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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 MEETING

+ + + + +

WEDNESDAY,

APRIL 5, 2006

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The meeting was convened in Room O-1F16
of One White Flint North, 11545 Rockville Pike,
Rockville, Maryland, at 8:30 a.m.

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MEMBERS PRESENT:

JOHN D. SIEBER	ACRS Member (CHAIR)
J. SAM ARMIJO	ACRS Member
MARIO V. BONACA	ACRS Member
THOMAS S. KRESS	ACRS Member
OTTO L. MAYNARD	ACRS Member
WILLIAM J. SHACK	ACRS Member
GRAHAM B. WALLIS	ACRS Member

ACRS CONSULTANTS PRESENT:

JOHN J. BARTON	ACRS Consultant
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ACRS STAFF PRESENT:

JOHN G. LAMB	ACRS Staff
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1 NRC STAFF PRESENT:

2

3 HANS ASHER

4 KENNETH CHANG

5 JOHN FAIR

6 ROBERT HSU

7 MEENA KHANNA

8 P.T. KUO

9 TOMMY LE

10 JIM MEDOFF

11 MICHAEL MODES

12 DUC NGUYEN

13 JAKE ZIMMERMAN

14

15 CONSTELLATION ENERGY STAFF PRESENT:

16

17 DAVID DELLARIO Constellation - NMP

18 MARK FLAHERTY Constellation - NMP

19 GEORGE INCH Constellation - NMP

20 PETE MAZZAFERRO Constellation - NMP

21 ROBERT RANDALL Constellation - Ginna

22 TIM O'CONNOR Constellation - NMP

23

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1 M-O-R-N-I-N-G S-E-S-S-I-O-N

2 8:31 a.m.

3 CHAIR SIEBER: On the record. I think
4 we can get started now. The meeting will now come
5 to order. This is a meeting of the Plant License
6 Renewal Subcommittee and I'm Jack Sieber, Chairman
7 of the Plant License Renewal Subcommittee for this
8 meeting and this licensing action.

9 ACRS members in attendance are Dr.
10 Graham Wallis, Dr. William Shack, Dr. Mario Bonaca,
11 Mr. Otto Maynard, Sam Armijo and Dr. Thomas Kress.
12 Also with us is Mr. John Barton, a consultant to the
13 Committee and a former member.

14 The purpose of the meeting is to discuss
15 the license renewal application for Nine Mile Point
16 Units 1 and 2. We will hear presentations from
17 representatives of the Office of Nuclear Reactor
18 Regulation, the Region I Office and the
19 Constellation Energy Group. The Subcommittee will
20 gather information, analyze relevant issues and
21 facts, and formulate proposed position and action as
22 appropriate for deliberation by the full Committee.
23 As part of the introduction, I should also mention
24 that John Lamb is the Designated Federal Official
25 for this meeting.

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1 The rules for participation in today's
2 meeting were announced as part of the notice of this
3 meeting previously published in the *Federal Register*
4 on March 21, 2006. We have received no written
5 comments or requests for time to make oral
6 statements from members of the public regarding
7 today's meeting.

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

17 We will now proceed with the meeting and
18 I call on Jake Zimmerman of the Offices of Nuclear
19 Reactor Regulation to begin.

20 MR. ZIMMERMAN: Thank you, Chairman
21 Sieber and ACRS members. My name is Jake Zimmerman.
22 I'm the Chief of the License Renewal Branch B in the
23 Division of License Renewal in NRR. With us today
24 is Dr. P.T. Kuo who is the Deputy Director of
25 Division of License Renewal, also Dr. Ken Chang

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1 who's the Chief of License Renewal Branch C who has
2 primary responsibility for our audit and review
3 activities of the Aging Management Programs.

4 The staff has conducted a detailed and
5 thorough review of the Nine Mile Point Nuclear
6 Station license renewal application which was
7 submitted in May of 2004. Mr. Tommy Le, the Senior
8 Project Manager for this review, will lead our
9 presentation today on the staff's draft safety
10 evaluation report. Mr. Michael Modes, the Region I
11 Inspection Team Leader, will discuss his inspection
12 related activities conducted at Nine Mile Point. In
13 addition, we have several members of the NRR staff
14 that are here to support the meeting and answer any
15 questions that you may have.

16 During the review of the initial
17 application, the staff identified issues associated
18 with quality of information provided in the
19 Applicant's resources that were available to support
20 our review. As a result in March of 2005, the
21 Applicant requested a 90-day grace period to address
22 these issues. The Applicant will specifically go
23 into more detail on how they addressed these issues
24 during their presentation.

25 In July 2005, the Applicant submitted an

1 amended application. Based on the improved quality
2 of the amended application subsequent responses to
3 requests for additional information and the enhanced
4 level of support provided to our audit and review
5 activities, we were able to resume our review and
6 complete it with the exception of two open items
7 that we will be discussing today with you.

8 With that, I'd like to just turn it over
9 to Mr. Tim O'Connor who is the Vice President for
10 Nine Mile Point Nuclear Station to begin the
11 Applicant's presentation. Thank you.

12 MR. O'CONNOR: Good morning. I am Tim
13 O'Connor, Site Vice President at Nine Mile Point
14 Unit 1 and Unit 2.

15 CHAIR SIEBER: Is your microphone turned
16 on?

17 MR. O'CONNOR: Hello?

18 CHAIR SIEBER: Yes.

19 MR. O'CONNOR: Once again, I'm Tim
20 O'Connor, Site Vice President at Nine Mile Unit 1
21 and Unit 2. I have responsibilities for the
22 operations of the facility and the strategic
23 direction of the facility for the corporation
24 assigned to the site. I would like to introduce
25 each one of the team members if I could.

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1 MR. DELLARIO: My name is David
2 Dellario, Director of Fleet License and Projects.

3 MR. MAZZFERRO: I'm Pete Mazzferro. I'm
4 the Project Manager for License Renewal for Nine
5 Mile Point.

6 MR. DELLARIO: And I'll go through the
7 rest of them, Mark Flaherty sitting to Pete's left,
8 the Acting Vice President of Constellation Energy
9 Nuclear Technical Services. Our support team and
10 subject matter experts we have here over to the
11 right and behind me. Bob Randall, Director of Ginna
12 Licensing, he spent the last 25 years at Nine Mile
13 Point and just recently moved over to Ginna. Ray
14 Dean, Director Quality and Performance Assessment.
15 Mike Falin, Project Lead. Ken Haws, Project Lead.
16 Dale Goodney, Design Engineering. George Inch,
17 Design Engineering. Jeff Poehler, Corporate
18 Engineering. And Carl Senska, Supervisor of
19 Chemistry.

20 I would like to just briefly go over the
21 agenda. It's similar format that you've seen
22 before. We're going to start off with Tim O'Connor
23 talking about or describing Nine Mile Point Nuclear
24 Station and then talk about current performance of
25 where the plant's at today. Then we're going to get

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1 into the license renewal early recovery project and
2 Mark Flaherty is going to discuss it from a
3 corporate standpoint and Tim O'Connor will discuss
4 it from the site standpoint. I'll go into the
5 details of the recovery project. Then Pete is going
6 to have a slide or two on the operating history,
7 plant improvement initiatives, our license renewal
8 programs, commitments, talk about implementation and
9 then Tim will wrap it up with the summary.

10 Now I'd like to turn it over to Tim
11 O'Connor to talk a little bit about Nine Mile Point.

12 MR. O'CONNOR: Good morning again. I'm
13 Tim O'Connor. Nine Mile Point as you may know is
14 owned by Constellation Energy, 100 percent for Unit
15 1 and approximately 82 percent for Unit 2. We do
16 have a co-owner that has 18 percent ownership which
17 is the Long Island Power Authority and is of Unit 2
18 only. The effective ownership of Constellation
19 Energy for Nine Mile took place essentially on
20 November 11, 2001.

21 The location of Nine Mile is in
22 Lycoming, New York and the ultimate heat sink is the
23 Ontario Lake and you know that Unit 2 does have a
24 cooling tower. The supplier for the NSSS and the
25 turbine for both units is General Electric.

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1 CHAIR SIEBER: These units are separated
2 in time from one another by quite of numbers of
3 years and so the designs are quite different.

4 MR. O'CONNOR: Yes sir.

5 CHAIR SIEBER: And also the corrosion
6 mechanisms and wear mechanism appear to be quite
7 different also. Have these differences between the
8 units affected your analysis in a significant way as
9 far as developing aging management programs and
10 scoping?

11 MR. MAZZFERRO: The materials and the
12 environments at both plants are very similar and as
13 you'll see going forward, our aging management
14 programs, most of them, are common to both units.
15 There are those two or three programs that are unit
16 specific only because of what's in scope versus
17 what's not in scope. But they are both boiling
18 water reactors. The operating parameters are very
19 similar. The materials of construction are similar.

20 CHAIR SIEBER: Okay. Well, we'll see as
21 we go through your presentation.

22 MR. O'CONNOR: As you pointed out, the
23 two units are different. I'm on Slide 5. There are
24 differences between the two units, both in age and
25 in the fundamental design. Unit 1 is a Mark I

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1 containment. It's rated as 1850 megawatts thermal,
2 650 megawatts electric. It did go commercial
3 12/01/69. Its license expires on 8/22/09.

4 Unit 2 is a much newer unit, a BWR 5, a
5 Mark II containment rated at 3467 megawatts of
6 thermal, 1144 megawatts electric and it went
7 commercial operation on March 11 1988.

8 MR. BARTON: Have you done any power
9 uprates in the units?

10 MR. O'CONNOR: This was a power uprate a
11 few years ago on Unit 1.

12 MR. BARTON: How much? What was the
13 percentage of increase? Was it just the one percent
14 that NRC gave you or was it something more?

15 MR. RANDALL: Robert Randall from Ginna.
16 The Nine Mile 2 did a power uprate of 4.3 percent in
17 1995. Unit 1 originally started off and did a power
18 uprate in 1972 I believe.

19 MR. BARTON: A long time ago.

20 MR. RANDALL: Yes. A long time ago. So
21 there was the appendix. The Unit 2 more recent one
22 was the Appendix K uprate.

23 MR. BARTON: Okay. Thank you.

24 MR. O'CONNOR: The next slide, Slide 6,
25 is our current performance at both units. Both Nine

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1 Mile 1 and Nine Mile 2 are green in the reactor
2 oversight process indicators. There are no open
3 inspections or findings with the status greater than
4 green and Nine Mile 1 and 2 do remain in the Column
5 1 of ROP license of the column matrix. The units
6 are running very strong.

7 MEMBER SHACK: Just looking at the PRA,
8 it's dominated for both units apparently by Station
9 Blackout. They don't share units. What's your
10 backup diesel arrangement at the plants?

11 MR. O'CONNOR: I'm not sure I understood
12 your question.

13 MEMBER SHACK: When I look at the PRA,
14 the risk is dominated by Station Blackout accidents
15 at both units. I was just wondering what the backup
16 diesel arrangements were at each plant if you happen
17 to know that.

18 MR. O'CONNOR: What you're looking for
19 is how many diesels each plant has?

20 MEMBER SHACK: Yes.

21 MR. O'CONNOR: Both units do have backup
22 diesels as you pointed out. Unit 1 has three
23 diesels. Unit 2 has three diesels as well.

24 CHAIR SIEBER: Can you cross connect
25 them?

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1 MR. O'CONNOR: No, the units are
2 separate.

3 CHAIR SIEBER: Is it on the same site?

4 MR. O'CONNOR: We have two separate
5 distinct units, one right here and one right over
6 there. (Indicating.) They were built apart in time
7 and completely essentially independent although
8 there are some cross-tie capabilities for fire
9 protection.

10 CHAIR SIEBER: There are plants that are
11 in similar circumstances as far as construction time
12 is concerned and unit design and some folks try to
13 reduce the risk by cross-connecting their vital
14 buses. So that's a possibility.

15 MR. O'CONNOR: I'm not aware of any
16 capability with that on either unit at this time.

17 CHAIR SIEBER: Okay.

18 MEMBER MAYNARD: A quick question. When
19 did that construction start on the Unit 2? There
20 was a commercial ops in `88, but do you know when
21 construction started?

22 MR. O'CONNOR: I'm not.

23 MR. MAZZFERRO: It started in mid to
24 late `70s. It was quite a long construction.

25 CHAIR SIEBER: Yes, they were 13 years

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1 in the construction of the plant.

2 MEMBER BONACA: I imagine the ratings
3 from the diesels are different for Unit 1 and Unit
4 2.

5 MR. O'CONNOR: The outputs?

6 MEMBER BONACA: Yes. I mean Unit 1 is a
7 much smaller unit.

8 MR. O'CONNOR: Yes. I'm not sure of the
9 exact -

10 MEMBER BONACA: But when you talk about
11 three diesels per unit, is each one of them
12 individually capable of supporting a division of
13 ECCS.

14 MR. O'CONNOR: That is the intent, yes.

15 MEMBER BONACA: Okay. Thank you.

16 MR. O'CONNOR: That essentially
17 concludes my openings. I would like to turn it over
18 to Mark Flaherty who will cover about the License
19 Renewal Recovery Project which was mentioned earlier
20 and then I'll talk a little bit more about some of
21 the site actions.

22 MR. FLAHERTY: Hi. I'm Mark Flaherty.
23 I'm currently the Acting Vice President of Technical
24 Services. Prior to that, I was the Licensing
25 Manager for Constellation responsible for licensing

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1 of all sites.

2 The license renewal application was
3 originally submitted by Constellation in May of
4 2004. In March of 2005, both Constellation and the
5 NRC agreed that there were quality concerns with the
6 initial application. You can kind of bend these
7 concerns really into two areas. The first and major
8 one, the (a)(2) scoping effort was inadequate and
9 the other major area is that the RA responses from
10 Constellation to the staff were also inadequate.
11 There were some errors and the timeliness of those
12 responses. As a result of this, both NRC and
13 Constellation agreed that a grace period was
14 necessary to improve the application and that we
15 would submit an amended application to facilitate
16 NRC review.

17 In response to this, we did do a root
18 cause analysis tied to the corrective action
19 program. The root cause identified three major
20 areas for the quality concerns. The first one dealt
21 with isolationism, isolationism both within the
22 project team itself and its interaction with the
23 rest of the site and isolationism with respect to
24 the rest of the industry and license renewal
25 efforts, these various NEI working groups and that

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1 type of thing and the team was not strongly
2 interactive with those efforts.

3 MR. BARTON: You had a consultant at
4 every license renewal meeting that I can remember
5 with the staff and when I read that you submitted a
6 sub par, that's my term for it, application. I just
7 wonder about the quality of the whole organization
8 because you were represented at every license
9 renewal meeting that I've attended and I've been at
10 quite a few of them. So I don't know how you
11 screwed that up so to speak.

12 MR. FLAHERTY: Well, a lot of the
13 isolationism was caused by the successes with the
14 Calvert License Renewal process. Since we were the
15 leader at that point in time, a lot of the project
16 team members relied on that success and didn't
17 recognize that things were changing, that the
18 expectations had increased, that type of thing. So
19 again, that was tied to while we may have been
20 participating in some of the meetings and such, that
21 information was not being actively fed back within
22 the project team and utilized.

23 CHAIR SIEBER: When I read your
24 description of your corrective actions and root
25 cause determination it seemed to me that the issue

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1 of isolationism applies not only to the license
2 renewal process but to day-to-day operations and
3 there are other plants that have marched down this
4 path and ended up substandard in their operation and
5 in the maintenance of their plant. I presume that
6 you all have learned from this instance that you
7 can't afford to have isolationism with this plant in
8 any aspect of its operation or maintenance. Have
9 you learned that?

10 MR. FLAHERTY: Very much so and I'll
11 discuss in the next slide the response from
12 corporate response solution and Tim will get into
13 the site responses.

14 CHAIR SIEBER: Okay.

15 MR. FLAHERTY: The second item that we
16 identified was management engagement. Again this is
17 also tied to the original Calvert success with the
18 project team which is that management viewed it that
19 okay, this team has successfully done this effort
20 for another facility within Constellation. So there
21 was a limited management oversight of the project
22 team both at the site and from corporate.

23 The last item that was identified was a
24 lack of resources. Again, the team was isolated.
25 It was a small team and their ability to respond

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1 back to RAIs and given the initial quality
2 application stretched a lot of the resources. So in
3 response to these three items that were identified,
4 on Slide 8 here, I'll discuss how we respond to it
5 corporately and then Tim will respond specifically
6 how the site also responded because it was a two-
7 pronged approach.

8 First item which really dealt with
9 management engagement was the project was turned
10 over to Fleet Licensing. As my chief nuclear
11 officer said, license renewal has the word "license"
12 in it. So it belongs within licensing. Now this, I
13 guess getting back to your question about lessons
14 learned applying to elsewhere, this position that we
15 created, this director overseeing licensing
16 projects, oversees licensing's input into large
17 projects such as power uprates, tech spec conversion
18 efforts, license renewal application. So we're
19 taking the lesson learned from license renewal and
20 saying that if we have a large submittal that's
21 going to the NRC that requires a lot of interaction
22 with the NRC, we want a specific point of contact
23 within Corporate that provides oversight for those
24 projects and then feeds that information both back
25 to the site and to Corporate management. So there's

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1 a direct response, I guess, to your question about
2 lessons learned.

3 We also implemented an extensive checks
4 and balances and this deals with the isolationism
5 root cause. This includes key performance
6 indicators both to track already meeting the time
7 line for submittal, are we resolving technical
8 issues, that type of thing. So it makes it visible
9 to everybody including management where we are with
10 the status of the project.

11 Establishing challenge boards, basically
12 a challenge board is where a technical issue or
13 concern or part of the submittal is finalized. It
14 goes before a review board with multiple parties
15 involved including management to basically challenge
16 the adequacy, the technical appropriateness, that
17 type of thing, so it's not one person making any
18 decision. It's a collective effort and this
19 provides a mechanism to ensure that, yes, what we
20 are submitting is correct and appropriate for the
21 station.

22 We also implemented weekly management
23 staff status meetings. This was either by
24 conference call or face-to-face meetings where we
25 review the KPIs, what issues were involved, that

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1 type of thing. So everybody was aligned. So these
2 meetings and phone calls were both with a site vice
3 president and our corporate management. So it was
4 again a two-pronged approach. And also --

5 MEMBER WALLIS: I'm just wondering if
6 all this matters. I mean I hear this from students
7 all the time, "I did all the right things." But
8 what matters is the product. That's really what
9 matters.

10 MR. FLAHERTY: Yes.

11 MEMBER WALLIS: Thank you.

12 MR. FLAHERTY: And so the final product
13 for the amended application, I believe, did show
14 that these efforts and corrective actions were
15 appropriate and did result in a positive impact. In
16 fact, we now have lots of licensees who do come to
17 Nine Mile Point to see how the recovery effort
18 actually accomplished or did things because in many
19 respects, we've become the new reference point or
20 model for various aspects of the application
21 submittal.

22 We had also had periodic meetings, or I
23 did, with the chief nuclear officer and President of
24 the company, Mike Wallace who were extremely
25 interested in the recovery effort, that type of

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1 thing and again challenged both the project team and
2 management to make sure that everyone was aligned
3 and it was being done correctly. And finally, we
4 added extensive resources to the project team. I
5 believe, Dave, at the time we had 36.

6 MR. DELLARIO: Thirty-seven.

7 MR. FLAHERTY: Thirty-seven parties
8 working on the project as part of the amended
9 application.

10 MR. DELLARIO: And it did not include
11 the nominal staff that was also supporting the
12 project.

13 MR. FLAHERTY: So that was the corporate
14 response and I'll turn it over to Tim for the site
15 response.

16 MR. O'CONNOR: There were a lot of your
17 questions earlier I understand them. This
18 particular project we found ourselves in the
19 position where the site essentially had delegated it
20 to somebody else. So it had taken itself out of the
21 accountability position that it owned and it was
22 responsible for not only the actions but the results
23 of them. And that gave us quite a bit of pause to
24 how are we doing things across the board. If this
25 could happen on this particular project, could it

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1 happen other places?

2 We've changed our processes and our
3 responsibilities and roles and accountabilities
4 starting that with me. My job is to make sure that
5 anything associated with the site, doesn't matter
6 what it is, is my personal and site accountability.
7 So we've established that set of processes rules and
8 accountabilities so that we do not find ourselves in
9 a position of delegating things out that belong to
10 the site.

11 Another thing we've learned with
12 projects is some of these projects go an extended
13 period of time and from benchmarking with other
14 facilities, the thing that one has to do is
15 preestablish results that you're looking for the
16 outcome to be in advance before you get started and
17 then have intermediate milestones and metrics to
18 validate that in fact those results are what you're
19 going to accomplish. That is again system changes
20 that we've made at our facility and have trained
21 people so that can perform to those expectations.

22 Another item that we learned was that
23 projects doesn't make any difference. If the site
24 owns it, then it has to participate in it and not
25 just in a side perspective. It has to participate

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1 in an integral manner. So in our case with this,
2 it's maintenance, operations, engineering and other
3 organizations and personnel from the site, from the
4 day-to-day operations have to participate and have
5 to become part of that particular team which means
6 that they're assigned responsibilities associated
7 with these projects. We do that across the board
8 regardless of what it is.

9 As Mark had said earlier, just because
10 you have actions doesn't mean you're getting the
11 results. So establishing and validating progress is
12 one perspective that we do with all jobs, but the
13 other is the challenge boards aren't just to assure
14 we're doing what we said. Challenge boards are to
15 review the project quality of whatever it is that
16 we're doing. Do we have the outcome that we're
17 looking for and how do we know that and what
18 performance can we measure in order for us to
19 establish that we're in fact on the right path?

20 Independent oversight is another element
21 that we've strengthened. An independent oversight
22 isn't just the corporation although it's one piece.
23 It's also our quality assurance organization and
24 subject matter experts. We've done more
25 benchmarking and more focusing on bringing in

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1 externals who have larger experiences than we do or
2 the corporation to participate and give us I'll say
3 the challenge of whether or not we are keeping the
4 industry standards and expectations.

5 Finally, one of the other things that I
6 think we've learned was that anything of this size,
7 you need engagement. You need engagement from the
8 entire site and the only way to do that is to
9 communicate it and to encourage people to understand
10 what's taking place, educate them and quite frankly
11 what we find when we do that is we get more
12 participation. Participation is what assures that
13 we deliver what we expect.

14 MR. BARTON: And how do you do that?
15 How do you accomplish that everybody on site knows
16 what the goal is, where the organization is going?
17 What's the mechanism you use to convey that?

18 MR. O'CONNOR: We have several -- In
19 fact, we've actually established communications
20 people now at our site. Their primary position is
21 to help us provide information sources. So we do it
22 by letters. We do it by face-to-face. We do it by
23 group discussions. These are I'll say three or four
24 different types of venues that we use and quite
25 frankly we do cross sections after we've

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1 communicated it. We do follow-ups to validate did
2 the information get to the people that we expected.

3 So if I communicate something out, I'll
4 do a survey shortly thereafter to go down to the
5 lowest levels and find out what in fact penetrated.
6 I find out sometimes it works and sometimes it
7 doesn't which means I have to recommunicate or do
8 other follow-up sessions to make sure that the
9 information is provided. We find that to be pretty
10 effective and as a result, we're getting more I
11 would say understanding and engagement of our work
12 force.

13 MR. BARTON: The communications people
14 you referred to, do they report directly to you or
15 do they report to somebody offsite in Corporate?

16 MR. O'CONNOR: The reporting
17 relationship is a direct line offsite but a
18 functional line to me on a day-to-day basis.

19 MR. BARTON: How often do you
20 communicate with the Corporate. I assume it's a
21 Corporate officer that's in charge of
22 communications. How often do you have communication
23 with that person?

24 MR. O'CONNOR: Several times a week and
25 I meet with my communications person almost daily.

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1 That's all I have to tell you about what we've
2 learned from the site and how we're applying it
3 across the board.

4 CHAIR SIEBER: Do you publish a plant
5 newspaper or anything like that?

6 MR. O'CONNOR: Yes sir.

7 CHAIR SIEBER: Do you have all-hands
8 meetings ever?

9 MR. O'CONNOR: Yes sir. In fact --

10 CHAIR SIEBER: How often?

11 MR. O'CONNOR: Good question. I have a
12 once-a-month that I myself and several of my team,
13 we provide performance updates from all perspectives
14 on the facility whether it's day-to-day operations
15 or whether it's things that are coming up aligned,
16 milestones, performance at the site, every month and
17 we do I would say get about 90 percent of the
18 population of the site goes every single month.
19 Depending on what shifts they're on, we have do some
20 arrangements to cover for them. Then once a
21 quarter, we do more of a global corporate type of
22 performance update to the site. So they get an
23 understanding of where the company is going as a
24 whole.

25 MR. BARTON: Do the Corporate people

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1 come down and participate in that one?

2 MR. O'CONNOR: Yes, they do.

3 CHAIR SIEBER: Okay. Go ahead.

4 MR. DELLARIO: Thank you, Tim. I'm now
5 going into some of the project actions that we took
6 during the recovery project and, Dr. Wallis, you
7 mentioned it really doesn't matter unless you get
8 the final product right. So when we jumped in the
9 recovery project, the first thing we did is we spent
10 a month defining the gaps, trying to understand what
11 good looks like and what does the team need to look
12 like going forward? Looking at our resources, do we
13 have the right qualifications and as you heard from
14 Mark and Tim, the site needs to get more involved.

15 So the first thing we did is we
16 supplemented the project team with Nine Mile Point
17 resources. At the time we were in the middle of
18 outage when we started the recovery process. So I
19 had to initially go out and get some contractors. I
20 was focusing on contractors in two different areas
21 and I say contractors. The ones we brought in for
22 an example would be a retired SRO from Nine Mile
23 Point that had been there 20 some years. So it may
24 have been a contractor, but they knew the plant. So
25 those are the individuals I brought in that knew the

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1 plant.

2 I also needed to supplement the staff
3 with contractors that worked on other license
4 renewal projects that were very successful, so paint
5 the picture of what does good look like. They have
6 been involved with license renewal projects.
7 They've been very successful and we wanted that
8 knowledge and that fresh set of eyes going forward.

9 We also had to consolidate the team to
10 Nine Mile Point. Initially, we had folks down in
11 Crofton, Maryland doing some of this work. We moved
12 the whole staff to one location.

13 We did extensive benchmarking, called
14 other applicants, talked to them, asked them what
15 they did, went through their application, compared
16 it to ours, looked at RAIs. We brought in a senior
17 license consultant and we did a lot of internal and
18 external assessments and this is the checks and
19 balances that Mark spoke about. Internally, we had
20 an individual on my team that had worked in Q&PA for
21 years.

22 Every week I would point to a different
23 area of the project and say give me an assessment
24 because every day I had meeting with my Lead and
25 they would tell me right where we're at while I did

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1 the checks and balances. You go and assess this
2 area of the project to make sure that I have
3 alignment from what I'm hearing because I was
4 running the project at the time and what's going on
5 in the project. In addition to that, we had what we
6 called external assessments. Every two or three
7 weeks, I would Q&PA Department onsite to come and do
8 an assessment of the project. We also had an
9 external assessment done through a consultant that
10 worked directly for our chief nuclear officer. He
11 would come down and assess the license renewal
12 project and report directly back to the chief
13 nuclear officer.

14 So as Mark mentioned, challenge boards,
15 the extensive use of challenge boards. Challenge
16 boards were able to take each one of our products.
17 Each section of the application was presented in
18 front of a challenge board and then we had
19 Maintenance, we had Operations, someone from
20 Chemistry, Training, just a large spectrum across
21 the site to look at each section a different way.
22 So that adds a lot of quality to the application.

23 It did another thing too. It educated
24 the site about what is license renewal. So the
25 team, the members on the challenge board, were

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1 people that were supervisors, general supervisors
2 and managers. So they were able to take it back to
3 their groups and talk intelligent about what they'd
4 seen in the last challenge board and what's going on
5 or what's coming up because we also presented all of
6 our program basis documents. We have 43 programs
7 that are going to manage aging at Nine Mile Point.
8 So each one of those were reviewed across the site
9 and challenged in front of at this board. So what
10 I'm describing right now is really the process that
11 we used to ensure we had quality and we had ensured
12 ourselves success going forward.

13 The next slide talks about what are the
14 areas we focused on and as Mark had mentioned, one
15 of the things that was identified to us was we had
16 to redo the NSR scoping effort. We went back and
17 completely did this over and I'm talking about
18 reviewing the current licensing basis, went back
19 through all the USARs.

20 We went ahead and we readdressed where's
21 the safety-related NSR interface actually located
22 out to that first seismic anchor. That involves the
23 site. The structural engineering group got
24 involved. The drafters marked it up on the
25 drawings, went out to the field and put the hands-on

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1 where that first seismic anchor was involved and the
2 system engineers went out and marked it down. So
3 you can see the site involvement. At times, we were
4 using most of the structural engineers onsite which
5 we had to defer some of the site activities to
6 support the license renewal project.

7 The next thing we looked at was the
8 spacial relationship between NSR, piping and safety-
9 related piping. We brought people from Operations
10 in to walk down room by room and identify the actual
11 scope of where we were at. So you started out with
12 the drawings, again mark them up and then go out in
13 the field with licensed operators to walk all the
14 piping down. That was an extensive effort.

15 We also had 28 outstanding RAIs, but we
16 didn't go back and just answer those 28 RAIs. We
17 went ahead and did benchmarking. We looked at the
18 last six applicants plus the last two BWRs at that
19 time which was Dresden and Quad Cities and reviewed
20 1600 RAIs. We wanted to make sure not only were we
21 going to adequately and in a quality manner answer
22 the 20 outstanding, but we wanted to make sure that
23 we addressed any potential RAIs or other applicants
24 had questions too that we should address before we
25 get them from the NRC.

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1 CHAIR SIEBER: You ended up with a large
2 number of RAIs nonetheless. Right?

3 MR. DELLARIO: Yes.

4 CHAIR SIEBER: Three hundred and some.
5 How many was it?

6 MR. DELLARIO: Three hundred and twenty-
7 four.

8 CHAIR SIEBER: Okay. That's a lot.

9 MR. DELLARIO: Yes, most of those were
10 before the amended application.

11 MR. BARTON: So most of those were what?

12 MR. DELLARIO: Prior to the amended
13 application.

14 MR. BARTON: All right. Just an example
15 that the initial application wasn't too good.

16 CHAIR SIEBER: Yes.

17 MR. DELLARIO: Another challenge though
18 with the project at that time was after we submitted
19 the application the project team, a lot of people,
20 left. So when the NRC started challenging the
21 application perhaps it wasn't at the level it should
22 have been at, but we didn't have the people to
23 answer the questions.

24 MR. BARTON: Were they in-house people
25 or were they contractors?

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1 MR. DELLARIO: In-house people.

2 MR. BARTON: They left for what? Left
3 the company?

4 MR. DELLARIO: Yes. So we had to deal
5 with a resource issue. That's when I talked about
6 the recovery project and bringing the right
7 resources back. That was the first thing we
8 identified. We didn't have enough people on this
9 project. So you could quickly build up your RAIs
10 when you can't answer questions verbally and they
11 officially send you an RAI and it just kept stacking
12 up and the team couldn't keep up with them. So it
13 was a domino effect.

14 The last part of our effort, the focus,
15 was on aging management programs. We did a lot of
16 extensive benchmarking to look at what is a program
17 basis document. What are the characteristics of a
18 good program basis document and we redid those. Now
19 the individuals that developed our program basis
20 documents and they are aligned to go Rev 1 are the
21 site program people.

22 These aren't the project program
23 engineers, but they are the site program people and
24 I say that because they understand what's in the
25 goal, our Nine Mile Point program owners. They

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1 understand the commitments. So they have this body
2 of knowledge going forward. So there's not going to
3 be where the project goes away and then we have to
4 turn it over to the site. They were heavily
5 involved with development of these programs which we
6 thought that was very important because they're
7 going to own these after the project goes away and
8 they need that body of knowledge.

9 So the results, we submitted the amended
10 application. The letter went out on the 14th. We
11 hand-delivered it on the 15th. We feel very
12 comfortable that we addressed the NRC's quality
13 concerns and I talked about checks and balances and
14 I base that off of the successful audits we had in
15 the fall and the inspection did very well. As I
16 mentioned, the way we went through this recovery
17 project in getting the site involved, it helped us
18 accelerate the transfer of that license renewal
19 knowledge prior to the ending of the project.

20 That's all I have. Now I'd like to turn
21 it over to Pete Mazzferro to talk a little bit about
22 the operating history.

23 MR. MAZZFERRO: Thank you. My name is
24 Pete Mazzferro and again I'm the License Renewal
25 Project Manager. What I want to talk today about is

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1 a little bit of the history of the plants and some
2 of the initiatives that we've implemented over the
3 years that had to do with aging management as well
4 as then some of the initiatives we have currently in
5 place and going forward and then a talk about the
6 commitments and our implementation plan to meet all
7 those commitments.

8 Looking at the operating history for
9 Nine Mile 1 and Unit 2 in previous years, we've
10 replaced the recirculation piping at Unit 1 and that
11 was because of an IGSCC concern. That was in the
12 early 1980s. At Unit 1 and Unit 2, we have
13 indications of cracking on our core shroud. For
14 Unit 1, we've made repairs. For Unit 2, we're still
15 in the inspection mode. I'll talk about those a
16 little bit more.

17 CHAIR SIEBER: Could you describe the
18 cracking from the standpoint of orientation and what
19 the repair consisted of?

20 MR. MAZZFERRO: I have a couple slides.

21 CHAIR SIEBER: Okay.

22 MR. MAZZFERRO: Just hold on a second
23 and I'll get into those details.

24 CHAIR SIEBER: All right.

25 MR. MAZZFERRO: So Nine Mile Point 2

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1 then is still just convention 304 stainless steel
2 piping.

3 MEMBER SHACK: For?

4 MR. MAZZFERRO: The recirc piping.

5 MEMBER SHACK: Unit 2?

6 MR. MAZZFERRO: It's 316L.

7 CHAIR SIEBER: You have to speak into
8 the microphone.

9 MR. INCH: My name is George Inch from
10 Design Engineering. Unit 2 piping is 316 L.

11 MEMBER SHACK: So that was original
12 construction, originally 316 L.

13 MR. INCH: Original. The Unit 1 piping
14 was replaced with 316 nuclear grade.

15 MR. MAZZFERRO: Our isolation condensers
16 at Unit 1 we've replaced the tubes in those in late
17 1997 because of a leak that we had. I have another
18 slide on those to talk about that in some detail.
19 We had some piping degradation on our reactor --
20 cooling system in the late '90s. We replaced that
21 and we've had leakage in the past on our stub tubes
22 for the CRD stub tubes. We've done a repair on
23 that and I have more information on that as well.

24 With regard to the core shroud cracking
25 on Unit 1, we identified cracking and in 1995, we

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1 installed tie rods to basically tape the structural
2 integrity of the horizontal welds. In 1999, we
3 installed clamps to replace the --

4 MEMBER WALLIS: I understand you had 30
5 percent cracking. In the SER, it says core shroud
6 welds H4, H5, H7 had greater than 30 percent
7 cracking. It seems like a lot.

8 MR. INCH: This is George Inch. That's
9 fairly typical of a BWR shroud. That's not unusual.

10 MEMBER WALLIS: Were they really growing
11 at $2E^{-5}$ inches per hour? That's about one inch in
12 five years. So how do they ever get to 30 percent
13 cracked?

14 MR. INCH: We're talking about
15 circumference, now in terms of percent of
16 circumference cracking and the core shroud cracking
17 is dominated by residual stress profiles from the
18 original welding. Those profiles are such that as
19 the cracking progresses through wall the stress
20 intensity that drives the cracking significantly
21 drops off. So the crack growth that's noted there
22 is an average crack growth and it's consistent with
23 what the industry's found.

24 MEMBER WALLIS: So it's a message that
25 there were these big cracks, but they've essentially

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1 stopped growing. So the fix has worked or there's
2 nothing to worry about anymore because anything
3 that's going to happen has happened. Is that
4 essentially the message?

5 MR. INCH: Well, no. It's under
6 control. It's understood and it's being managed
7 with water chemistry, inspections, going forward.

8 MEMBER SHACK: But your tie rods are
9 actually a full structural equivalent to the
10 horizontal weld. Right?

11 MR. INCH: That's correct. At Unit 1,
12 the tie rods replace the H1 through H7 welds.

13 MEMBER WALLIS: So if it were 270 degree
14 cracking it would still be all right.

15 MR. INCH: That's correct.

16 MEMBER WALLIS: You could tell it by the
17 tie rods.

18 MR. INCH: The tie rod assumes that
19 those horizontal welds are 360 degree through-wall
20 crack.

21 MEMBER WALLIS: So that to me is a
22 separation, 360 degree through-wall crack. Isn't
23 that a separation?

24 MR. INCH: Yes, there are very
25 conservative assumptions associated with that

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1 report.

2 MEMBER SHACK: What do these vertical
3 weld clamps look like that patch up the vertical
4 welds?

5 MR. INCH: Mike, there's a slide. It's
6 a picture. What they are is the vertical welds at
7 Nine Mile 1 that have cracking on them are in the
8 belt line. They're 90 inches long and what we have
9 is on each one of those welds, V-9 and V-10, we have
10 two vertical weld clamps and that's an as-installed
11 picture. It's a plate, an inch thick plate, that is
12 pinned, it has two pins, that go through the shroud
13 that have acentrics on them. So when they rotate,
14 it tightens up into a hole, EDM-2 holes in the
15 shroud, and each plate fits in that with those
16 acentric pins and the assumption is that the
17 vertical weld is flawed the whole length of the 90
18 inches and these plates will ensure that barrel
19 section's integrity.

20 MEMBER SHACK: So it's a full structural
21 replacement.

22 MR. INCH: Yes, it is.

23 MEMBER SHACK: And it only take two pins
24 to do that?

25 MR. INCH: Well, it's two plates on each

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1 weld and the pins are fairly substantial. They're
2 3.5 inch diameter pins and the plate is also
3 substantial. It's an inch thick plate.

4 MEMBER SHACK: And the material for the
5 pins and the plates?

6 MR. INCH: The material of the plate is
7 an XM-19 material and the pins are, I believe, a
8 stainless 316.

9 MR. MAZZFERRO: Okay. So that's
10 basically the complete story for Unit 1 on core
11 shroud cracking. For Unit 2, we've identified
12 cracking back in 1998 and via an analysis, that was
13 determined to be acceptable at that point. We did a
14 reinspection in the year 2000 that was also
15 satisfactory. In 2000/2001, we implemented dual
16 metal chemical injection and hydrogen water
17 chemistry. We did another inspection in 2004. That
18 inspection was also satisfactory and we have another
19 inspection that's scheduled for our outage in 2008.

20 MEMBER SHACK: Now on your inspections,
21 I assume the shroud is reasonably accessible. For
22 the core shroud support, are all the welds
23 accessible for inspection?

24 MR. MAZZFERRO: You're referring to the
25 welds at the bottom?

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1 MEMBER SHACK: The welds at the bottom,
2 yes. In fact, I guess I'm most interested in Nine
3 Mile Point 1, the BWR-2.

4 MR. INCH: Yes. My name is George Inch.
5 The Unit 1 has a conical support.

6 MEMBER SHACK: Right.

7 MR. INCH: And that's very accessible
8 from the top surface. So we can get to 100 percent
9 of that conical support while in the H9 welding we
10 call it the support of the vessel weld from the top
11 surface.

12 The bottom surface access is extremely
13 limited. There's a baffle plate that you have to
14 get behind. So visual inspection from the bottom
15 side is extremely difficult and what we've done is
16 we've inspected that with because we have good
17 access from the ID we were able to deploy a crawling
18 UT that was able to interrogate that support weld
19 from the ID with a phased UA probe and we got
20 approximately 80 percent coverage and it's the tie
21 rods that got in the way of some of the locations.

22 And that phased UA UT was done in 2001
23 after another BWR-2 in Japan had some identified
24 cracking that was discovered when they were
25 replacing the shroud. It was visually identified as

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1 being selective on the bottom side and with no
2 cracking on the top side. So the UT was deployed
3 in that year to determine whether or not we had a
4 similar condition and the UT is primarily for
5 circumferential detection, but it had some
6 capability for axial. It was highly sensitive.

7 We identified some indications similar
8 to that characterization. We had access to the
9 vessel OD of that location at the five recirc nozzle
10 locations and in 2003 and 2005, we did a vessel OD
11 UT of those locations to confirm that there were no
12 indications propagating anywhere near the vessel.
13 So because of the UT, we had very good coverage of
14 that location.

15 MEMBER SHACK: Thank you.

16 MR. MAZZFERRO: Okay. Moving on to
17 Slide 16 and talk a little bit about the isolation
18 condensers. The experience that we had at Nine Mile
19 Point Unit 1 is that in 1997 we had identified
20 leakage through our tubes. So we entered a plant
21 shutdown and actually replaced the tubes. The cause
22 of that cracking was stress cracking of the tubes
23 based on thermal cycling. As it turns out, the
24 water level on the tube side was fluctuating. So we
25 went into a repair. We replaced all the tubes

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1 themselves and we did that with better material than
2 what we had in there previously.

3 MEMBER SHACK: You replaced all the
4 tubes?

5 MR. MAZZFERRO: We replaced the tubes in
6 all four condensers, yes, and to get access to the
7 tubes, it's all a welded design, we had to cut all
8 that out. At the time, we also looked for a new
9 design such that we could get access to the tubes on
10 a more frequent basis and there was just nothing
11 available in the time frame that we needed it. So
12 we stayed with our original design which was a
13 totally welded design.

14 CHAIR SIEBER: So how do you determine
15 where the leakage is, what the flaws are like and
16 how do you detect it and what would you do for an
17 in-service inspection to determine the integrity of
18 these tubes in the future to get to them?

19 MR. MAZZFERRO: We have a number of --
20 What we had is a number of programs applicable to
21 our emergency condensers and those are consistent
22 with the guidance provided in the GALL except for
23 the eddy current testing. We did have to take an
24 exception to that particular PAR. Our justification
25 for that was based on the fact that we understood

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1 what caused the cracks in the first place, i.e. the
2 thermal cycling. We fixed that and we eliminated
3 that stressor.

4 What we had discovered was that again
5 our water level on the tube side was fluctuating and
6 therefore we were basically heating and cooling our
7 tubes. So what we did was we installed what we call
8 a keep fill system on that line such that the water
9 level is always maintained above the tubes. So now
10 we've eliminated the stressor which caused the
11 cracking. That was one of the items we used for
12 justification.

13 CHAIR SIEBER: So can we conclude that
14 this will last 10,000 years?

15 MR. MAZZFERRO: Our analysis concluded
16 we could last past the period of extended operation.

17 CHAIR SIEBER: But you have no way to
18 measure it.

19 MR. MAZZFERRO: What we have identified
20 is an in-service leak test, whereby while the plant
21 is in operation basically it will isolate any makeup
22 to the shell side. So if there was any leakage past
23 the tube, we would then see it in the shell side
24 water level. Now at that point, you have actually
25 leakage which would then negate the pressure

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1 boundary function, but we would be able to detect it
2 early enough that we wouldn't lose our heat transfer
3 function for the heat exchangers.

4 Now that's just a confirmation type test
5 again, based on the new material that we put in,
6 based on the elimination of the stressors, and we
7 have continuous monitoring so we know where the
8 water level is.

9 CHAIR SIEBER: The Code requires that
10 you be able to predict whether you meet or are going
11 to hit minimum wall sometime before the next
12 inspection. Right? And you can't do that here.

13 MR. MAZZFERRO: We can't do that in this
14 case.

15 CHAIR SIEBER: Yes. You can't comply to
16 the Code.

17 MR. MAZZFERRO: Our Code of Construction
18 is B31-1.

19 CHAIR SIEBER: Right. It still requires
20 you to do in-service inspection.

21 MR. MAZZFERRO: Okay. Really what we
22 had in place is what we can do, but we can't do that
23 particular part.

24 CHAIR SIEBER: Yes.

25 MR. MAZZFERRO: But again, we have other

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1 measures in place based on design and --

2 CHAIR SIEBER: Yes, but they aren't
3 substitutes in my way of looking at it. You have
4 something in place, but it's not as good as what the
5 Code would require.

6 MR. MAZZFERRO: Okay.

7 CHAIR SIEBER: Go ahead.

8 MR. MAZZFERRO: The next item I would
9 like to talk about is the stub tubes, the Nine Mile
10 Point Unit 1 CRD stub tubes. We had identified
11 leakage in the 1980s. At that time, we applied for
12 and received approval to use the roll repair. That
13 was in the form of a safety evaluation in March of
14 1987. That roll repair we have used on our stub
15 tubes and it has been successful to-date.

16 We recognize that that is approved only
17 for us. The industry has submitted that the same
18 roll repair, different acceptance criteria, a zero-
19 leakage acceptance criteria, that's undergoing
20 review and approval through the ASME Code Committee
21 currently. That appears to be on a track to be
22 approved this year.

23 So from a license renewal aging
24 management program going forward, what we've
25 committed to is to follow the Code Committee for the

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1 roll repair which would again have a zero leakage
2 criteria and then should a stub tube that's been
3 rolled leak again in the future which we haven't
4 seen, but theoretically it's possible, so if that
5 were to occur, we would implement a zero leakage
6 repair and on the slide, we identify one of the
7 three repairs that could be implemented. One is a
8 weld repair consistent with the 58A which is
9 endorsed by the NRC in a Reg Guide.

10 CHAIR SIEBER: That's very difficult to
11 do though, is it not? I mean I've been under those
12 vessels. It's pretty congested under there.

13 MR. MAZZFERRO: The design has been --

14 CHAIR SIEBER: A lot of airborne.

15 MR. MAZZFERRO: Right. The design has
16 been reviewed and approved. There are activities in
17 place to qualify the tooling as well as the
18 personnel and to do a demonstration that it will
19 work. That's an ongoing activity within the
20 industry.

21 CHAIR SIEBER: I presume it would be
22 some kind of machine weld. It's not a hand weld.

23 MR. MAZZFERRO: Correct. There's a
24 variation of the welded repair that would be subject
25 to NRC approval and then in the future, there could

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1 be a mechanical or weld repair, but before we would
2 use that, that would also need to be reviewed and
3 approved by the NRC.

4 CHAIR SIEBER: And how many penetrations
5 do you have under there?

6 MR. MAZZFERRO: We have a total of 129
7 and to-date 33 have been roll repaired.

8 CHAIR SIEBER: Okay.

9 MR. MAZZFERRO: The next item I'd like
10 to talk about is a little bit about the Mark I
11 containment on Unit 1. What we have on your slide
12 is a simplified picture of the containment for Nine
13 Mile Point Unit 1 and really the items to talk about
14 here are a couple.

15 One is there's a renewed concern about
16 corrosion on the outside of our drywell shell and
17 this is an industry initiative that's going on
18 currently. The issue was first addressed in the
19 late '80s in response to Generic Letter 8705. At
20 that time, we had done extensive inspections of our
21 design to determine that we had not had any water
22 leakage that impacted the exterior surface of our
23 drywell shell. And since that time, we have
24 instrumentation in place and we do periodic
25 inspections to look for evidence of leakage and we

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1 have not found any indications of any leakage of
2 water that would have impacted the outside of the
3 shell.

4 CHAIR SIEBER: You found corrosion
5 nonetheless. Right?

6 MR. MAZZFERRO: Not on the outside.

7 CHAIR SIEBER: Okay.

8 MEMBER WALLIS: How did you know there
9 wasn't on the outside?

10 MR. MAZZFERRO: In 1987-1988 again in
11 response to Generic Letter, we actually did remote
12 visual exams.

13 MEMBER WALLIS: Do you inspect something
14 around the outside?

15 MR. MAZZFERRO: What we did is we
16 looked in two different areas. One of them is at
17 the top where the refueling seal is. We were able
18 to access that area and go 360 degrees around that
19 area and saw no indications again of any water
20 staining or any leakage that had occurred.

21 Then at the bottom, we have ten drain
22 lines that are the sand cushion drain lines and we
23 sent up again a remote visual up through each of the
24 lines to verify the lines were not plugged which
25 they were not. We were able to look at the

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1 condition of the sand and that was very dry and
2 dusty. In small areas, we were able to look at the
3 actual exterior surface and we did not find again
4 any indications of any leakage.

5 MEMBER WALLIS: What's so special about
6 -- I'm sorry, John.

7 CHAIR SIEBER: Go ahead.

8 MEMBER WALLIS: What's special about 225
9 foot elevation where you found the corrosion?

10 MR. MAZZFERRO: That was on the inside.

11 MEMBER WALLIS: Yes, but what's special
12 about that elevation?

13 MR. MAZZFERRO: What's special about
14 that elevation is (1) it's not coated, it was never
15 coated from original design and (2) at that location
16 we have our drywell area coolers which is basically
17 we take a section from the top surface discharged at
18 the bottom and then that is cooled by close-up
19 cooling. However, every refuel outage, we go in and
20 we do cleaning on those area coolers.

21 So what we discovered was by performing
22 our maintenance activities, we were actually wetting
23 the surface more than we should have been. At the
24 time, we did not protect the area, the drywell liner
25 or the concrete with any material. We just sprayed

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1 water. We now know that's a problem.

2 MR. BARTON: The inside of the liner is
3 not coated in Nine Mile 1. There's no coating on
4 the lines.

5 MR. MAZZFERRO: At that elevation, it is
6 not. The upper elevation which if you look at the
7 cylindrical part, that is coated, but the bottom
8 portion is not coated.

9 MR. BARTON: The bottom portion, you
10 mean above the concrete floor it's not coated.

11 MR. MAZZFERRO: Correct.

12 MR. BARTON: Why?

13 MR. MAZZFERRO: That was the original
14 design. I don't --

15 MEMBER MAYNARD: In the area where you
16 found the corrosion, what did you do after you found
17 it? Did you clean them or leave it? Did you coat
18 it? What did you do with the areas?

19 MR. MAZZFERRO: The area was identified
20 during our 2003 outage. We did, as required by the
21 IWE Code, a detailed visual inspection and that met
22 the acceptance criteria there. However, we also,
23 because of our corrective action program, did UT
24 measurements at four of the most severe locations
25 and determined based on those thicknesses that we

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1 were well above design and we have a program in
2 place to look at those same locations again in our
3 next outage which is a year from now.

4 Based on those results, we'll have a
5 quantified corrosion rate for those locations and
6 based on that information, we will determine what
7 else do we need to do going forward. That would be
8 above and beyond the IWE requirements. And again,
9 that will depend on as the corrosion rate caused us
10 to get to minimum wall sometime during or at the end
11 of the period of extended operation which we would
12 not want it to be or is the corrosion rate such that
13 we wouldn't reach minimum wall for 200 years?
14 Again, those are two extreme cases. We have a
15 graded approach of what actions we would take
16 depending on what that corrosion rate is.

17 CHAIR SIEBER: But right now, you don't
18 know what the corrosion rate is because you only
19 have one set of measurements.

20 MR. MAZZFERRO: That's correct, but what
21 we did at the time, we took the as-found thickness
22 for the drywell shell at those locations and we
23 applied the original assumed corrosion rate which
24 was a lose of 1/16th of an inch over 40 years. Just
25 applying that corrosion rate, we concluded that we

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1 would not reach minimum wall for 45 years.

2 MEMBER WALLIS: Excuse me. One-
3 sixteenth of an inch in four years?

4 MR. MAZZFERRO: Forty.

5 CHAIR SIEBER: Forty.

6 MEMBER WALLIS: Forty years.

7 MR. MAZZFERRO: That was the original.

8 MEMBER WALLIS: But if you had that and
9 you've been operating for quite a while, there would
10 be an awful lot of rust on the floor or somewhere.

11 MR. MAZZFERRO: Right. That's why we
12 don't think that's what we were getting. We weren't
13 getting that --

14 MEMBER WALLIS: Lots of vapor would show
15 you that.

16 MR. MAZZFERRO: Yes, but again because
17 we did not have a quantified value, we used what our
18 design value was which again is another reason why
19 we're going to take another SAT, determine what the
20 corrosion rate is at that location and then take the
21 appropriate actions going forward.

22 CHAIR SIEBER: Now this is an open item
23 for you.

24 MR. MAZZFERRO: Correct.

25 CHAIR SIEBER: As far as license renewal

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1 is concerned.

2 MR. MAZZFERRO: Right.

3 CHAIR SIEBER: The staff has suggested
4 to you all one acceptable way to resolve the open
5 item.

6 MR. MAZZFERRO: Yes.

7 CHAIR SIEBER: Do you agree with the
8 staff or do you have your own way?

9 MR. MAZZFERRO: No, we --

10 CHAIR SIEBER: Obviously, you aren't
11 going to get a renewed license with an open item.

12 MR. MAZZFERRO: That's correct.

13 CHAIR SIEBER: I promise that.

14 MR. MAZZFERRO: Yes. We went with the
15 staff actually last Monday in a public meeting and
16 that was a very productive meeting, good discussion.
17 We followed up with that with a letter that we just
18 sent in yesterday describing in detail what our
19 actions are and that's currently under their review.

20 CHAIR SIEBER: Okay.

21 MR. MAZZFERRO: But we do believe it
22 does meet, it will meet, with staff approval, but
23 again, we just submitted that yesterday.

24 CHAIR SIEBER: And you've actually had
25 nine years since you first discovered the corrosion

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1 to make sufficient measurements to determine at what
2 rate the corrosion is occurring. Right? Found it
3 in `87.

4 MR. MAZZFERRO: No, it's in 2003. On
5 the inside, it's 2003.

6 CHAIR SIEBER: Okay.

7 MR. MAZZFERRO: Yes. That's why our
8 next outage really is --

9 CHAIR SIEBER: Yes, three years.

10 MEMBER ARMIJO: I have a quick question.
11 What's the environment that's causing the corrosion
12 and can you monitor that environment or control the
13 environment to basically eliminate the problem?

14 MR. MAZZFERRO: The environment that
15 caused it again was because of a maintenance
16 activity that we were performing and --

17 CHAIR SIEBER: Turned water on it.

18 MR. MAZZFERRO: And that change to that
19 maintenance activity is in our corrective action
20 program and that will be implemented before the
21 coming outage so that we don't continue to do that.

22 MEMBER ARMIJO: So if you eliminate the
23 water you expect the corrosion rate to stop.

24 MR. MAZZFERRO: We would expect it to
25 significantly decrease, but that's again why we're

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1 going to continue with the monitoring so that we do
2 know what is actually happening as opposed to
3 relying on an analysis or a projection.

4 MEMBER WALLIS: Does this water vapor
5 come up from the torus region into this region? The
6 suppression pool is, the water vapor from the
7 suppression --

8 MR. MAZZFERRO: No.

9 MEMBER WALLIS: This cannot come up.

10 MR. MAZZFERRO: Up from the torus water?

11 MEMBER WALLIS: Yes, come up through the
12 down comers and everything. There's no --

13 MR. MAZZFERRO: During normal operation,
14 both the drywell and the torus is anoded with
15 nitrogen. The only kind there is --

16 MEMBER WALLIS: But there's a pool in
17 the torus. Right?

18 MR. MAZZFERRO: That's correct.

19 MEMBER WALLIS: And so that nitrogen is
20 saturated with water. So it's not the water.

21 CHAIR SIEBER: No.

22 MEMBER WALLIS: Maybe it's an oxygen
23 from somewhere, but the water is there, the water
24 vapor is there.

25 MR. MAZZFERRO: In the torus.

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1 MEMBER WALLIS: But doesn't that come up
2 into the drywell too?

3 MR. MAZZFERRO: We didn't conclude that
4 that would be significant. Again, when we
5 discovered it, we were actually splashing water on
6 the shell. That was much more the significant
7 contribution than water vapor coming up.

8 MEMBER WALLIS: Yes, you were splashing
9 water on the shell.

10 MR. MAZZFERRO: Yes.

11 MEMBER WALLIS: But isn't the drywell,
12 the drywell atmosphere isn't completely dry, is it?
13 It does have water vapor in it.

14 MR. MAZZFERRO: There is --

15 CHAIR SIEBER: Oxygen.

16 MR. MAZZFERRO: Right.

17 MEMBER WALLIS: Yes, we were talking
18 about water.

19 MR. MAZZFERRO: There is some humidity
20 in during normal operation in drywell. That's
21 correct.

22 MEMBER BONACA: But you don't think that
23 it comes through the refueling seals.

24 MR. MAZZFERRO: I'm sorry. Could you
25 repeat that?

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1 MEMBER BONACA: You do not think that
2 some of the water comes through the refueling seals.

3 MR. MAZZFERRO: No, actually on the next
4 page, we have a picture of our refueling seal. This
5 is a completely welded design that does have drain
6 lines which are instrumented to let us know if there
7 is something leaking there and then if any water
8 were to leak past the refueling seal, it would be
9 collected on what we call our shelf area which is
10 concrete and that's sloped away from the drywell
11 shell. It also has a drain line that's instrumented
12 for leakage.

13 CHAIR SIEBER: Other than the ten drain
14 lines at the bottom of the shelf or the torus, you
15 don't really have a lot of information about wall
16 thickness. Right?

17 MR. MAZZFERRO: On the drywell shell?

18 CHAIR SIEBER: Yes.

19 MR. MAZZFERRO: Other than the UT
20 measurements we took because of the corrosion on the
21 inside.

22 CHAIR SIEBER: Yes, but that was
23 specific to --

24 MEMBER WALLIS: One location, right?

25 CHAIR SIEBER: Yes, where you saw the

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1 corrosion.

2 MR. MAZZFERRO: Right.

3 CHAIR SIEBER: As opposed to in general
4 in the drywell.

5 MR. MAZZFERRO: Correct.

6 CHAIR SIEBER: Okay.

7 MR. MAZZFERRO: And again, that was
8 based on the extensive work we did in the late `80s
9 to determine whether we had any signs of any leakage
10 of any water impacting the exterior surface and then
11 our monitoring since then. Now if we were to
12 discover water staining or water leakage, obviously
13 that would go back into our corrective action
14 program and we would have to do an evaluation of the
15 impact on the exterior surface and then we would
16 take whatever measures we needed to take to make
17 sure we did have obviously sufficient thickness in
18 our drywell shell.

19 CHAIR SIEBER: Okay. Now you said that
20 the containment is not coated on the inside.

21 MR. MAZZFERRO: Portions of it. If you
22 go back to the slide or slipping, there's a
23 cylindrical part which we call the upper
24 elevations. That is coated. The bottom portion
25 which we call a cylindrical part is not.

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1 MEMBER WALLIS: The spherical part is
2 not coated.

3 MR. MAZZFERRO: Correct.

4 MEMBER WALLIS: The spherical part. I
5 think you said cylindrical for both.

6 MR. MAZZFERRO: I'm sorry. The
7 spherical part. Thank you.

8 CHAIR SIEBER: Now there is some
9 discussion in the inspection reports about coating
10 supplied in containment where you inspect and repair
11 coatings. Could you --

12 MEMBER WALLIS: That's the next slide I
13 think. Right?

14 CHAIR SIEBER: Yes.

15 MR. MAZZFERRO: Right. We do have as I
16 mentioned coatings on the cylindrical portion of the
17 Unit 1 drywell. We do have a program of containment
18 coatings --

19 MEMBER WALLIS: I was very surprised by
20 what I read in the SER about coatings. It said and
21 maybe the problem is with the NEI guidance rather
22 than with you, but it says "Coatings are monitored
23 for blistering, cracking, peeling, loose rust and
24 physical mechanical damage." And this is somehow
25 supposed to "ensure that the amount of coating

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1 detachment from a substrate during a LOCA is
2 minimized." Now if your coating is blistering,
3 cracking and peeling, it's about to fall off
4 presumably.

5 The LOCA environment is far harsher than
6 that and I have some personal experience around the
7 hose and stuff of coatings that look fine but when
8 hosed with sufficient pressure would come off. It
9 seems to me extraordinary that just looking to see
10 if they're blistering or peeling is good enough to
11 tell whether or not they'll come off during a LOCA.

12 MR. MAZZFERRO: There are two items
13 here. One is by following the ASME standard which
14 is what we do you're looking for those things. So
15 that's the monitoring piece. The other part of it
16 is the potential impact on our suction strainers.

17 MEMBER WALLIS: Which we have -- I
18 guess. Right?

19 MR. MAZZFERRO: Based on the design
20 analysis that was done when we installed the
21 strainers originally and based on the results that
22 we find by our inspections, we then look at is there
23 an adverse impact on our suction strainers.

24 MEMBER WALLIS: That concerned me too
25 because it says again that you find some areas of

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1 degraded coating and then you "repair or defer while
2 maintaining the total amount of degraded coatings
3 below the permitted amount." Well, if I went in
4 there and I found coatings peeling off, I would say
5 that this may be prejudices all the coating in a
6 LOCA because a LOCA environment is far harsher than
7 require they peel off a coating by touching it or it
8 falls off by itself under gravity.

9 So if I found any areas where the
10 coatings were peeling, I would suspect a whole
11 coating and that doesn't seem to be the attitude at
12 all. I don't think it's necessarily your problem.
13 Maybe it's a problem for the NRC and NEI, but I was
14 really surprised when I read it. What is your take
15 on this situation?

16 MR. MAZZFERRO: Basically, we've been
17 participating with the industry and NEI following
18 the guidance that's been accepted and I understand
19 there are ongoing conversations between the NRC
20 staff and NEI and we are continuing to participate
21 to find a resolution of it.

22 MEMBER WALLIS: But if you find coating,
23 paint, peeling off your house in some areas and you
24 take a garden hose and you apply it with some force
25 to the whole house, the paint will come off in lots

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1 of places other than the places where it's peeling
2 because all the paint is ready to come off. And I
3 just don't understand this attitude. The LOCA jet
4 is a very powerful jet in the area where it's close
5 to where it comes out of the high pressure system.

6 MR. MAZZFERRO: Right.

7 MEMBER WALLIS: It's a far harsher
8 environment than if you just visually look for the
9 peeling. So maybe this is something we need to take
10 to the staff, not perhaps just to you.

11 CHAIR SIEBER: Yes. I think what Nine
12 Mile Point is doing is not different than what the
13 rest of the industry is doing.

14 MEMBER WALLIS: I would say it's usual
15 to find areas of degraded coatings during refuel
16 outages. That means to me that the whole coating
17 issue needs to be examined.

18 CHAIR SIEBER: I presume that all or
19 almost all of your coatings are qualified coatings.
20 Is that correct?

21 MR. MAZZFERRO: Yes.

22 CHAIR SIEBER: Okay. Well, we're a
23 little bit behind and we just have four more slides
24 to go. So why don't we see if we can finish up.

25 MR. MAZZFERRO: Okay. The next thing if

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1 just to present to you some plant improvement
2 initiatives. We've already mentioned that at both
3 stations we have implemented Noble Metal Chemical
4 Addition and Hydrogen Water Chemistry. At Nine Mile
5 Point Unit 2, we're in the process of completing a
6 re-rack of the spent fuel pool racks and that's
7 going from Boraflex to Borell (PH). We will be
8 implementing corrosion inhibitors.

9 MEMBER WALLIS: Before I ask about this
10 re-racking, how much have you gained by that? If
11 you look at how much the fuel pool was originally
12 designed for, how much have you gained by this re-
13 racking?

14 MR. MAZZFERRO: For Unit 1, we gained
15 because we completed the re-rack on Unit 1, and it's
16 a ball park figure. I think we gained another 20
17 percent or so and Unit 2 I don't know the numbers of
18 how much additional fuel we would be able to store.

19 MEMBER WALLIS: But if you go back, has
20 this happened before you made other changes to the
21 fuel pool to increase its capacity?

22 MR. MAZZFERRO: At Unit 1, we have.
23 Again, when we went from Boraflex to Borell racks --

24 MEMBER WALLIS: When we go from the
25 original, each time you gain a substantial amount.

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1 MR. MAZZFERRO: We gain -- Yes, and that
2 again goes through NRC review and approval because
3 it's actually an amendment to our tech specs.

4 MEMBER MAYNARD: Will you maintain full
5 core off-load capability?

6 MR. MAZZFERRO: Yes.

7 MEMBER MAYNARD: And you'll do that
8 throughout the extended period also.

9 MR. MAZZFERRO: There are more measures
10 we will need to take in the future.

11 MEMBER MAYNARD: But it's your intent to
12 keep the ability for a full core off-load.

13 MR. MAZZFERRO: At this plant, yes.

14 MEMBER WALLIS: So how soon will you
15 have to take those measures?

16 MR. MAZZFERRO: I don't know.

17 MEMBER BONACA: Do you have a dry
18 storage unit in now?

19 MR. MAZZFERRO: We currently do not have
20 dry storage.

21 MEMBER BONACA: So your pool must be
22 pretty full.

23 MR. MAZZFERRO: Actually with the re-
24 racking, we were able to go, I know we can go past
25 the end of our current license which is in 2009.

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1 Off the top of my head, I don't know what the date
2 is, where we lose that capability.

3 MR. DELLARIO: I think it's within the
4 first couple of years of the period they set up.
5 Right?

6 MR. O'CONNOR: Yes. We have capital
7 projects assigned in our 2006 to 2011 that has dry
8 cast storage as part of our additional measures. We
9 begin the funding of the project in 2008, 2009 and
10 2010 as determined.

11 MEMBER WALLIS: So you're asking for a
12 license renewal without knowing how you're going to
13 handle this additional amount of used fuel?

14 CHAIR SIEBER: Yes.

15 MEMBER WALLIS: So we just sort of trust
16 you that you'll figure out how to do it?

17 CHAIR SIEBER: Well, you can't penalize
18 these guys. It's an industry problem.

19 MEMBER BONACA: Well, if they don't, it
20 will stop operation. So they have to.

21 MEMBER MAYNARD: Actually most plants
22 didn't have full capability for their initial
23 license period too, counting on the positive. So I
24 think it's pretty common at this point without the
25 ability to ship it to DOE to develop interim

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1 measures.

2 MEMBER WALLIS: With all these -- they
3 keep gaining a little back by re-racking Boraflex
4 and so on.

5 MEMBER MAYNARD: And then you get to dry
6 cast storage.

7 MEMBER WALLIS: Then you get to a point
8 where that doesn't work anymore. You have to do
9 something.

10 MEMBER MAYNARD: Like dry cast storage
11 onsite.

12 CHAIR SIEBER: Yes, and these are all
13 commonplace.

14 MEMBER MAYNARD: Yes.

15 MEMBER WALLIS: So you're just saying
16 that it's not your problem. It's someone else's
17 problem.

18 MR. BARTON: No, it's his problem.

19 CHAIR SIEBER: No, it's their problem.

20 MR. BARTON: It's this guy's problem.
21 He said he's in charge of everything onsite. It's
22 his problem. I wrote that down as soon as he said
23 that.

24 MR. MAZZFERRO: I stick to that.

25 MEMBER WALLIS: It would be a little

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1 more reassuring if you had a plan or something that
2 you could lay out and say we know what we're doing.

3 MR. MAZZFERRO: As Tim indicated, we do
4 have a plan in terms of the company that does set
5 out milestones and goals, whatever else, for
6 addressing the fuel storage issue. But the time
7 line for that is building the dry storage capability
8 going forward beginning in 2008.

9 MEMBER WALLIS: I'm just still thinking
10 of this as the public response to all these license
11 renewals. The newest fuel issue is a common problem
12 for all these license renewals and somehow the
13 public has to be reassured that it's under control.

14 MR. MAZZFERRO: The last item on that
15 slide, the station service transformers and
16 disconnect switches, that's there because those
17 components, we have it for a recovery from an SBO.

18 With respect to our aging management
19 program that we credited for license renewal, there
20 are 43 programs, eight new ones for Nine Mile Point,
21 and we did align them to the guidance provided in
22 GALL, Rev 1.

23 With respect to our commitments, we made
24 54 commitments between the two stations. They are
25 entered in our official tracking system which we

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1 call the Nuclear Commitment Tracking System. Our
2 priority for completing these activities is very
3 high. They're regulatory commitments and within our
4 priority system, regulatory commitments is second
5 only to safety issues.

6 We have an implementation plan and
7 schedule that currently involves completing the Unit
8 1 in the common activities by 2007. That would
9 allow time for the staff to come in and do their
10 post license inspection.

11 MEMBER WALLIS: Okay. Can we stop here?
12 I mean you've told us all this administrative stuff
13 and how you're managing everything and there's been
14 almost no discussion of any technical issue except
15 for this corrosion which seems to be very small in
16 the drywell. Aren't there some technical issues
17 like steam dryers where there's cracking and so on?
18 Have you view this as unimportant?

19 MR. MAZZFERRO: Well, the steam dryers
20 for us are in scope. We have been inspecting them
21 during outages. We have found indications.

22 MEMBER WALLIS: There are cracks and all
23 that.

24 MR. MAZZFERRO: We've had to do repairs
25 on our dryers.

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1 CHAIR SIEBER: Unit 1 is one of the
2 early plants with box-type steam dryer.

3 MEMBER BONACA: Are you planning a power
4 uprate? I'm sorry.

5 CHAIR SIEBER: Pardon?

6 MEMBER BONACA: No, I was asking. I
7 didn't realize you hadn't finished. I was asking if
8 they are planning a power uprate at any one of the
9 two units.

10 MR. MAZZFERRO: On Unit 2, not on Unit
11 1.

12 MEMBER BONACA: Okay.

13 MEMBER WALLIS: But you might with other
14 plants being successful. You might decide to go for
15 Unit 1 too.

16 CHAIR SIEBER: Might.

17 MR. BARTON: Unit 1 is pretty well
18 stretched, isn't it, unless you did some major
19 equipment replacement?

20 MEMBER WALLIS: So the steam dryer is
21 okay because you're managing it okay. Is that
22 right? You're observing things and checking it.

23 MR. MAZZFERRO: And doing repairs when
24 we need to.

25 MEMBER WALLIS: Repairs when you need

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1 them. That's good enough. There are no other
2 technical issues at all.

3 CHAIR SIEBER: We have two open items
4 and we talked about one of them during this meeting.

5 MEMBER WALLIS: What's the other one?

6 CHAIR SIEBER: Which is containment
7 corrosion.

8 MEMBER WALLIS: But there's a fluent.

9 CHAIR SIEBER: The other one is s
10 fluence issue. Maybe you can describe what you're
11 doing on that one and that's on Slide 24.

12 MEMBER WALLIS: And we're going to get
13 to that.

14 CHAIR SIEBER: I'm trying to help them
15 get there.

16 MEMBER WALLIS: Yes, I'm just a little
17 concerned.

18 CHAIR SIEBER: If you want to, you can
19 go to --

20 MEMBER WALLIS: Let's go back to my
21 original question. You say we've been good boys.
22 We've gone through all the motions and all that and
23 everything's fine. But really what we're trying to
24 probe for is are there some technical issues that we
25 need to be concerned about and we haven't really had

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1 much discussion about where might be technical
2 issues, but there aren't and so on. We just have to
3 trust the staff to have dug into it and found those.

4 MR. MAZZFERRO: Based on our discussions
5 and the review by the staff, any technical issues
6 that have come up, we believe we have come to
7 resolution on all of those and they've asked us as
8 you know a number of questions.

9 MEMBER WALLIS: This is a bit circular
10 because the staff writes in their report that the
11 licensee did this analysis and claims that so on and
12 so on and so on.

13 MR. MAZZFERRO: Some of the technical
14 issues, we did talk about with respect to this CDR
15 stub tubes, with respect to the core shroud
16 cracking. Those are items that we obviously have to
17 manage going forward and we will manage going
18 forward.

19 As far as from an open issue standpoint,
20 the SER includes two of them. We believe we've
21 provided sufficient information for the staff to
22 close both of them. The other open issue has to do
23 with a fluence calculation or our original analysis
24 for one of the TLAs. Portions of that analysis, the
25 methodology had not previously been approved,

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1 reviewed and approved, by the NRC staff. We
2 submitted in the last couple of weeks a new
3 analysis.

4 CHAIR SIEBER: Using what code?

5 MR. MAZZFERRO: Using the methodology
6 approved by -- Do you want to help out, George?

7 MR. INCH: Yes, it was done using the
8 DORT Code. It's an industry code, the Discrete
9 Ordinance methodology. It's been reviewed and
10 accepted for Nine Mile for meeting Reg Guide 1.190.

11 CHAIR SIEBER: Okay.

12 MR. MAZZFERRO: We'll jump to the last
13 slide and conclude.

14 MR. O'CONNOR: We certainly have
15 appreciated the time to talk to you this morning. I
16 think you've heard enough about our lessons learned
17 from the project itself and what we've gained from
18 it. Unless there are other questions on the open
19 items, at least you've heard what we believe to be
20 the items to resolve which we think we've given the
21 NRC the information they are looking for and find
22 that it should be acceptable.

23 We do believe that we understand the
24 issues and that our programs are sound for us to
25 manage the aging issues. We do have these

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1 commitments that we're making inside of our tracking
2 systems. We do have accountability for that to make
3 sure that nothing is missed. Our corrective action
4 program is healthy and that is one of the vehicles
5 that we use to make sure that we don't miss things.

6 And I can assure you that as I sit in
7 front of you here is that we're going to operate the
8 place effectively. We're not going to be behind the
9 industry and we're going to continue to make sure
10 that we reach the standards of excellence that are
11 out there. And that's our commitment. We
12 appreciate the time here for us to talk with you
13 this morning.

14 MR. BARTON: Jack, before you hit the
15 gavel, I have a question. I noted in this
16 application there were some strange systems in scope
17 that I hadn't seen before and maybe the Applicant
18 can answer this. On Nine Mile Point on Nine Mile 1,
19 you say that the city water system is in scope and
20 loss of city water could prevent completion of a
21 safety review function. What function is it and if
22 city water gets lost which is not inconceivable,
23 what's your backup?

24 MR. MAZZFERRO: City water is in scope
25 for the A2 criteria of nonsafety related piping that

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1 runs in the vicinity of safety related equipment.
2 Therefore if there was leakage out of the city water
3 system it could impact a piece of the safety related
4 equipment. It's not the system function itself.
5 It's one of these interactions.

6 MR. BARTON: It's one of these within
7 proximity space issue.

8 MR. MAZZFERRO: Yes.

9 MR. BARTON: All right. Thank you.

10 CHAIR SIEBER: Okay. Any other
11 questions? What I'd like to do now before we hear
12 the staff's presentation is to take a break and it's
13 pretty close to 10:00 a.m. So let's be back at
14 10:15 p.m. Off the record.

15 (Whereupon, the foregoing matter went
16 off the record at 9:57 a.m. and went back on the
17 record at 10:15 a.m.)

18 CHAIR SIEBER: On the record. We have a
19 Planning and Procedures meeting that will begin
20 shortly and we will lose two of our members so that
21 they can attend that meeting. I'm not one of them.
22 So I will stay here.

23 What I'd like to do now is introduce NRR
24 and have them make their presentation and to do that
25 we'll begin with Jake Zimmerman.

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1 MR. ZIMMERMAN: I'm going to turn it
2 right over to Tommy Lee, our Senior Project Manager
3 responsible for the Nine Mile Point review.

4 CHAIR SIEBER: Okay. Good morning.

5 MR. LE: Good morning, Chairman Sieber.
6 How are you?

7 CHAIR SIEBER: I'm fine.

8 MR. LE: Good morning, Members of the
9 Subcommittee. My name is Tommy Le. I'm the Senior
10 Project Manager in the Division of License Renewal.
11 I have been on the task since July of 2004. The
12 application was submitted in May.

13 Again, I would like to represent that
14 staff to brief the Subcommittee today and the SER
15 that we respectfully submitted to you on March 3rd
16 is the result of all the hard work by all of the NRC
17 staff behind me. My job was just to put it
18 together. So I don't take credit for it.

19 CHAIR SIEBER: I think you did a good
20 job of putting it together.

21 MR. LE: Thank you. It's heavy. Again,
22 that also is a result from the patience and hard
23 work from the Applicant's staff to provide the NRC
24 staff with a resolution and all the things that the
25 staff had wanted and so with that note, I also would

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1 like to introduce to you with me I have Robert Hsu
2 who is the Assistant Team Leader for the audit.

3 CHAIR SIEBER: Good morning.

4 MR. LE: And the Team Leader was Dr. Ken
5 Chang. He got promoted. So he didn't want to be
6 with the staff.

7 MEMBER WALLIS: I would like to say that
8 these audits are very useful to us and in fact, we
9 got an SER. We also got a very substantial audit
10 report.

11 MR. LE: And with me is Michael Modes,
12 the Team Leader, for the Region I team inspection.
13 He supported the NRC review of the license review of
14 the Nine Mile Point.

15 With that, I would like to have Slide 1
16 please. In this slide, I would like to brief the
17 ACRS the same process that the staff has rigorously
18 taken to review the application from Constellation
19 Energy. First, I will go through the overview of
20 how the staff had taken in the past two years and
21 then we will discuss the scoping and screening
22 review process and then we would ask Mike Modes to
23 come in and talk about his inspection at Nine Mile
24 Point and then in Section 3, we will report to the
25 Subcommittee the aging management review results

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1 that the staff had conducted and Section 4 is a
2 TLAA. With that, Slide 3 please.

3 As the Applicant had previously
4 reported, the application was submitted on May 26,
5 2004 requesting a 20 year license extension for both
6 Unit 1 and Unit 2 at Nine Mile Point Nuclear
7 Station. Unit 1 as you know is a Mark I, GE BWR-2.
8 It has 1,850 megawatt thermal with 650 megawatt
9 electrical. The operating license for Unit 1
10 expires on August 22, 2009.

11 For Unit 2, it's a Mark II, GE BWR-5
12 with a thermal rating of 3467 megawatt thermal with
13 an electrical output of 1,144 megawatt with 4.3
14 percent power uprate as the Applicant had indicated
15 previously. For the Unit 2 to be accepted for the
16 review, the Applicant had requested for the
17 scheduler exemption because the operating experience
18 for that Unit 2 had not reached 20 years as
19 required.

20 MEMBER WALLIS: I noticed that this is
21 the first application for a BWR-2 and a BWR-5 for
22 license renewal.

23 MR. LE: Yes sir.

24 MEMBER WALLIS: So you are setting a
25 precedent here.

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1 MR. LE: Thank you. The staff is
2 reviewing it.

3 MEMBER WALLIS: So it's important that
4 it be done right so the subsequent ones can follow
5 the example.

6 MR. LE: We know we did it right. We
7 did it carefully. The Nine Mile Point Station is
8 located around six miles north of Oswego and I
9 mention Oswego because that's the only place we can
10 fly a plane to stay during our audit.

11 MEMBER WALLIS: That's where it snows a
12 lot in the winter.

13 MR. LE: And snow. Mike knows about
14 that.

15 CHAIR SIEBER: I've been there in
16 January. It's miserable.

17 MR. LE: Yes. Michael was on one
18 inspection and he had turned back. For those that
19 have better, Syracuse is about 40 miles south,
20 southeast of the plant. Slide No. 4 please.

21 The overview report here is the SER that
22 we've presented to the members of the ACRS which was
23 issued on March 3rd and we had 54 commitments by the
24 Applicant. This was an increased number from 31
25 original commitments which was submitted in the

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1 original application. The Unit 1 had 14
2 commitments. Unit 2 had 13 commitments. Those are
3 plant specific. And the common are 27 commitments
4 for both Units 1 and 2.

5 These commitments are going to be
6 implemented two years prior to the period of
7 extended operation as you heard the Applicant had
8 stated. For Unit 1, it would be two years before
9 that and the expiration is 2009. So I'm sure they
10 are pretty busy like bee during the implementation.

11 The SER had two open items and no
12 confirmatory item and for the two open items I would
13 like to respectfully defer it to Section 3 and
14 Section 4. The SER had three license conditions,
15 the standard conditions. It had to do with FSAR
16 supplement required by 54(d) and the activity that
17 Applicant had to implement in accordance with
18 Appendix A in the SER and No. 3 is the
19 implementation of the most recent staff approved of
20 the ISP program to demonstrate that they are in
21 compliance with Part 50 Appendix H. Slide 5 please.

22 CHAIR SIEBER: On the last slide with
23 the commitments, a lot of those have to be done next
24 year.

25 MR. LE: Yes sir. That's why I

1 mentioned them.

2 CHAIR SIEBER: There's not a lot of
3 time.

4 MR. LE: Yes. That's why they're not
5 taking a vacation from now on. Slide 5, the NRR
6 scoping and screening method, the audit was
7 conducted on September 27 to October 10 of 2004 and
8 this was conducted by the staff from the formerly
9 Division of -- and for Section 2.1, the staff
10 audited and identified an issue and that has been
11 resolved through REI and the Applicant has provided
12 additional information in the amended application.

13 During the scoping and screening
14 methodology, the Applicant realized that the (a)(2)
15 methodology was not within the acceptability of the
16 staff requirements. So they did revamp and they had
17 requested a 90 day grace period to address that and
18 I will talk about that later on and also during the
19 scoping and screening methodology the staff
20 identified that there are insulation that is used as
21 the fire wrap-around and structural steel fire
22 protection and that has been added to the scope.
23 Slide 6 please.

24 MR. BARTON: Wait a minute. You made a
25 statement that the methodology for determining

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1 compliance with 5054(a) appears to be rigorous
2 enough to identify all systems. What do you mean
3 rigorous enough?

4 MR. MODES: I think I made that
5 statement.

6 MR. BARTON: What does "enough" mean?
7 It could have been better. It could have been more.

8 MR. MODES: What you're reading is a
9 report based on an inspection that is only a small
10 slice of the total number of systems available for
11 review.

12 MR. BARTON: Right.

13 MR. MODES: And the inspection process,
14 really its goal is to arrive at a conclusion of
15 reasonable assurance. It's one of the few areas
16 where an inspector is given that latitude. So that
17 is very carefully phrased wording to mean "hey, we
18 looked at a slice. We looked at quite a few and
19 what we arrived at is a reasonable assurance
20 conclusion based on that. So what we think is that
21 the methodology applied would continue to be applied
22 elsewhere and it would arrive at that conclusion."

23 MR. BARTON: Yes, it came out of the
24 inspection report on March 2nd.

25 MR. MODES: Right, and it's to indicate

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1 that we can't possibly look at them all.

2 MR. BARTON: I got you.

3 MR. MODES: Okay.

4 MR. BARTON: Yes.

5 MR. LE: Thank you, Mike. On Slide 6,
6 the staff would like to report to the Committee
7 Section 2.2 -- level scoping and other REI questions
8 that result in the following item: 14 new systems
9 were added. Three previously included in the
10 regional system. Application was removed. A new
11 and revised license LR drawing and now identify the
12 (a)(2) component was provided. The amended
13 application clearly identified SSC within the scope
14 of license renewal subject to AMR. The amended
15 application now uses the standard component type and
16 component intended function as consistent with the
17 standard review plan by the staff and the industry
18 NEI-95-10 to identify the SSC in scope and those
19 that(* are the subject to ARM. Again, all issues
20 were resolved in the amended LRA, this including the
21 question from the audit staff and the REI from the
22 technical staff in NRR and these are pursuant to 10
23 CFR 54.4 (a)(1) and (a)(2). Slide 7.

24 MEMBER BONACA: These 14 new systems
25 added, they were added by the Applicant, all of

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1 them.

2 MR. LE: Could you say that again?

3 MEMBER BONACA: Those 14 new systems
4 which were added to the scope, were they identified
5 by the Applicant? That's my understanding from the
6 presentation.

7 MR. LE: Yes. During the 90 day review.

8 MEMBER BONACA: Yes. I understand. I'm
9 asking did the staff identify any new system that
10 should be placed that the Applicant failed to
11 identify?

12 MR. LE: The staff won out that the
13 original scoping from the Applicant were not
14 addressing the regulations.

15 MEMBER BONACA: No, I understand that.

16 MR. LE: They went back and found more
17 systems.

18 MEMBER BONACA: But once this is done,
19 once they found the new systems and made these
20 changes, you did not identify anything they had
21 missed.

22 MR. LE: Yes.

23 MEMBER BONACA: All right. Thank you.

24 CHAIR SIEBER: I got the impression that
25 the biggest issue there was the failure to initially

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1 include non-safety related systems. Is that
2 correct? That's what I got.

3 MR. LE: I think the staff originally,
4 Greg Galletti was the team leader, and he identified
5 that the ways that methodology of the (a)(2) were
6 not rigorous enough.

7 CHAIR SIEBER: Okay.

8 MR. LE: So the Applicant in their
9 presentation, they did a walkdown of every room and
10 picked out all of the systems that might affect the
11 SR component system.

12 CHAIR SIEBER: After marking up the
13 drawings, they did a physical walkdown.

14 DR. CHANG: This is Ken Chang
15 representing the Auditing. For all these 14 new
16 systems identified according to the scope, the
17 auditing review team had an audit onsite and we also
18 did not find anything new that needed to be added
19 to it.

20 CHAIR SIEBER: Okay. Thank you.

21 MR. LE: Slide 7 please. The staff
22 would like to report to the Subcommittee the
23 continuation of the scoping. In 2.3 Mechanical
24 system, we had 45 total systems within the scope and
25 subject to AMR, 35 of these systems BOP, 26 of them

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1 auxiliary system and 7 are steam and power
2 conversion for Unit 1. For Unit 2, there are a
3 total of 61 mechanism systems. Forty-seven are BOP
4 with 47 auxiliary systems and 7 steam conversion.

5 Section 2.4, Structure and Component
6 Support, for Nine Mile 1, we identified the primary
7 containment structure of the Class 1 and in scope,
8 11 structure, containment electrical penetration and
9 -- I'm sorry. I'm on Structure and 11 structure
10 commodity. For Unit 2, the same finding except that
11 we have two -- system for structure and scope.

12 Section 2.5, Electrical and IC System
13 and Commodity for Unit 1, we found that the cable
14 and connections are nonsegregated in switchyard bus
15 and containment and electrical penetration in
16 switchyard component are the same for both units and
17 they are included in the scope of license renewal.
18 Slide 8 please.

19 As a summary of the scoping and
20 screening effort done by the audit team and the
21 staff review, we found that the Applicant's scoping
22 methodology meets the requirement of 10 CFR Part 54
23 and the scoping and screening result including all
24 SSC within the scope of license renewal and subject
25 to AMR.

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1 Now I would like to invite Michael to
2 address the Region activity in the inspection.

3 MR. MODES: Gentlemen, good morning.
4 Michael Modes, NRC Region I, Senior Reactor Engineer
5 Team Lead for License Renewal. It's always a
6 pleasure trying to survive a visit to the lion's
7 den. And yes, it does snow in Oswego. My first
8 trip up there to do the license renewal, we call it
9 bag man. It has nothing to do with what the Mafia
10 does of course. It's a previsit and I actually got
11 thrown off the interstate and told to go somewhere
12 else. So, yes, it does snow.

13 The inspection, this inspection, is the
14 more efficient inspection than prior. It focuses on
15 10 CFR 54.4(a)(2) for nonsafety affects safety and I
16 like to say this is a bottom up inspection. We
17 start with the procedures and what's actually going
18 on at the plant and we try to meet the aging
19 management audit in the middle. It's like doing a
20 tunnel from both ends. Hopefully we meet.

21 We conducted the inspection on February
22 14, the week of, and February 28, in addition to
23 which I asked a very seasoned ISI inspector to do a
24 containment walkdown during their subsequent outage
25 on April 4th and because of the way the inspection

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1 turned out, we walked away with 15 open items, five
2 programs that we could not arrive at reasonable
3 conclusion and subsequently we returned to go
4 through all of those and found them to be
5 satisfactory. They did quite a turnaround in the
6 90-day implement. Next slide.

7 It was quite a turnaround from what we
8 had seen prior to that. What we really got a sense
9 for in the inspection was there was a real lack of
10 connection between the application, the programs and
11 what the program people, the application people, had
12 been doing and what was really going on at the
13 plant. There was confusion, lack of ownership and a
14 lack of connection in some places where proposed
15 programs didn't even connect up. They weren't even
16 in a form that could be reviewed. You can't arrive
17 at reasonable conclusion if you don't know what
18 they're doing.

19 So we conducted that follow-up
20 inspection on December 12th. We reviewed all of the
21 15 items previously. I brought a very seasoned
22 inspector with me as well on that inspection and
23 asked him to spend that week going through the
24 54.4(a)(2) process with them. Where prior, a two-
25 day walkdown in the initial inspection turned up

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1 about four or five systems that we identified that
2 weren't in, this time he wasn't able to identify any
3 systems that hadn't been included.

4 So the inspection concluded that the
5 open items were satisfactorily resolved and we
6 closed them out in an inspection report. I might
7 add that this will be the second plant in Region I
8 to enter into the extended period and we are
9 currently already planning both staffing allocation
10 and scheduling for the follow-on inspection of 003,
11 something we have to anticipate because we have to
12 go through these pre-extended period outage
13 inspections with them. That's a pretty big
14 undertaking, almost equal in size. Any questions?

15 The following, the next two slides are
16 all green. I've already told you that. Any
17 questions? It's a pleasure, gentlemen. Thank you.

18 MR. LE: Thank you, Mike. Now we'd like
19 to brief the Subcommittee on Section 3.0 which is
20 aging management review results. Helping me in this
21 presentation would be my Mr. Robert Hsu back there
22 and Dr. Ken Chang. Oh, you're joining us again,
23 huh? To brief the committee, we reviewed the usual
24 3.1 reactor vessel internal reactor cooling system,
25 3.2 engineering safety fissure system, 3.3 auxiliary

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1 system, 3.4 steam and power conversion system, 3.5
2 containment structure and component support and 3.6
3 the electrical and IC component. Next slide.

4 The staff reviewed the AMR and AMP
5 responsible by two groups, the staff from the
6 Technical Branch in the NRR, namely the Division of
7 Engineering and Division of Component Integrity,
8 review of those plant specific AMR and AMP and the
9 Audit Team headed by Dr. Ken Chang to perform the
10 onsite audit for those items that the Applicant
11 reported in the application that it's consistent
12 with the GALL report and accompanied AMR line item.

13 In short, the DE staff did have about
14 seven plant specific AMR in all the line items. The
15 Audit Team conducted within two phases. As you're
16 aware from the Applicant's presentation, the
17 original application was amended by a new
18 application and the Audit Team had conducted the
19 original inspection during the weeks of August 5th,
20 August 13th, October 21st and October 25th.

21 As you noted, there are more
22 inspections, audits, than normal a license renewal
23 plan would and, Dr. Chang, would you like to address
24 some findings on that?

25 DR. CHANG: Ken Chang, Audit Team

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1 Leader. In the review and audit of the original
2 application, we followed a normal trial of going
3 first time to do the AMP audit and that time it was
4 two weeks because of the ACRS probably knows that's
5 Unit 1 and Unit 2 separate by time and also systems
6 are very different. So essentially we are reviewing
7 two plants.

8 We're not reviewing one plant. We
9 reviewed and audited two plants. We structured the
10 audit report in two sections, Unit 1, a common
11 portion and Units 1 and 2. So it's a very detailed
12 review. Through those reviews, the bulk of the
13 review was done in the first two audits, the August
14 5th through 13th and August 13th through 17th.

15 What followed that is the AMR reviews.
16 The structure of the Nine Mile Point License Renewal
17 Application Team was the AMPs are handled by the
18 plant staff and always at the plant and it was
19 headed by Pete. And the AMRs were done by the
20 Constellation Nuclear Services which is located in
21 Crofton. Those are, you heard before, not well
22 communicated and it's kind of, may I use the same
23 word, isolated, isolation. So when we reviewed the
24 AMRs, we reviewed at Crofton instead of at the
25 plant. We reviewed at Crofton and even more so is

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1 we always take any opportunity that we get together
2 with the applicant to say "Well, let's do a little
3 more review." We even do it in our contractor's
4 office.

5 Actually, the first part of the review
6 and audit was done in five trips, five meetings. At
7 the end of the fifth meeting, we came to a point
8 that Applicant has to commit to do a lot of
9 modifications, supplements, to the extent that we
10 think it's not feasible to accomplish in a short
11 period of time. So we mutually come to an agreement
12 that it's best handled by taking a gracing period.

13 So you take a chunk of time to address
14 all the questions, all the problems, we identified
15 in one shot and submit it in so-called amended or
16 updated or whatever you like to call it application.
17 So we will re-review the amended application or the
18 updated application in another AMR. So the first
19 period, the first phase, of the review and audit
20 ends right there after we agree to take a 90 day
21 gracing period.

22 July 14th, they submitted the amended
23 application. Within less than two months, like in
24 six weeks, we went there to do the AMP audit of the
25 amended application and then within a month, we go

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1 back there again to do the AMR audit. The amended
2 application is in a much better quality and we talk
3 about quality there.

4 Also we were amazed by the level of
5 resource support for the Audit Team. We formed a
6 big team there because there was a lot of review
7 there. It was supported by the plant staff and by
8 their consultants. You heard earlier that the team
9 supporting the amended application they said about
10 37. I added it. It's 38. But then you take away
11 the six challenge board members. So it's really 32,
12 32 people supported the amended application and also
13 supported the audit of the amended application
14 compared to the original one.

15 Now we have a big room full of people
16 only in the entrance meeting. After that, people
17 kind of went away. We don't get the kind of support
18 we anticipated and we outnumbered the Applicant's
19 staff. But in the second phase audit, they
20 outnumbered us. In every breakout meeting, we only
21 have two or three people. They have eight or nine.
22 So we really have to run fast to catch up with them
23 of which I'm glad because we are not there to have a
24 good time. We are there to look at what you've
25 done. Tell me what you've done in writing or

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1 across-the-table discussions. So we were very happy
2 with that.

3 And therefore after the two audits --
4 I'm sorry. Come back. After the first audit, we
5 hammered all the AMP/AMR questions which is
6 different from the original application down to five
7 open items. Those five open items are a little
8 tougher and are the focus of the second audit. The
9 second audit was in October. That is amazing
10 because normally we don't quickly come down to that
11 small number of open items. Naturally, it was
12 helped by the original audit. Some of them don't
13 change.

14 We even extended the resolution of the
15 audit findings to the exit meeting. The exit
16 meeting which is probably in November.

17 MR. LE: Yes.

18 DR. CHANG: I lost the date, but you
19 confirmed it. November. When we were in there in
20 November for the exit meeting, we also did a two-day
21 audit before the exit meeting and after the two-day
22 audit, we concluded that everything is well take
23 care of. Then we went to the exit meeting and
24 closed every item.

25 Now the two open items we talk about,

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1 one is not in the Audit Team's territory and the one
2 of the containment drywell liner that is discovered
3 after some other industrial activities. So it's not
4 obvious at the time of audit. So I would say I'm
5 very satisfied and also glad about the results of
6 the audit, documented audit report which is close to
7 600 pages. Then you move on and at the appropriate
8 time, I would supplement you.

9 MR. LE: Thank you, Dr. Chang.

10 MR. BARTON: I have a question before
11 you get too far. In the audit report, you guys came
12 up with an RAI regarding some heat exchangers. I
13 didn't see anything in the SER on this. Has this
14 been resolved? It's RAI 3.4.1(a-1). Is that still
15 an open item or has that been resolved by the staff?

16 DR. CHANG: Is it an Audit Team's
17 activity or is that a staffs activity?

18 MR. LE: That's a staff activity.

19 DR. CHANG: Could you point us to the
20 right staff to address this?

21 MR. BARTON: You can continue, but I
22 need an answer to that before we break up.

23 MR. LE: Section 3.4.1 (a-1).

24 MR. BARTON: You don't have to look it
25 up now. Just keep going. I need an answer before

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1 we adjourn here.

2 MR. LE: All right. We'll get back to
3 you. As Dr. Chang has pointed out, the second phase
4 of audits was performed and this time the Applicant
5 personnel outnumbered the staff in contrary to the
6 first one. Out of this audit and other reviews,
7 there was five new AMP programs brought in and 23
8 more commitments were made by the Applicant. Next
9 slide please.

10 During the AMP review, there was some
11 programs that are consistent with the GALL report,
12 some that would need enhancement. The staff would
13 like to provide some examples of the enhancement.
14 The bolting integrity program was added. This is a
15 new program and the Applicant committed to implement
16 the bolting integrity program for both units in
17 Commitment 33 and 31 for Units 1 and 2. Next slide.

18 DR. CHANG: Hold it. Let me supplement
19 that. This is hard to believe that the original
20 application doesn't have aging management of
21 bolting. What we're saying is the bolting integrity
22 of different bolts are not covered by one AMP in
23 total but is spread out in five or six different
24 AMPs on the ISI. So this bolt may be covered by IWP
25 and that bolt may be covered by IWC. So if the

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1 bolting issue, the aging management of bolting,
2 aging effect of bolting, is covered by five or six
3 different programs, how would you expect the staff,
4 the audit team, to be able to review everything
5 without negligence, without neglecting?

6 So we started that up with the Applicant
7 to say we prefer you to put all these elements from
8 different IWP, IWC, BEF, GIL, all this, into one
9 program. We handled this collectively with the
10 technical staff in the headquarters.

11 We set up a conference call, Audit team
12 onsite with Tommy and the technical staff, some of
13 them even presented here in the EMCB area, in the
14 old Material Branch area, and we have the
15 Applicant's program owner and also the License
16 Renewal Team members. We all go through a
17 conference call like an hour or an hour and a half.
18 Finally, we come to the conclusion to say this is
19 something that needs to be done for your own sake,
20 for easy tracking, for easy follow, put in one
21 program. So that's a new program that was
22 constructed through the audit activity.

23 MR. LE: Thank you, Dr. Chang. On this
24 slide, the next one, there's the BWR vessel internal
25 program. Next slide, and this program is consist

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1 with enhancement and among the enhancement the
2 Applicant committed to 100 percent inspection of the
3 top line for Unit 1 and it's a commitment today.

4 In the next slide, we talk about Reactor
5 Vessel Surveillance Program. This is a program
6 where the Applicant managed the loss of structure
7 toughness due to neutron irradiation embrittlement
8 in the RV beltline reactor vessel. The program is
9 based on the integrated surveillance program
10 criteria in the VIP-78 and VIP-86. The enhancement
11 for this program is at the -- They were enhanced to
12 include the conformance to the updated integrated
13 surveillance program of the VIP-116 and I believe
14 this has been approved by the staff.

15 DR. CHANG: A clarification. This
16 Commitment No. 22 for Nine Mile Point 1 and
17 Commitment 20 for Nine Mile Point 2 was volunteered
18 by the Applicant. It was not as a result of the
19 Audit Team's findings, but we are presenting to you
20 what programs are being enhanced to meet the core
21 requirements or meet the BWR/VIP requirements. The
22 Audit Team just concurred with it.

23 MR. LE: I think they see in your eyes
24 that they volunteered.

25 DR. CHANG: That's another way of saying

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1 it.

2 MR. LE: Next slide. No. 18 please.

3 We're talking about Unit 1 control rod derive stub
4 tubes penetration. This is for Unit 1 only.

5 Originally Unit 1 stub tubes were repaired by the
6 roll and expansion technique with an allowance for
7 some amount for the RCPB leakage and they plan to
8 implement -- N-730 if approved by the NRC staff and
9 this was made in Commitment 36. At Nine Mile Point
10 we implement, should the leakage appear later on
11 during the period of extended operation, the
12 Applicant committed to implement zero leakage
13 permanent repair and that's in Commitment 36.
14 It was discussed by the Applicant previously.

15 DR. CHANG: Let me supplement on this
16 Commitment 36. The original was the original
17 Commitment 36, the first half. The first bullet is
18 the original commitment and then the second one is
19 still say Commitment 36, but that's a different
20 Commitment 36. It's a Modified Commitment 36.
21 After the Audit Team through the audit, we proposed
22 change of the original Commitment 36 to make a new
23 Commitment 36. So this Commitment 36 if you compare
24 the time line before and after, they're not the
25 same.

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1 CHAIR SIEBER: Okay.

2 MR. LE: Next slide. Unit 1 Emergency
3 Condenser, this is designed for emergency condenser
4 fissure and belt welded to the emergency condenser
5 shell that are not designed to be removed.
6 Therefore eddy current testing is recommended by the
7 GALL report but the tipping ising not possible. So
8 during the audit and review, the Applicant provided
9 the spaces for not performing the eddy current
10 testing and committed to implement a leakage test to
11 detect small leak and this is Commitment 29 for Unit
12 1. Next slide.

13 CHAIR SIEBER: And the staff is
14 satisfied with that?

15 DR. CHANG: Yes. The staff, we, spent a
16 considerable amount of time on this emergency
17 condenser. The staff reviewed the basis for the
18 Applicant to take the exception of not performing
19 the eddy current testing and we agree with that
20 reason why it cannot be performed. But the
21 Applicant provided an alternative. It's through the
22 performance monitoring system. In this area, I
23 would suggest to my Assistant Team Leader, Robert
24 Hsu, to talk about it. Robert.

25 MR. HSU: Yes. My name is Robert Hsu.

1 The staff provided the reason we accept that because
2 previously 1997 they appraised that. They already
3 have a 32 year appraisal and the reason, the first
4 thing is they have replaced a brand new better
5 quality material resisting degradation. That's the
6 first thing. Second thing, they implemented a
7 better water chemistry program and the third, they
8 also install an online system which is going to
9 monitor the water level which eliminated the cause
10 of the previous cracking degradation. And the next
11 one is they also provide a commitment that they're
12 going to do the leakage test, the leakage test which
13 is able to detect a leakage. So based on all this
14 and the process of additional irradiation monitoring
15 program and the temperature monitoring which was
16 originally required by the GALL, we accept this
17 position.

18 MR. BARTON: What was the change in the
19 -- You said the chemistry program was changed, water
20 chemistry.

21 MR. HSU: Yes. The better water
22 chemistry program.

23 MR. BARTON: What was better about the
24 water chemistry program? You have -- water on one
25 side of the reactor coolant and the other. What's

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1 better? What did they do better than they were
2 doing before?

3 MR. HSU: They have a better consul and
4 they have much good operating experience and with
5 hydrogen water.

6 MR. BARTON: I don't know if hydrogen
7 water helps you up in isolation condensers.

8 PARTICIPANT: Was it water chemistry or
9 was it control of the water level?

10 DR. CHANG: I think it was the control
11 level.

12 MR. BARTON: That I'll buy.

13 DR. CHANG: Yes.

14 MR. BARTON: I don't buy a change in
15 water chemistry though.

16 DR. CHANG: Control of water level,
17 remove the transient which put the tubes in a cold
18 and hot position, up and down all the time. You
19 remove the stressor of the tubing, that kind of
20 thing.

21 MR. BARTON: All right. That makes
22 sense. All right.

23 DR. CHANG: Thank you for your
24 clarification.

25 MR. BARTON: Your clarification. My

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1 question.

2 DR. CHANG: I only picked up on what you
3 had started.

4 CHAIR SIEBER: I guess I would comment a
5 little bit about this explanation. It's unfortunate
6 the isolation condenser was designed this way and
7 probably should not have been even though I suspect
8 that it met the B-31.1 Code which preceded the ASME
9 Code that most of the plants were built in
10 accordance with. On the other hand, when you do a
11 leakage test, those are usually done at operating
12 conditions and the presumption if you find a leak is
13 that a crack has already occurred and since it's
14 already occurred, there is no margin to crack.

15 On the other hand, a typical eddy
16 current in-service inspection looks for wall
17 thickness and says if you have anything greater than
18 40 percent through-wall reduction, then under design
19 conditions which is much higher than a leakage test
20 there is some probability that you'll have a leak.

21 So there is inherent in this alternative a
22 reduction in margin. Whether that reduction results
23 in any kind of a hazard is another question, but in
24 my view, it's not an even exchange.

25 DR. CHANG: It's not a superb design.

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1 CHAIR SIEBER: It is not. That's an
2 understatement.

3 DR. CHANG: Yes.

4 MR. BARTON: They didn't build too many
5 plants with some kind of --

6 CHAIR SIEBER: That's right.

7 MR. BARTON: Although this is simple
8 design.

9 DR. CHANG: But given that -- I agree
10 with everything you say, but given the situation,
11 it's already there. What Nine Mile Point has done
12 is the best they can do, use better material, to
13 remove the loading, to remove the stressor and also
14 it's new.

15 CHAIR SIEBER: On the other hand, you
16 have no way to predict what time in the future a
17 crack or leakage will develop either. So that's
18 another piece that you're missing. I guess I have
19 thought about this a lot and I raised this in my
20 letter to John a week ago or ten days ago so that we
21 could discuss it here today and I'm not prepared to
22 say that the staff or the Applicant is wrong. It's
23 just that I do see it as a reduction in margin.

24 MR. LE: Thank you, Dr. Chang. The next
25 slide, No. 20, we would like to report about the

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1 non-EQ inaccessible medium voltage cable program.

2 MR. BARTON: That should have been red
3 flag.

4 DR. CHANG: Ken Chang. It's a red flag,
5 but I assure you that the Audit Team is not going to
6 let those kind of issues go on without being
7 noticed.

8 MEMBER BONACA: But I noticed that
9 they're all under the problem of Unit 2. So there
10 are no medium voltage cables in Unit 1.

11 DR. CHANG: There is not inaccessible
12 medium voltage cables.

13 MEMBER BONACA: Yes, that's right.

14 DR. CHANG: In Unit 1.

15 MEMBER BONACA: Not one?

16 DR. CHANG: The Audit Team in that
17 specific audit, we picked an electrical expert from
18 the tech division of Duc Nguyen. Is Duc there?

19 MR. NGUYEN: My name is Duc Nguyen. I
20 am a regional from the Division of Engineering and I
21 try the License Renewal request of Dr. Ken Chang. I
22 have reviewed a lot of applications. Go back to the
23 Nine Mile Point and the reason why the Nine Mile
24 Point 2 and Nine Mile Point 1 are different is
25 because Nine Mile 1 they don't have the cable in the

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1 scope of the inaccessible medium voltage cable.
2 Either they have above the ground or they are low
3 voltage. They don't have the medium voltage
4 inaccessible cable. 9.2 they have and we during the
5 review process identified at least one. The --
6 water cable you can count most of them inaccessible.

7 So that we identified at least one cable
8 in Unit 2 and we request the Applicant to go back
9 and do the review. And we had a meeting at around
10 4:00 p.m. and they had to stay overnight to bring
11 all the drawings on the site and they identified an
12 additional 18 cables.

13 MR. BARTON: Are they all on Unit 2?

14 MR. NGUYEN: Yes, because Unit 1, they
15 don't have any cable that's in scope. To be in
16 scope, you have to have the cable in scope of
17 license renewal and you have to have to medium
18 voltage from two -- to 35 -- and then you have to
19 subject to the water -- phenomena. That means
20 underground and inaccessible. Unit 1 they have
21 above the ground, the cable, the surface water cable
22 I believe and all the cable would be low voltage and
23 if you know the water -- phenomena is proportionate
24 to the level of the voltage, especially medium
25 voltage cable.

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1 MR. BARTON: Thank you.

2 MR. LE: Thank you, Duc. As an added
3 value during the staff audit with the Applicant, we
4 also ran into the situation where Duc found that the
5 insulation testing of the cable and the motor they
6 tested it with both cable and motor together and so
7 the staff pointed out that that wouldn't tell about
8 the insulation of the cable. So the Applicant are
9 reviewing it and they should be testing the
10 insulation separately rather than together.

11 CHAIR SIEBER: Right.

12 MR. LE: The next slide please. On the
13 Slide 21, we would like to report the overall
14 managing of all the systems, 3.1 reactor vessel.
15 For Unit 1, we found that there are 15 AMP that the
16 Applicant are using to manage the aging effect and
17 for Unit 2, there are 14 AMP. For engineering
18 safety system, there's a nine AMP for Unit 1 and
19 eight AMP for Unit 2. For auxiliary system, there
20 are 17 AMP for Unit 1 and 15 AMP for Unit 2. For
21 steam and power conversion, there are 17 AMP for
22 Unit 1.

23 CHAIR SIEBER: Nine.

24 MR. LE: Nine, I'm sorry and six for
25 Unit 2.

1 MR. BARTON: What do these numbers mean?
2 Are these numbers significant in any way? So what?

3 MR. LE: Those are the numbers of the
4 AMP. I'm just trying to say that we reviewed all
5 the AMPs in the system.

6 MR. BARTON: All right. So you reviewed
7 them all. So the numbers generally don't mean that
8 much here.

9 MR. LE: Yes. That we found.

10 DR. CHANG: I take a different
11 interpretation of the data. This is indicating that
12 when we review the AMRs we also revisit this many
13 AMPs because this many AMPs are the ones the ARM is
14 relying on to manage that. So we're not just saying
15 it's 3.1. We only look at three AMPs.

16 MR. BARTON: Okay. So you've looked at
17 them all.

18 DR. CHANG: Right.

19 MR. BARTON: So you have to say "Just
20 looked at them all."

21 DR. CHANG: Yes.

22 MR. BARTON: End of slide. Next slide.

23 DR. CHANG: Right. Next slide.

24 MR. LE: Next slide. All right. Next
25 slide. We reported earlier we had two open items.

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1 This is the first item in the Nine Mile Point 1
2 drywell liner. After the audit, the staff really
3 reviewed all the documents and noted that the
4 Applicant had a report in refueling outage `03 that
5 they found 360 degrees rusting around the drywell
6 interior and so the staff wasn't sure what
7 corrective action and preventive action to mitigate
8 future corrosion.

9 So we identified this at the time when
10 we were producing the safety evaluation report.

11 We identified an open item and two weeks
12 ago, we met with the Applicant on March 27 to talk
13 about what they found and why they did not take any
14 corrective action and report it in the DER. During
15 that meeting, the Applicant also provided us an
16 overall operating experience with no corrosion found
17 outside of the drywell and none inside except for
18 those that report at elevation 2 and 25 feet.

19 Yesterday, the staff received a letter
20 from the Applicant to report that they are ready and
21 propose a program for the supplemental inspection of
22 the drywell. That letter had been received from the
23 staff and under review and, Hans, can you tell us
24 what the status of the review is?

25 MR. ASHER: I am Hans Asher from

1 Division of Engineering NRR. Yesterday when Tommy
2 sent us the email with the Applicant's program, I
3 was unable to open the email at that time. In the
4 morning I opened it. I printed it out, but I didn't
5 have a chance to look at it and evaluate it. So I
6 can't tell much, but based on what I've seen during
7 their presentation on March 27, it looked like they
8 voluntarily put the refueling seals into the scope
9 of license renewal. That made me happy that the
10 chances of hitting the upper part of the drywell
11 hitting corrosion are remote.

12 Also they took actions here and they
13 found something in 2003 which looks like a positive
14 actions but I want to evaluate a little more to see
15 because it's an uncoated area and the geometry is
16 such that if there is any water or moisture it may
17 go near the concrete and is it going to affect that
18 concrete shell. So I'm going to evaluate it and
19 call a teleconference if I need to and work on it.

20 MR. LE: Hans, can you stay there? In
21 the next slide, this slide was provided by Hans and
22 Dr. Chang. Can you explain the meaning of your
23 slide?

24 MR. ASHER: The Subcommittee has seen
25 this slide for all the plan before. Most of the

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1 fundamentals that we have identified in GALL and
2 they provided the reasons for it and they are all
3 within the special limits that we had established.

4 MR. LE: All right. Thank you. In the
5 next slide --

6 DR. CHANG: Hold a minute. Ken Chang.
7 Before we leave Section 3, I would like Robert Hsu
8 to address that one heat exchanger item that --
9 identified. Robert, are you ready to talk about it?

10 MR. HSU: Okay. The heat exchanger item
11 which originally was raised by the technical staff
12 and the technical staff asked this question and then
13 they addressed in the SER.

14 MR. BARTON: It is addressed in the SER?

15 MR. HSU: Yes.

16 MR. BARTON: Okay. So the staff is
17 satisfied with the response.

18 MR. HSU: Yes, the staff accepts the
19 response.

20 MR. BARTON: Okay. I just wanted to
21 make sure it was tied to the SER because it was
22 hanging out there in the audit report. I didn't
23 know where the closure was. Okay. Thank you.

24 MR. LE: That is the end of the Section
25 3.0. The staff would now like to brief the result

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1 of Section 4, the TOAA. This is a very unique
2 review. The staff had not found for Section 3.1 the
3 identification of TOA within the expectation of
4 regulation.

5 For 4.2, the reactor vessel neutron
6 embrittlement or the analysis reported in the
7 application were acceptable by the staff.

8 Section 4.3, metal fatigue, the
9 Applicant had committed to implement the FatiguePro
10 monitoring software and this has the Commitment 5
11 for Unit 1 and Commitment 4 for Unit 2.

12 For 4.4 TOAA addressing the equipment
13 qualification of electrical equipment, the Applicant
14 has stated that the EQ program together with other
15 plant programs will adequately manage the aging
16 effect of all the EQ during the period of standard
17 operation. The staff found it acceptable.

18 And Section 4.5 is not applicable. It's
19 a concrete containment tendon prestress with only
20 for the pressurizer.

21 4.6 Containment line plate, metal
22 containment and penetration fatigue analysis, the
23 Applicant had provided adequate evaluation to
24 demonstrate that the fatigue uses are not exceeded
25 during the period of operation and the Unit 1

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1 fatigue monitoring program for the torus attachment
2 typing and Unit 2 torus margin program will
3 adequately manage the aging effect for this feature.

4 Previously, the next slide, on Section
5 47, the other plant specific TOAA, the evaluation
6 for Unit 2 bioshield had been identified as an open
7 item and the reason for this as the Applicant
8 pointed out that the methodology for fluent
9 calculation were not an NRC approved methodology.
10 At this point, I would like to call on Jim Medoff to
11 report to the committee what is your review because
12 the Applicant has submitted a letter on March 23 to
13 propose the resolution to close this item.

14 MR. MEDOFF: Good morning. I'm Jim
15 Medoff with the Division of Component Integrity. I
16 was responsible for reviewing the time limiting
17 aging analysis for the bioshield. Basically, the
18 Applicant identified this as a TLA because they had
19 discovered a number of flaws in their bioshield at
20 Nine Mile Point Unit 2 and they had done a dynamic
21 crack growth fracture mechanics evaluation to
22 justify further service of the flaws.

23 The flaws that were unacceptable were
24 repaired by the Applicant prior to continued
25 service. The reasons it's a TLA is in the analysis.

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1 They had a set a maximum fluence on the bioshield
2 for the dynamic crack growth fraction mechanics
3 analysis. So they had identified the analysis as a
4 TLA for the facility.

5 Originally, they were proposed to
6 disposition this under a single I criteria meaning
7 that the fluence for the bioshield through the
8 extended period did not go above the fluence in the
9 assessment and therefore the evaluation was still
10 bounding. But the staff determined that they had
11 used an unapproved fluence methodology for the
12 bioshield and we requested that they submit an
13 updated fluence methodology that would conform to
14 Reg Guide 1.190 and we had our fluence expert, Dr.
15 Lambros Lois, review their methodology.

16 We were going to originally disposition
17 this through a commitment and the reason it's an
18 open item is OGC had put a legal objection on that
19 saying that if we were going to wait for an updated
20 fluence assessment later on that would avoid due
21 process. So we issued an open item on it.

22 Subsequent to that time, the Applicant
23 had sent in two responses, one in a docketed letter
24 to the staff and one in a docketed email to the
25 staff, that provided an updated fluence value for

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1 the bioshield that was done in accordance with an
2 approved methodology and we had Dr. Lois review
3 that. We determined that the fluence was less than
4 the fluence threshold for an embrittlement of
5 phreatic steels in 10 CFR Part 50 Appendix H and we
6 agreed that the analysis, did not need to be
7 identified as a TLA for this.

8 CHAIR SIEBER: So this open item is
9 essentially complete and will go away.

10 MR. MEDOFF: The open item will go away.

11 CHAIR SIEBER: And months of paperwork.

12 MR. MEDOFF: And actually the two
13 sections of the LRA associated will be deleted from
14 the application.

15 CHAIR SIEBER: Okay. Thank you.

16 MR. LE: Thank you, Jim. The two open
17 that the staff had reported previously, one is now
18 considered close and we will take the necessary
19 paperwork to report this in the final SER. For the
20 containment corrosion, the staff will continue to
21 discuss the technical concern and when it resolves,
22 it will be documented in the final SER.

23 In the next three slides -

24 MEMBER BONACA: I have a question about
25 the core shroud repairs. They were never considered

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1 as part of TLAs. Right?

2

3 MR. LE: No. Meena, can you comment on
4 that?

5 MEMBER BONACA: The clamps. I'm
6 thinking about the clamps that are being installed
7 on the shroud.

8 MS. KHANNA: Right.

9 MEMBER BONACA: They were never included
10 as TLAs.

11 MS. KHANNA: No, that's correct. They
12 were not.

13 MEMBER BONACA: Although they really are
14 planning to manage aging of those components.

15 MS. KHANNA: Through the BWR.

16 MEMBER BONACA: As you would do as
17 possibly for a TLA.

18 MS. KHANNA: Right. That's correct and
19 that's going to be handled through the BWR vessel
20 internals.

21 MEMBER BONACA: Okay. So that's why it
22 was excluded from the TLAs. Okay.

23 MR. LE: Meena, please stay there. In
24 the next three slides, we would -- actually a
25 Brunswick meeting. So we summarized these values in

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1 the SER in the table and we would like Meena to walk
2 us through Slides 26, 27 and 28.

3 MS. KHANNA: Okay. Hello. My name is
4 Meena Khanna and I'm with DCI. Based on lessons
5 learned as Tommy had indicated from the Brunswick
6 Lessons Renewal ACRS meeting, we walked away with a
7 few -- We decided to include a few more slides to
8 our presentation. But I do want to note that these
9 charts are actually not included in the current SER
10 but we will definitely include them in the final SER
11 because we do believe that it does clarify how our
12 assessment was performed on upper shelf energy and
13 was on the reactor pressure vessel circ and axial
14 weld failure probability analysis.

15 On this first chart, you can see we have
16 the three beltline materials listed for Nine Mile
17 Point Unit 1. The acceptance criterion, basically
18 there are two acceptance criterion. There is one
19 that's required by 10 CFR Part 50 Appendix G which
20 requires you to have an upper shelf energy value of
21 at least 50 foot pounds where you'll see that the
22 circ weld for Nine Mile Point 1 meets.

23 The other one is because they were not
24 able to meet that value, were not able to
25 demonstrate an upper shelf energy value of 50 foot

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1 pounds, they performed an EMA which was approved
2 through the BWR VIP74-a report. The staff provided
3 an SER on that. We did approve that methodology and
4 basically for Nine Mile Point 1 boiler shelf plates
5 because that's a BWR-2 design in the 74-a SER as
6 approved by the staff, we have an acceptance
7 criteria of less than 29.5 percent drop in the upper
8 shelf energy foot pound value.

9 You'll be able to see. We did compare
10 -- Well, actually we performed our own analysis of
11 the upper shelf energy values and then compared them
12 to the criteria as required in the 74-a report or 10
13 CFR Part 50 Appendix G. You'll see that their
14 values are definitely below the acceptance criteria.
15 We were able to conclude that they satisfactorily
16 satisfied 10 CFR 54.21(c)(1)(ii).

17 If you go to the next slide, for Nine
18 Mile Point 2 you'll see that they definitely were in
19 agreement and did satisfy the requirement of 10 CFR
20 Part 50 Appendix G of projecting upper shelf energy
21 values of greater than 50 foot pound.

22 The last slide is actually a slide on
23 the injector vessel circumferential weld relief and
24 reactor vessel axial wall probability of failure
25 analyses. BWR VIP 05 which the staff has also

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1 approved states that you can justify your acceptance
2 criterion as justified -- Okay. Let me get this
3 right. Sorry. Let me start from the beginning.

4 For limiting circ welds and you can
5 state that this was not applicable for Nine Mile
6 Point 2 because they had not submitted a relief
7 request for the elimination of circ welds
8 inspections. You'll see that we only approved it
9 for Nine Mile Point Unit 1 which they had
10 identified.

11 The acceptance criterion that the staff
12 used is based on the staff's SER of the BWR VIP 05
13 report. The Nine Mile Point 1 welds are fabricated
14 from CE welds and in the VIP 05 report the
15 acceptance criterion for CE welds is less than 113.2
16 degree Fahrenheit Mean RTndt. So if you look at the
17 Nine Mile Point 1 values, they are very low. We did
18 confirm. We came up with 22.5 degrees Fahrenheit of
19 the Mean RTndt which is definitely well below the
20 acceptance criterion of 113.2. I do want to note
21 that these values are very low because those welds
22 have very low copper chemistry values.

23 And then the same thing was done for
24 limiting axial weld. The acceptance criterion that
25 was accepted in the 05 SER, the BWR VIP 05 SER, is

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1 less than 114 degrees. The staff did its own
2 calculations of the Mean RTndt values and came up
3 with 31.0 which is very close to what Nine Mile
4 Point came up with and which is also well below the
5 114 degrees Fahrenheit Mean RTndt that's accepted in
6 the staff's BWR VIP 05. We were able to conclude
7 that these TLAs did meet 10 CFR 54.21(c)(1)(I) or
8 (ii).

9 MR. LE: Thank you, Meena.

10 CHAIR SIEBER: Thank you.

11 MR. LE: With Meena's input --

12 MR. FAIR: Hi, this is John Fair with
13 NRR Division of Engineering. I just wanted to make
14 one point of clarification on the core shroud
15 repair. There was a TLA associated with it as
16 discussed in Section 4.3.5 of the staff SER and
17 basically what it was they had a relatively low
18 fatigue usage for the core shroud repair and so
19 extrapolated out for 60 years it's not a problem.
20 But it is discussed in the SER.

21 MEMBER BONACA: I saw it. Thank you,
22 John.

23 MR. LE: With that input from John, the
24 staff now makes conclusion on the TLA review. We
25 were able to close the open item in Section 4.7 and

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1 now the staff has concluded that TLAA list is
2 adequate according to 10 CFR 54.3. The analysis
3 provided were valid for the period of standard
4 operation according to 10 CFR 54.21(c)(1)(I). The
5 staff concludes the analysis that projects by the
6 Applicant to the end of POE in accordance with 10
7 CFR 54.21 (c)(1)(ii). And the aging effect will be
8 adequately and sufficiently managed for the extended
9 period of operation in accordance with (iii).

10 The staff also concludes that that the
11 supplement to the FSAR has been sufficient and
12 adequate as required by 10 CFR 54.21(d) and there
13 are no plant specific exemptions that have been
14 requested as stated in the 10 CFR 54.21(c)(2). With
15 all the previous details, findings from the staff
16 and the Audit Team and the regional inspection, the
17 staff now would like to report to the Subcommittee
18 that the staff has now concluded that there is
19 reasonable assurance that the activity authorized by
20 the renewal license will continue to be conducted in
21 accordance with the current licensing basis and that
22 any changes made to the Nine Mile Point Nuclear
23 Station CLB in order to comply with the 10 CFR
24 54.29(a) are in accord with the Act and the
25 Commission regulation. That ends the briefing.

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1 CHAIR SIEBER: Okay. Thank you very
2 much and I would like to thank the staff for all
3 their work in preparing the safety evaluation and
4 their work in preparing for today's presentation.

5 Now the process that we go through, this
6 is a subcommittee meeting of the Advisory Committee
7 on Reactor Safeguards. We have a statutory
8 responsibility under the Atomic Energy Act of 1954
9 as amended to review granting of new licenses or the
10 extension of the term of any license and therefore,
11 before the Safety Evaluation Report is complete, we
12 will prepare a report which will be come Section 5
13 of the Safety Evaluation Report.

14 Now this is an interim meeting. We have
15 interim meetings when the bulk of the work has been
16 done in preparing the application that's been
17 submitted and the bulk of the review work is done so
18 that if there are issues that are of concern to the
19 Advisory Committee that might impact the granting of
20 a license extension or impact some aspect of the
21 future operation of the plants so that the Advisory
22 Committee can alert both the staff and the Applicant
23 of that condition.

24 If that is the case, we would write an
25 interim letter report and provide it to the staff

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1 with our views on the issues that are outstanding of
2 the subject of our concern. On the other hand, if
3 you don't get a interim letter, that does not mean
4 that school is out and everything is perfect. It
5 means that the application and the safety evaluation
6 are progressing along a path that we consider to be
7 satisfactory and that there is a probability that
8 license renewal will be granted provided all the
9 commitments are completed. So you have to watch
10 your mailbox to see if you get a letter or not.

11 On the other hand, after our second
12 meeting where all of you will appear before the full
13 committee, there must be a report or you don't get a
14 license renewal. So we're in the first step of that
15 process which is an interim review and it may or may
16 not result in an interim letter. After seven years
17 of being on the Advisory Committee on Reactor
18 Safeguards, I have learned never to predict what the
19 full committee will do when it attempts to reach
20 consensus and I am not going to change my method of
21 operation today. On the other hand, if there is an
22 interim letter, I will be the first drafter and
23 typically not the last drafter of such a letter.

24 I would be interested in hearing from
25 Committee members as to their views first of all

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1 regarding the application, secondly, the staff's
2 review, issues of concern to them, and lastly,
3 whether if they were acting on their own they would
4 write an interim letter and what the contents of
5 that letter would be. And I'll make it easy. I
6 will be last. That makes it easy for me, but I
7 would like to ask --

8 MR. BARTON: Before you start that
9 process, may I ask a question?

10 CHAIR SIEBER: Sure.

11 MR. BARTON: I noted, and I didn't
12 reference where I noted this, there are service
13 water tunnel on Nine Mile 1 exhibit leakage and it
14 was subsequently repaired from inside the tunnel and
15 the question is is there any program in place,
16 management program, to inspect the tunnel for other
17 cracks or leakage paths in the future and I couldn't
18 find the answer to that anywhere. I don't know who
19 to address that to, to Applicant or the staff.

20 MR. LE: Can the Applicant take that?

21 MR. MAZZFERRO: This is Pete Mazzferro
22 from Constellation Energy. The service water
23 tunnels are in an aging management program and
24 they're covered under our structures monitoring
25 program in which we do inspections every two years.

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1 MR. BARTON: Thank you.

2 DR. CHANG: This issue was discovered in
3 the third first-stage audit which was held at
4 Crofton. At that time, this issue was heavily
5 reviewed.

6 CHAIR SIEBER: Okay.

7 MR. BARTON: Thank you.

8 CHAIR SIEBER: Thank you. Well, John, I
9 would like to ask your opinions on the four
10 questions that I asked and any others that may have.

11 MR. BARTON: Where are those four
12 questions written?

13 CHAIR SIEBER: One of them dealt with
14 the application and its adequacy, the second the
15 staff's review, third your concerns, fourth, if you
16 would write an interim letter.

17 MR. BARTON: I'll start at the end with
18 interim letter. I'm not sure an interim letter is
19 required. I think full committee ought to be
20 appraised of what are "the issues" of this
21 application and basically the containment issues.
22 The final application was fine. I just don't know
23 why it took so long. We had an explanation, but I
24 think that the job done initially was sub par. And
25 after all these applications we've reviewed so far,

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1 I just wonder this far down the path why we had to
2 go through some of that. There's a lot of
3 experience out there on what constitutes a good
4 application and somebody didn't -- We heard the
5 explanation, organization or whatever. But the
6 final application, I don't have any problem with.

7 I think the staff did a good job of
8 reviewing the application, came up with a lot of
9 issues and commitments. I don't have any issue with
10 the SER. I thought the SER was done fine.

11 CHAIR SIEBER: And thank you. Let me
12 add one thing. We discussed this briefly before,
13 but the root cause of the original application
14 problems, one of them was isolationism.

15 MR. BARTON: Right.

16 CHAIR SIEBER: And my experience in the
17 industry over 30 years that was viewed by a number
18 of plants as a good way to be. You know stay low in
19 the grass and the inspectors won't come by. Don't
20 mess up. You don't get in the newspapers and that's
21 a mistake. It really is.

22 In order for you to run a good plant,
23 you have to know what everybody else is doing
24 because you can't by yourself think of everything.
25 Somebody else will have thought about this issue and

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1 another plant will have thought about that issue and
2 that's why there's industry groups. That's why
3 there's INPO. That's one of the functions of the
4 NRC is to make sure that people are aware of the
5 latest in technology and the advances in the process
6 of operating and maintaining a plant.

7 So isolationism doesn't work. If we're
8 seeing that at this day and age after an industry
9 that's basically been around for 40 years, I think
10 we all need to take that to heart and make sure that
11 it doesn't persist in the future.

12 MR. BARTON: I think they made a lot of
13 changes as a result of that.

14 CHAIR SIEBER: I do too.

15 MR. BARTON: I guess what I'm
16 disappointed in is that it was able to get that far
17 without the organization recognizing it and
18 correcting it before it got to the staff telling
19 them "Hey, your application is really not adequate."

20 CHAIR SIEBER: You can overcome one
21 mountain. On the other hand if isolationism is
22 built into the culture, you have to change the
23 culture.

24 MR. BARTON: You're looking at safety
25 culture issues now.

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1 CHAIR SIEBER: Not this morning. Later
2 in the week. Okay. Thank you, John.

3 MEMBER MAYNARD: As far as the
4 Applicant's concerned, it obviously got off to a
5 shaky start. It looks like a number of good
6 corrective actions have been taken. I think we've
7 beaten this issue almost to death. I think it's
8 something that both the Applicant and other
9 applicants need to be conscious of and pay attention
10 to in the future, but it looks like they have taken
11 a number of good aggressive actions.

12 As far as the staff's review, it appears
13 to be very thorough. It appears that they were
14 instrumental in identifying some issues to the
15 Applicant that resulted in good corrective actions
16 by the Applicant. So overall, I think the staff has
17 done a good job and in fact, the SER reflects that.

18 As far as issues, we discussed a couple
19 of them. The inability to do eddy current testing,
20 a little bit of a concern. However, with the
21 actions taken, I'm not sure that that's really a
22 degraded margin. It's actually probably an increase
23 in margin over what they had for the first 30 years.
24 So that's an issue that it would be better if
25 something else could be done. But without that, it

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1 looks like the appropriate actions are being taken
2 there.

3 I personally don't see any value added
4 at this point for us to put an interim letter in. I
5 think issues have been discussed or known and
6 they're being worked on and I'm not sure what value
7 added it would be for an interim letter.

8 CHAIR SIEBER: Dr. Shack, would you like
9 to comment?

10 MEMBER SHACK: It seems to me that in
11 the essence that license renewal is really focused
12 on the managing of the aging of the passive systems,
13 I think they've done a pretty good job with their
14 reactor internals, their piping. That's the
15 replacement in the Unit 1 and essentially a good
16 material to start with in Unit 2. They've been
17 aggressive in the water chemistry with the hydrogen
18 control and the metal addition. So I think they've
19 done a good job of managing the aging of those
20 passive systems which again is a large part of the
21 license renewal process.

22 CHAIR SIEBER: Thank you. Dr. Wallis.

23 MEMBER WALLIS: You should really hear
24 from the other first since I missed part of this. I
25 think that the licensee's fulfilling the

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1 requirements of the regulations as far as I can
2 gather and I think the staff has checked those
3 requirements well. I did raise the question of
4 coatings. I don't know what the staff had to say
5 about that, but it's a message I take away I think
6 for maybe a different place where we ask about that
7 issue because apparently the NEI guidance has been
8 approved and they're doing what they're supposed to
9 do. But it may not be in the future the right thing
10 to do. That's a different issue though. I don't
11 want to hold things up for that.

12 CHAIR SIEBER: Dr. Bonaca.

13 MEMBER BONACA: First of all, I would
14 like to recognize the staff for having done the job
15 of identifying the shortcomings and leveraging those
16 with the licensee and I think the licensee then did
17 a decent job of bringing back and to correcting the
18 scope and so on. I think all in all the application
19 is pretty complete. I see a couple of open items
20 and they seem to be appropriate in needing closure.
21 I think the SER was complete, one of the heaviest
22 SERs we have received to-date.

23 And I don't think we need to write an
24 interim letter. I think that the issues are pretty
25 clear and I haven't heard from anyone to bring in an

1 issue other than the two that are being addressed as
2 open items and we of course will review those in the
3 final review of the final SER. So I have no further
4 comments.

5 CHAIR SIEBER: Sam.

6 MEMBER ARMIJO: My view is both the
7 Applicant and the staff have done a very thorough
8 job. I also don't see a need for an interim letter
9 and on the issue of the isolation condenser, absence
10 of eddy current testing, I'm not sure that an
11 integral leak test isn't really better since it's a
12 100 percent system test of the function which can be
13 done frequently as opposed to infrequent spot checks
14 using eddy currents which aren't 100 percent
15 reliable anyway. So I'm not so sure that's a big
16 loss as far as being reasonably sure that function
17 condenser will be met. Overall, I'm satisfied.

18 CHAIR SIEBER: Okay. Thank you. So far
19 we have a number of votes that say no interim
20 letter, but that's no everybody. So we'll find out
21 later this week.

22 MR. BARTON: We always have the right to
23 change our minds before.

24 CHAIR SIEBER: Right. You can change
25 your mind at any time, but in any event, my own

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1 comments and conclusions, I agree that the
2 application, the amended application, is
3 satisfactory. In fact, I thought it was pretty
4 thorough. It's about double the size of the safety
5 evaluation report and I think it's complicated by
6 the fact that the units are different in time and
7 different in basic design concept and so it took me
8 a little bit of extra time to study exacting what
9 the issues were between the units and how they fit
10 into the time frame. You're almost running out of
11 time on Unit 1. Unit 2 you have a lot of time left
12 since it only went on line in 1987 or 1988.

13 On the other hand, it's none too soon to
14 be implementing these programs. Some of these
15 commitments have to be implemented within the next
16 year which to me is going to be a tight schedule.
17 It's going to take a lot of effort to do that.

18 As far as the staff's SER is concerned,
19 I think the staff has exercised good judgment all
20 the way through. I think the SER is well written
21 and I continue to congratulate the staff becoming
22 more efficient and more thorough in the processing
23 of these applications and I think that's good for
24 applicants and it's good for the Agency and it's
25 good for the public safety when you're thorough and

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1 decisive as the staff demonstrates that they are.

2 I also don't see a need at this point
3 for an interim letter because I think issues that
4 are there that I would be concerned about are well
5 known by everyone and have been identified by both
6 the applicant and the staff and are on their way to
7 being resolved. So I'm not sure that there would
8 added value in writing an interim letter, but I'll
9 find out in the next couple of days.

10 MR. BARTON: Is the full committee going
11 to hear some presentation?

12 CHAIR SIEBER: From me.

13 MR. BARTON: From you. Okay. I
14 understand.

15 CHAIR SIEBER: I will just give a verbal
16 report.

17 MR. BARTON: So you'll highlight five or
18 ten issues.

19 CHAIR SIEBER: Yes.

20 MR. BARTON: All right. That's good.

21 CHAIR SIEBER: I will just go through
22 the 80 or 90 slides that I have very quickly. With
23 that, if anyone has any comments that they would
24 like to make. Lacking any comments, I appreciate
25 the time and effort spent by the Applicant,

NEAL R. GROSS

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1 Constellation Energy, and by the staff including the
2 Region I staff who did a fine job in audits and
3 inspections in this program. If there are not
4 further questions, I think that we can adjourn this
5 Subcommittee meeting. Off the record.

6 (Whereupon, at 11:45 a.m., the above-
7 entitled matter was concluded.)

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