been delayed for, say, two
13 months or something like that, until these issues were
14 resolved. But it seems like there's something about
15 the timing of these events, the inspection, the
16 inspection reports, the audit and review report, and
17 the SER, it seems like all these things came very
18 close together, and I'm not sure whether that's the
19 NRC's scheduling process or the applicant's ability to
20 get information to the NRC or what, but I don't see
21 this as a particularly poor application, but rather,
22 I think there's some confusion by the timing of some
23 of these documents and which one precedes the other,
24 particularly as I say, for a reviewer like me that's
25 off in a corner without understanding the chronology

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1 always of what came first and what input was into what
2 document.

3 But having said that, I still share some
4 of the concerns that have been expressed regarding the
5 current performance issues at this plant. It seems to
6 me difficult to understand how we could proceed to
7 recommend renewal of the license with an open
8 confirmatory action letter. I realize on one hand,
9 that those issues are within the current licensing
10 basis, and yet, on the other hand, I see us having a
11 responsibility to take a position that's -- that we
12 feel comfortable with and that we feel that we can
13 defend. It just seems to me unreasonable to say,
14 well, you can go ahead and run for another 20 years
15 when there are serious long-standing, outstanding
16 issues.

17 CHAIRMAN BONACA: Thank you, Graham.
18 Steve?

19 MR. ROSEN: Yes, thank you. With regard
20 to the quality of the application, I know there was an
21 enormous amount of work done by the applicant and by
22 the staff on this application, and most of it, very,
23 very good. There is one concern I have, having to do
24 with the late re-scoping of the systems, which
25 particularly stands out to me as very troublesome

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1 because then -- I mean, how much confidence should we
2 give to the application when that kind of activity,
3 which is normally an up-front activity, happens at the
4 very last moment almost? It's troubling. I'm not sure
5 where I go with that. But the quality of the
6 application suffers from that.

7 With regard to the current performance
8 issues, I question that. I'm very uncomfortable with
9 that as well. I would have to, not repeat what my
10 colleagues have said, but broaden it slightly to say
11 that it's beyond the cap program. There are four
12 other issues in the cap of varying degrees of
13 importance to the license renewal, but some, I think,
14 are particularly important, including human
15 performance, the human performance issues. So I
16 wouldn't limit it to just the corrective action
17 program.

18 Finally, I do have one tiny technical
19 concern which I expressed some of during the meeting
20 and that is the one-time inspections of the cast iron
21 valves in the fire protection system. It seems to me
22 we miss an opportunity by saying well, we'll do some
23 hardness testing once we get in and look at those
24 valves. The right answer to me is to take a view of
25 those valves out in the one-time inspection, say, ten

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1 years down the road, they're on the ground for sure,
2 but maybe there a couple above ground as well, and
3 they're bolted, I think. So go get a couple of those
4 bolted valves and take a few out and destructively
5 examine them with metallurgical techniques and show
6 that there's no selective leaching going on and that's
7 the end of it. And you wouldn't have to do hardness
8 testing or anything like that. I mean these valves
9 are replaced once in a while anyway, for other
10 reasons. It might not even be a requirement to take
11 a valve out that wasn't coming out for some other
12 reason. So anyway, that's just -- what I heard and
13 what was discussed was just sort of unsatisfactory to
14 me.

15 CHAIRMAN BONACA: Thank you. I will echo
16 somewhat Graham Leitch's comments with regard to the
17 timing of the SER. I already voiced my concern
18 before. I found myself in a review that I was getting
19 material that was issued before and afterwards was
20 getting additional material, modified information to
21 change that. I could not integrate inspection reports
22 with the other from the lab. Timing was different if
23 I compared -- so there were a number of issues that
24 said to me, if we had received this SER a couple of
25 months later, probably it would be so square and much

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1 clearer to us. And that says, you know, it is
2 important for the SERS to get stuff at the mature
3 stage so that we can give the right judgment.
4 Otherwise, our judgment seems to be affected more by
5 the logistics of how information is provided than by
6 the substance of the application. So, that's
7 something to keep in mind.

8 Regarding the issue of current performance
9 and license renewal rule, the rule has members that
10 have been very specific all the time about saying we
11 have to separate those, and I still believe that we
12 have to have a separation there. I'm only concerned,
13 however, about current performance as it possibly may
14 affect license renewal commitments. There is a link
15 there. One of the linkages is the human performance
16 issue. If, in fact, there is a significant human
17 performance issue, and we really do not have our own
18 personal inspection, we have to trust what Region III
19 is saying about that, then we have to be somewhat
20 concerned about the implementation of commitments.

21 I'm not saying that this is not going to
22 happen. I'm only saying that I would have liked to
23 see them out of _____ -- before we had to make a
24 judgment and maybe that will happen. I mean, by the
25 time the SER comes, it will be our call, and,

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1 therefore, our issues, moot.

2 I don't think that there is a sufficient
3 basis for saying that the application should not
4 proceed. In fact, I think that they have made a
5 submittal and we have expressed some opinions about
6 it, but I think that we really need to have some
7 confidence and comfort that, in fact, for all those
8 parts which have not been inspected, and there are
9 many of those, commitments will be adequately
10 implemented. You know, you get a little bit of cold
11 feet when you have a licensee that is in a degraded
12 condition and is essentially struggling to recover.
13 I wish them the best. So, in that respect, there is
14 some connection here and that's just one view.

15 Tomorrow, we will have our colleagues get
16 the presentation and tomorrow night we will go through
17 a discussion of this SER and where we go with that.

18 But I want to thank everybody from the
19 staff, from the applicant, for the presentations.
20 They were informative.

21 With that, unless there are additional
22 comments or questions, I will close the meeting and
23 we'll talk about this tomorrow morning.

24 Thank you again.

25 (Whereupon, at 5:16 p.m., the meeting was concluded.)

CERTIFICATE

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

Name of Proceeding: Advisory Committee on
Reactor Safeguards
Plant License Renewal
Subcommittee Meeting

Docket Number: n/a

Location: Rockville, MD

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



Rebecca Davis
Official Reporter
Neal R. Gross & Co., Inc.

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Point Beach Nuclear Plant, Units 1 and 2 Discussion of Red Findings

Staff Presentation to the ACRS Plant
License Renewal Subcommittee
Patrick Loudon, Branch Chief
Division of Reactor Projects, Region III
May 31, 2005

Point Beach Red Findings



- Licensee identified Auxiliary Feedwater system finding in November 2001.
- Two NRC Special Inspections performed:
 - December 2001 – February 2002
 - September 2002 – March 2003
- 2003 Inspection identified second Auxiliary Feedwater system finding

Point Beach Red Findings



- Plant notified of final decision on first Red finding in April 2003
- Red Finding places Point Beach in Column IV of the NRC Action Matrix
- Second Red finding issued in December 2003

NRC Inspection Procedure 95003



- Supplemental Inspection 95003 conducted from August to December 2003
 - Diagnostic in nature
 - Focused on known problem areas
 - Results determine any necessary additional NRC actions
- Point Beach 95003 inspection completed in three parts

Point Beach 95003



- Teams comprised of inspectors from all NRC regional offices and included contractors
- Additional findings and violations identified
- Results indicated five general areas of concern

NRC Areas of Concern



- Five areas of regulatory concern:
 - Human Performance
 - Engineering Design Control
 - Engineering/Operations Interface
 - Emergency Preparedness
 - Corrective Action Program

Point Beach CAL



- These five areas formed basis for NRC Confirmatory Action Letter (CAL)
- CAL issued on April 21, 2004
- Licensee developed Commitment Letter based on their Site-Wide Excellence Plan
- Commitment Letter attached to CAL

Point Beach Inspections



- Baseline team inspection membership was expanded
- Special inspections were conducted to evaluate the licensee's progress in implementing Confirmatory Action Letter items.

Point Beach Current Performance



- Substantive Cross-cutting Issues
 - Substantive cross-cutting issues identified in the areas of Human Performance and the Corrective Action Program
 - Also are identified as areas of concern in the Confirmatory Action Letter

Point Beach Current Performance

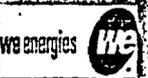


- Human Performance has been a licensee focus and recent improvement has been noted
- Corrective Action Program is sound; however, some areas are still in need of improvement

Point Beach Current Assessment



- The licensee has made progress in all five Confirmatory Action Letter areas of concern
- The NRC focus is on sustainability of the licensee's corrective actions



Point Beach Nuclear Plant

License Renewal Presentation to ACRS Subcommittee

Jim Knorr
PBNP License Renewal Project Manager
Nuclear Management Company, LLC
May 31, 2005

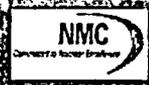
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Participants

- **Doug Johnson – Director,
License Renewal Projects**
- **Jim Knorr – Manager License Renewal**
- **Support Staff**
 - **John Thorgersen – Programs Lead**
 - **Todd Mielke – Mechanical Lead**
 - **Mark Ortmyer – Civil Structural Lead**
 - **Steven Schellin – Electrical Lead**
 - **Brad Fromm – TLAAs & Major Components**
 - **Bill Herrman – Programs & Implementation**

2





Description of Point Beach Nuclear Plant

- PBNP Owner – We Energies
- PBNP Operator – Nuclear Management Company, LLC
- Located in Two Creeks, Wisconsin
- Westinghouse 2-loop PWRs
- Rated Thermal Power
Units 1 and 2 1540 MWt
- Rated Electrical Output
Unit 1 538 MWe
Unit 2 538 MWe

3

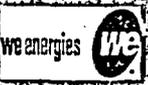




Point Beach Features

- Four Emergency Diesel Generators
- 25 MWe Combustion Turbine
- Ultimate Heat Sink - Lake Michigan
- Once-through Cooling
- Containment - Post Tensioned Steel Reinforced Concrete with Steel Liner
- 18 Month Fuel Cycles

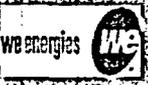
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Operating Experience

- 1975 Unit 1 Steam Generator Tube Rupture
 - Cause - IGSCC
- 1999 Unit 1 Feedwater Heater Shell Failure
 - Cause – Steam impingement and flow accelerated corrosion

5


PBNP Performance Summary

- NRC Performance Assessment
 - All Performance Indicators Green
 - Aux Feedwater Design Related Red Findings (2003)
- Unit 1 Rolling 18 Month Capability Factor = 87.25
Last Auto Rx Trip – July 15, 2003
- Unit 2 Rolling 18 Month Capability Factor = 89.19
Last Auto Rx Trip - July 10, 2003

6





PBNP Major Improvements

- New Steam Generators
 - Unit 1 - 1984
 - Unit 2 - 1997
- Split Pin Replacement – Both Units - Mid 1980s
- Upflow Modification – Late 1980s
- Two Additional Emergency Diesels – 1994
- Unit 2 Baffle Bolt Replacement – 1998
- New Integral-Hub Low Pressure Turbines - 1998
- New Training and Engineering Building -1998
- DC Upgrades
 - 2 New Batteries and DC Busses - Mid 1980s
 - New Swing Battery and Bus – Mid 1990s
 - New Non-safety Related Batteries

7





PBNP Major Improvements

- Upgrade Portions of Service Water System – Late 1990s
- Replaced Plant Process Computer – 2000
- Redesigned Intake Structure – 2001
- New Containment Fan Cooler Hxs – Early 2000s
- Reactor Vessel Head Replacement
 - Unit 2 in Spring 2005
 - Unit 1 in Fall 2005
- Scheduled to Replace Auxiliary Feedwater Pumps – 2006 - 2007

8

Application Background

- Application Submitted February 25, 2004
- Current License Expiration
 - Unit 1 – October 5, 2010
 - Unit 2 – March 8, 2013
- LRA Process
 - Standard 2003 LRA Format with Expanded Content
 - NRC Used the New Review Process

Aging Management Programs (AMPs)

- 26 AMPs total
 - All are Units 1 and 2 common AMPs
- 21 Existing AMPs
- Five New AMPs
- Exceptions/clarifications to Generic Aging Lessons Learned (GALL) Programs:
 - Use of different or later versions of codes and standards
 - Expansion of program scope beyond GALL
 - Use of later NRC guidance or precedence

 **NMC**
Nuclear Mission Critical

GALL Exception Examples

- Reactor Vessel Surveillance Program
 - Added capsule for extended life
- Reactor Vessel Internals Program
 - Submit program for review and approval ≥ 24 months prior to period of extended operation
- Instrumentation Circuits
 - Alternate program – Cable Testing
- Medium Voltage Cables
 - Already tested all inaccessible medium voltage cables

 **we energies** **WE**



11

 **NMC**
Nuclear Mission Critical

PBNP Effective Full Power Years

- Current EFPY
 - Unit 1 - 25.7
 - Unit 2 - 26.2
- Projected EFPY (95% Capacity Factor with assumed power uprate to 1678 MWt)
 - Unit 1 - 51 at 60 years
 - Unit 2 - 53 at 60 years

 **we energies** **WE**



12



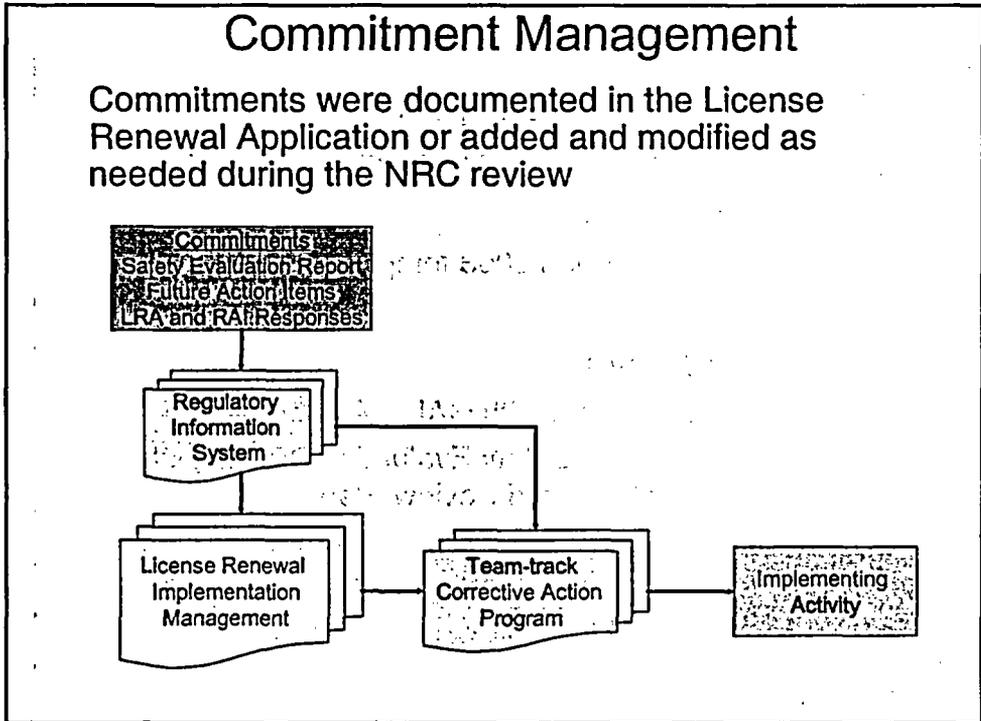


Reactor Vessel Time Limited Aging Analyses (TLAAs)

- Unit 1 (53 EFPY – 95% capacity factor @1678 MWt)
 - USE = <50 ft-lbs ($J_{0.1}/J_1 = 1.87$ and 1.60)
 - $RT_{PTS} = 299$ °F
- Unit 2 (53 EFPY – 95% capacity factor @1678 MWt)
 - USE = <50 ft-lbs ($J_{0.1}/J_1 = 5.57$ and 4.87)
 - $RT_{PTS} = 316$ °F
(300 °F reached at 38.1 EFPY in 2017)

Note: 10 CFR 50.61 requires submittal of a safety analysis of a flux reduction program to prevent failure of the reactor vessel due to a PTS event or licensing of an alternate PTS analysis technique three years prior to reaching the acceptance criteria.

13





Corrective Action Program

- Integral to Tracking Commitments
- Common Process Across NMC Fleet
 - Team-Track System
 - Corrective Action Program (CAP) Item
 - Corrective Action Item(s)
- Integrated into Work Control Process
 - CHAMPS (Computerized History and Maintenance Planning System)

15



Closing Remarks

- Application
 - Based upon 2003 template with enhanced detail
- NRC Review
 - “Consistent with GALL” Audit process
 - Standard Safety Evaluation Report patterned after Standard Review Plan

16

Point Beach Nuclear Plant, Units 1 and 2 License Renewal Safety Evaluation Report

Staff Presentation to the ACRS Subcommittee
Veronica Rodriguez, Michael Morgan, and
Gregory Suber, Project Managers
Office of Nuclear Reactor Regulation
May 31, 2005

Review Highlights



- License extension request - February 25, 2004
 - Unit 1: October 5, 2010
 - Unit 2: March 8, 2013
- SER with Open and Confirmatory Items issued on May 2, 2005
- Five (5) Open Items
 - 2 Aging Management Programs (AMPs)
 - 3 Aging Management Reviews (AMRs)
- Fifteen (15) Confirmatory Items
- Three (3) License Conditions



Review Highlights

NRC Audits and Inspections

- AMP GALL Audit
 - April 26 - 30, 2004
- Scoping and Screening Methodology Audit
 - June 21 – 25, 2004
- AMR GALL Audit
 - June 7 – 11, 2004
- Regional Scoping and Screening/AMP Inspection
 - March 7 – 25, 2005

3



Section 2 - Overview

Section 2.1: Scoping and Screening Methodology

- On-site Audit - June 21-25, 2004
- Three Confirmatory Items
 - CI 2.1-1 Application of Scoping Criteria in 10 CFR 54.4(a) – Exposure Duration
 - CI 2.1-2 Application of Scoping Criteria in 10 CFR 54.4(a) – First Equivalent Anchor
 - CI 2.1-3 Flow-Accelerated Corrosion Effect on Piping Section Scoping in 10 CFR 54.4(a)(2)

4

Section 2 - Overview



Section 2.1: Scoping and Screening Methodology

- Revised Methodology (letter dated April 29, 2005)
 - Removed "Exposure Duration"
 - New methodology using "Spaces" approach
 - Scope expansion
 - No new aging effects mechanisms identified
 - New Tables and Line Items in Sections 2 and 3
 - 14 Component Types

5

Section 2 - Overview



Section 2.4: Scoping and Screening of Containments, Structures and Supports

- Staff reviewed LRA to determine if any passive and long-lived SSC's required to be within the scope of license renewal were omitted
 - No omissions were identified
 - One (1) Confirmatory Item
 - Identify specific concrete tanks foundations

6

Section 2 - Overview



Section 2.2: Plant-Level Scoping and Screening

Section 2.3: Scoping and Screening of Mechanical Systems

Section 2.5: Scoping and Screening of Electrical and Instrumentation and Controls

- Staff reviewed LRA to determine if any passive and long-lived SSC's required to be within the scope of license renewal were omitted
 - No omissions were identified
 - No Open or Confirmatory Items

7

Section 3 - Overview



Aging Management Review Results

- Section 3.0: Use of the GALL Report/AMP's
- Section 3.1: Reactor Vessel Internals
- Section 3.2: Engineering Safety Features
- Section 3.3: Auxiliary Systems
- Section 3.4: Steam and Power Conversion
- Section 3.5: Containments, Structures, Supports
- Section 3.6: Electrical Components

8

Section 3 - Overview



Section 3.0: Applicant's Use of the GALL Report

- Total of 26 Aging Management Programs
 - 21 Existing Programs, 5 New Programs
 - 22 Programs Consistent with the GALL Report with exceptions or enhancements
 - 4 Plant-Specific Programs
- Two (2) Open Items for AMPs
- Two (2) Confirmatory Item for AMPs

9

Section 3 - Overview (AMP)



Enhancements

- LRA treatment of enhancements was inclusive
 - Actions needed to demonstrate consistency with GALL Report AMP
 - Actions appropriate to implement commitments
- Project team audit
 - Evaluates enhancements necessary to demonstrate if LRA AMP is consistent with the GALL Report
 - Audit programs not implementation documents
 - May sample implementation documents to obtain additional info
 - Region determines program implementation sufficiency

10

Section 3 - Overview (AMP)



AMPs using ASME Code

- Three LRA AMPs
 - IWB-IWC-IWD
 - IWE-IWL
 - IWF
- Existing programs consistent with the GALL Report
 - Exceptions (relief requests and LBB for thermal embrittlement)
 - Enhancements (administrative)
- Open Item
 - Relief requests basis for exceptions
- Confirmatory Item
 - Use of flaw tolerance evaluation to manage CASS thermal embrittlement

11

Section 3 - Overview (AMP)



Buried Service Monitoring Program

- Existing Program consistent with the GALL Report
 - Enhancements (administrative)
- RAI responses and Commitments
 - Some fire protection piping may not have been coated or wrapped
 - One-time (planned or opportunistic) inspection
 - Susceptible section of fire protection piping will be excavated and inspected prior to period of extended operation
 - Commitment to perform inspection every 10 years
 - May credit opportunistic inspection
 - If loss of material is observed, sample size will be expanded

12

Section 3 - Overview (AMP)



Cable Condition Monitoring Program

- New program consistent with the GALL Report
 - Exceptions
 - E2 non-EQ instrumentation circuits
 - Testing of radiation monitoring and nuclear instrumentation not required because EQ qualified or non-adverse environment
 - Nuclear instrumentation circuits not in TS surveillance, but periodically tested
 - E3 inaccessible medium-voltage cables
 - Based on RAI response applicant agreed to be consistent with the definition of significant moisture
 - Tested every 10 yrs using a sample of most susceptible cables
 - Enhancements
 - Administrative

13

Section 3 - Overview (AMP)



Flow-Accelerated Corrosion Program

- Existing program consistent with the GALL Report
 - Confirmatory item
 - RAI clarification of acceptance criteria for minimum wall thickness calculation used with safety and non-safety related piping
 - Received support from NRC Region III staff
 - Applicant to provide justification and confirmation that minimum required wall thickness will be maintained for the period of extended operation
- Enhancements
 - Administrative

14

Section 3 - Overview (AMP)



One-Time Inspection Program

- New program consistent with the GALL Report
- AMP modifications
 - Identified aging management methods based on aging effect
 - Use visual inspections per ASME Code Section V to detect fouling to manage loss of heat transfer
- RAI response
 - Added hardness test for selective leaching inspection methodology

15

Section 3 - Overview (AMP)



One-Time Inspection Program (cont'd)

- Exceptions
 - Small bore piping not in scope of OTI AMP, volumetrically inspected per risk-informed in-service inspection criteria
- Enhancements
 - Administrative
- Open Item
 - Two (2) AMR line items using only water chemistry without verification such as One-Time Inspection Program
 - SCC in stainless steel heat exchanger
 - Loss of material in steam generators

16

Section 3 - Overview (AMP)



Bolting Integrity Program

- Existing program consistent with the GALL Report
- Exceptions
 - One (1) Open Item - exceptions to the bolting recommendations of NUREG and EPRI documents not stated in AMP
- Enhancements
 - Administrative

17

Section 3 - Overview (AMR)



Section 3.1: Reactor Vessel, Internals, and Reactor Coolant System

- Reactor Vessel
- Reactor Vessel Internals
- Pressurizer
- Steam Generators
- One (1) Open Item - SG loss of material evaluation
 - Use of the Water Chemistry Control Program as the only AMP for managing loss of material. No program to validate effectiveness of Water Chemistry Control Program
- Commitments to submit programs for NRC approval 24 months prior to entering the period of extended operation

18

Section 3 - Overview (AMR)



Section 3.3: Auxiliary Systems

- Spent fuel cooling
- Service water
- Fuel handling
- Containment ventilation
- One (1) Open Item - Component Cooling Water cracking evaluation
 - Use of the Water Chemistry Control Program as the only AMP for managing loss of material. No program to validate effectiveness of Water Chemistry Control Program
- No Confirmatory Items

19

Section 3 - Overview (AMR)



Section 3.5 Containments, Structures, and Component Supports

- Control building
- Diesel generator building
- Yard
- Turbine building
- One (1) Open Item - Containment liner plate loss of material evaluation
 - Staff requested procedural descriptions (repair guidelines) and acceptance criteria for identifying corrective actions when loss of material is observed

20

Section 3 - Overview (AMR)



- Section 3.2: Engineered Safety Features
- Section 3.4: Steam and Power Conversion Systems
- Section 3.6: Electrical Components

- No Open or Confirmatory Items

21

License Renewal Inspections



- Scheduled to support NRR reviews
- Onsite inspections performed in accordance with NRC Inspection Procedure 71002
- Combined scoping, screening, and aging management reviews into one inspection
 - Two weeks onsite over a period from March 7 - 25, 2005
- Opportunity to look at normally inaccessible areas inside the Unit 2 containment from April 4 - 8, 2005

22

License Renewal Inspections



- Team of five inspectors
 - Lead inspector - mechanical systems expertise
 - NRR Project manager - mechanical systems expertise
 - Electrical inspector
 - Operations inspector
 - Structural inspector
 - Water chemistry inspector

23

License Renewal Inspections



- Scoping and Screening
 - Looked at electrical, structural, and mechanical systems
 - Emphasized physical walk downs of the plant
 - Concentrated on non-safety systems whose failure could impact safety systems
- Conclusions
 - Majority of systems appropriately scoped
 - Applicant's program for mechanical systems not completely defined at time of inspection
 - Additional information submitted to NRR
 - Need for further inspection to be determined following NRR review

24

License Renewal Inspections



- Reviewed 16 aging management programs and two (2) Time-Limited Aging Analyses programs
- Conclusions
 - Majority of programs adequate for period of extended operation
 - One-time Inspection program not yet sufficiently developed to allow review
 - Additional information to be submitted to NRR
 - Further inspection might be needed dependent upon NRR review

25

License Renewal Inspections



- Aging Management Programs
 - Bolting Integrity
 - Boraflex Monitoring
 - Boric Acid Corrosion
 - Buried Services Monitoring
 - Cable Condition Monitoring
 - Closed-Cycle Cooling Water
 - Fire Protection
 - Flow-Accelerated Corrosion
 - Fuel Oil Chemistry Control
 - One-Time Inspection
 - Open-Cycle Cooling Water
 - Periodic Surveillance and Preventative Maintenance
 - Structures Monitoring
 - Systems Monitoring
 - Tank Internal Inspection
 - Water Chemistry Control
- Time-Limited Aging Analyses programs
 - Environmental Qualification
 - Fatigue Monitoring

26

License Renewal Inspections



Conclusions

- Overall, scoping, screening and aging management programs adequate for extended operation
- Two areas may require additional inspection
 - Scoping and Screening – Mechanical non-safety components whose failure might affect safety-related system, structures or components
 - Aging Management – One-Time Inspection Program requires further information regarding specific sample sizes and locations

27

Section 4 - Overview



Time-Limited Aging Analyses (TLAA)

- Reactor Vessel and Internals Neutron Embrittlement
- Metal Fatigue
- Fracture Mechanics Analysis
- Loss of Pre-Load
- Neutron Absorber
- Wear
- Environmental Qualification

28

Section 4 - Overview



Section 4.2: Reactor Vessel and Internals Neutron Embrittlement

- Three analyses affected by irradiation embrittlement identified as TLAA's
 - Pressurized Thermal Shock
 - Upper Shelf Energy
 - Pressure Temperature Limits
- Applicant used 53 EFPY

29

Section 4 - Overview



- RV Pressurized Thermal Shock, Units 1 and 2

	Limiting Material for PTS	Screening Criteria	Calculated 53 EFPY RT_{PTS} value	Conclusion
Unit 1	Intermediate to lower shell circumferential weld (71249)	300 °F	Applicant: 299 °F Staff: 299 °F	Screening Criterion is met
Unit 2	Intermediate to lower shell circumferential weld (72442)	300 °F	Applicant: 316 °F Staff: 315 °F	Screening Criterion is exceeded in 2017

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Section 4 - Overview



- Point Beach Commitments for PTS
 - Low-low leakage loading fuel management pattern (Both Units)
 - Hafnium absorbers assemblies (Unit 2)
 - Document flux reduction plan and other options allowed by 10 CFR 50.61(b)
 - Submit additional analyses supporting continued operation at least three years prior to exceeding screening criteria
 - Thermal annealing of the reactor pressure vessel in accordance with 10 CFR 50.66

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Section 4 - Overview



- Upper Shelf Energy (USE), Units 1 and 2
 - Vessel beltline USE values will be less than the acceptance criteria (50 ft-lb)
 - Equivalent margin analysis performed
 - Applicant performed plant specific analysis that satisfied 10 CFR 50, Appendix G requirements
 - Staff performed independent analysis and confirmed applicant's conclusion
 - Analysis projected through end of period of extended operation pursuant to 10 CFR 54.21(c)(1)(ii)

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Section 4 - Overview



Section 4.3: Metal Fatigue

- ASME Class 1 Components
- USAS B31.1 Piping
- Environmentally Assisted Fatigue

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Section 4 - Overview



Section 4.4: Fracture Mechanics Analysis

- Reactor Vessel Underclad Cracking
- Reactor Coolant Pump Flywheel
- Reactor Coolant Pump Casing
- Leak-Before-Break
 - RCS Main Loop Piping
 - Pressurizer Surge Line
 - Class 1 Accumulator Injection Line
 - Class 1 RHR Line

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Section 4 - Overview



Section 4.5: Loss of Pre-load

- Containment buildings are post-tensioned, reinforced concrete.
- Based on applicant's projections, predicted final effective preload exceeds minimum required preload at 60 years
- TLAA remains valid through the period of extended operation

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Section 4 - Overview



Section 4.5: Loss of Pre-load

Pre-stressed forces projected for 40 and 60 yrs of operation (kips/tendon)

Inspection Year	Dome Tendon Projected	Dome Minimum Value	Vertical Tendon Projected	Vertical Minimum Value	Horizontal Tendon Projected	Horizontal Minimum Value
40	621	607	641	621	624	594
60	612	607	635	621	615	594

(Values for Unit 2; Unit 1 values were greater)

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Section 4 - Overview



Section 4.6: Spent Fuel Pool Storage Rack Boraflex

- Aging effects will be adequately managed through the period of extended operation using the Boraflex Monitoring Program
- Four (4) Confirmatory Items
 - Surveillance Frequency – Areal Density
 - Surveillance Frequency – Blackness Testing
 - Baseline Areal Density Inspection
 - Specify Acceptance Criteria

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Section 4 - Overview



Section 4.8: Environmental Qualification

- Applicant's EQ Program is consistent with the GALL Report
- Staff concluded EQ Program will continue to manage equipment in accordance with 10 CFR 50.49, and meets 10 CFR 54.21(c)(1)(iii)

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