

ORIGINAL

UNITED STATES NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:

FLORIDA POWER & LIGHT
COMPANY, St. Lucie Plant No. 1

)
) Docket No. 50-335-OLA
) ASLBP No. 88-560-01-LA
)
)

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1 UNITED STATES OF AMERICA
2 NUCLEAR REGULATORY COMMISSION
3 ATOMIC SAFETY AND LICENSING BOARD

4 In the Matter of:)
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7 COMPANY, St. Lucie Plant) ASLPB No. 88-560-01-LA
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9)
10 - - - - -)

11 BEFORE: B. PAUL COTTER, Chairman
12 GLEN O. BRIGHT
13 DR. RICHARD F. COLE
14 Administrative Judges

15 Sheraton Beach Hotel
16 Hutchinson Island
17 Jensen Beach, Florida

18 Tuesday,
19 March 29, 1988

20 The above-entitled matter came on for hearing,
21 pursuant to Notice, commencing at 9:00 a.m.

22 Reporting:

23 JEFFREY A. ROESER
24
25

APPEARANCES:

On behalf of the Petitioner:

MR. CAMPBELL RICH
MR. ANTHONY CANTIZARO

On behalf of the NRC:

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United States Nuclear Regulatory Commission
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MR. E. G. TOURIGNY

On behalf of FLORIDA POWER & LIGHT:

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P R O C E E D I N G S

JUDGE COTTER: Good morning, ladies and gentlemen.

This is a proceeding to hear oral argument on the Petition of Campbell Rich to intervene in this proceeding and to consider the positions of the parties concerning the Contentions and the Contentions that he has asked to be litigated during the course of it.

The proceeding involves, as you know, the high density reracking of the spent fuel pool of the St. Lucie Plant.

Our schedule today is to address the oral argument concerns first, which we expect to take at least most of the morning and possibly part of the afternoon.

We then hope to be able to take a tour of the spent fuel pool itself, the Board does, and finally if there is any time remaining, we will entertain limited appearance statements from those who wish to offer them.

If the time is not sufficient for limited appearance statements, we certainly would welcome written statements and we will reschedule at a later date if it is appropriate and a period

1 of time to receive limited appearance statements.

2 At this point I ask those at the
3 head table here representing the parties in this
4 proceeding to enter their appearance.

5 If you would, please.

6 MR. BAUSER: Yes. My name is
7 Michael A. Bauser. I am appearing here today on
8 behalf of the Florida Power & Light Company.

9 I am accompanied by Mr. Harold F.
10 Reis and Mr. John T. Butler.

11 JUDGE COTTER: Thank you, Mr.
12 Bauser.

13 MS. YOUNG: Good morning. My name
14 is Mitzi Young. I am here representing the NRC
15 Staff.

16 Also seated at counsel table is Mr.
17 Benjamin H. Vogler and also seated at the table
18 but not entering an appearance in this proceeding
19 is the Plants Project Manager, Ed Tourigny.

20 JUDGE COTTTER: Thank you, Ms.
21 Young.

22 Mr. Rich?

23 MR. RICH: My name is Campbell
24 Rich. I live here in Martin County and to my
left is Anthony Cantizaro --

1 AUDIENCE: Louder. We can't hear.
2 Speak slowly, too.

3 MR. RICH: My name is Campbell
4 Rich. I'm a resident of Martin County. Seated
5 to my left is Anthony Cantizaro.

6 AUDIENCE: We can't hear you.
7 Speak into the microphone.

8 MR. RICH: Can you hear me in the
9 back?

10 My name is Campbell Rich. I live
11 in Martin County. Seated to my left is Anthony
12 Cantizaro. He was one of the original
13 signatories to the original letter requesting a
14 public hearing on this issue.

15 JUDGE COTTER: Thank you, Mr. Rich.
16 Are there any preliminary matters
17 that anyone wishes to take up at this point
18 before we turn to the Petition?

19 MR. BAUSER: Yes, Mr. Chairman.
20 If I might, I would like to make a
21 few introductory comments on behalf of FPL.

22 JUDGE COTTER: To what point, Mr.
23 Bauser?

24 MR. BAUSER: I would like to
25 discuss very briefly the nature of the proceeding

1 in terms of what is involved strict from what I
2 think is going to become a rather technical
3 discussion as we proceed.

4 And also, to outline, for the
5 benefit of the Board, our position with respect
6 to the Contentions involved.

7 JUDGE COTTER: Well, let me reserve
8 your position on the Contentions and proceed with
9 your introductory remarks.

10 Excuse me a moment.

11 AUDIENCE: Would you please give
12 the address of where we would address public
13 statements, written statements, for the record.

14 The public may not have an
15 opportunity to speak at this meeting.

16 JUDGE COTTER: Yes.

17 They can be sent to me, and my name
18 is B, as in boy, Paul Cotter, Jr. I am Chairman
19 of this Board --

20 AUDIENCE: Cotter? C-O-T-T --

21 JUDGE COTTER: E-R.

22 AUDIENCE: Is that "B" Paul Cotter?

23 JUDGE COTTER: B, as in boy, Paul
24 Cotter, C-O-T-T-E-R, Jr.

25 I am Chairman of the Atomic Safety

1 and Licensing Board in this proceeding.

2 And the address is U. S. Nuclear
3 Regulatory Commission, Washington, D. C., 20555.

4 Does everyone who wants that have
5 it?

6 Yes, sir. Mr. Bauser, proceed.

7 MR. BAUSER: Mr. Chairman, Members
8 of the Board, I would like to emphasize a basic
9 point at the outset.

10 The factors pertinent to the
11 admission of Contentions and circumstances under
12 which the Commission will conduct a hearing are
13 specified in technical and legal terms.

14 FPL's objections to Contentions and
15 to the conduct of a hearing are therefore
16 necessarily also framed in the same technical and
17 legal language.

18 This should not be interpreted,
19 however, as reflecting any lack of concern for
20 safety or the environment.

21 On the contrary, putting aside the
22 technical legalities, various Contentions to be
23 considered today have been addressed in terms of
24 the issues they raise and fully taken into
25 account on their merits.

1 In fact, the principle concerns
2 reflected in the Petition to intervene were
3 considered long ago either in connection with the
4 licensing of the St. Lucie Plants themselves, or
5 in connection with similar issues at other
6 plants.

7 For example, at the time the St.
8 Lucie Plants were constructed matters related to
9 future population growth, the threat of
10 hurricanes and possible earthquakes were all
11 considered.

12 The plant is essentially an island
13 built on compacted earth, and all of its
14 structures are above the height of any
15 conceivable level the sea might reach as a result
16 of hurricanes or other natural phenomenon.

17 With respect to these matters,
18 then, there is simply new in the Contentions.

19 So far as the increased spent fuel
20 capacity is concerned, which apparently is what
21 triggered this proceeding, again, there is
22 nothing new.

23 Such expansions have taken place at
24 numerous plants throughout the country without
25 difficulty.

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2 reflected in the petition to intervene were
3 considered long ago either in connection with the
4 licensing of the St. Lucie plants themselves, or
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20 capacity is concerned, which apparently is what
21 triggered this proceeding, again, there is
22 nothing new.

23 Such expansions have taken place at
24 numerous plants throughout the country without
25 difficulty.

1 St. Lucie I has been in commercial
2 operation since 1976 at the same site as its
3 sister plant, St. Lucie II, which has been in
4 commercial operation since 1983.

5 FPL is proud of these facilities
6 and has been and will continue to be very careful
7 that they operate in a manner which does not
8 endanger the public.

9 These plants enjoy an enviable
10 reputation, not merely for their efficient and
11 economical production of electricity, but also
12 for overall operational excellence.

13 For example, the Nuclear Regulatory
14 Commission reviews the operations of licensed
15 nuclear power plants during the preceding year on
16 an annual basis.

17 That review is detailed, critical
18 and covers many different functional activities,
19 including power plant operations, maintenance and
20 quality programs.

21 The most recent such examination
22 which was received as recently as January of this
23 year states in its overview that, am I'm quoting,
24 "St. Lucie continues to perform as one of the top
25 sites in the region."

1 FPL intends not merely to maintain
2 its record at St. Lucie, but to improve it.

3 This is true with respect to all
4 plant activities, including the spent fuel
5 expansion at St. Lucie I.

6 Thank you, Mr. Chairman.

7 JUDGE COTTER: Do you have any
8 opening comments?

9 MS. YOUNG: No, the Staff does not.

10 JUDGE COTTER: Mr. Rich, do you
11 have any opening comments?

12 MR. RICH: Yes, I do.

13 I would first like to welcome you
14 to Florida. You certainly have picked a
15 beautiful spot in which to hold this hearing.

16 The view from this floor reveals a
17 very lovely part of Florida. That natural beauty
18 is, in fact, a large part of the attraction of
19 this area.

20 Our appreciation for our
21 environment and our struggles to preserve it is
22 what brings people here, which allows us to grow,
23 which allows our economy to thrive.

24 We work very hard in this community
25 to resist the short-sighted excesses that have

1 spoiled so much of South Florida.

2 We make consistent effort to think
3 not of the most expedient means to a more
4 profitable end, but of what is best not only for
5 us, but also for our environment and for future
6 generations.

7 We are currently trying to preserve
8 the area directly across the river from us, known
9 as the Savannahs.

10 We are also encouraging the
11 acquisition of another nine hundred and some
12 undevelope^d acres in the south part of the
13 County.

14 But all this effort would be
15 rendered meaningless by one accident in the spent
16 fuel pool, permanently contaminating most of this
17 area.

18 I must admit to some confusion
19 still concerning the difficulty we have had in
20 supposedly qualifying for the Board's attention.

21 We are the ones, obviously, who
22 live here, who own homes here, take our children
23 to school here, pursue our livelihoods here and
24 enjoy the many beautiful beaches on this island.

25 We are the ones who remain

1 susceptible to the disastrous effects of any
2 accident, whether predicted or unforeseen, that
3 may occur at this plant.

4 This perpetual exposure qualifies
5 us on the most essential level for any
6 participation we may choose in these matters.

7 Long after you have made your
8 decisions and have gone back to Washington and
9 long after these plants have shut down and FP&L
10 has lost any positive motivation for maintaining
11 these pools; we, the members of this community,
12 ultimately, will bear the responsibility of
13 maintaining them.

14 We will suffer the perennial
15 exposure to and have the ever-present worry
16 concerning the safety of the high-density storage
17 system.

18 Thus, our involvement in these
19 hearings need not be further qualified on
20 inadequate technical and legal basis and filed in
21 a timely manner.

22 The effort should not be to fool
23 the public or disqualify us on a technical
24 matter, or to slip the situation and its import
25 past us unnoticed.

1 Rather, the effort must be to
2 inform us as best that is possible; to provide us
3 with the opportunity to understand the
4 responsibilities and significant hazards that
5 would accompany such a decision, and allow us to
6 make up our minds whether we want this in our
7 midst.

8 Our decision and that of the
9 Florida Department of Environmental Regulation
10 and the Florida Office of Radiation Control and
11 both counties Emergency Management Teams must
12 play an important role in any decision that is to
13 be made.

14 The Federal Government must not be
15 in a position to unilaterally decide to create a
16 situation that poses a clear and present danger
17 to the welfare of this community.

18 It is not up to us to prove that
19 the system is dangerous. We reject that burden
20 of proof.

21 Rather, the burden is clearly upon
22 FP&L and the NRC to demonstrate the
23 unquestionable reliability of the system and he
24 new and unproven technologies that are being
25 developed to handle this material.

1 You don't get to make one mistake.
2 The system must be without fault, for clearly the
3 results of an error are much too deadly.

4 This is a risk our community is not
5 willing to take.

6 We have suffered through TMI,
7 Chernoble and other less-publicized nuclear and
8 other toxic-waster disasters.

9 The much-discussed high-level
10 waster storage and/or reprocessing facility that
11 has been promised for decades has never been
12 realized, as evidenced by the dismal failure of
13 the West Valley, New York, site.

14 The temporary storage facility here
15 continues to increase its capacity and there is
16 no end in sight.

17 This same situation is occurring at
18 many different facilities around the nation and
19 these systems are being forced to store greater
20 and greater amounts of toxic waste.

21 These are all temporary solutions
22 to an ongoing problem that can too easily create
23 a permanent disaster.

24 Make-shift technology is being
25 improvised to deal with the myriad of problems

1 created by ever-higher density storage
2 requirements.

3 The literature available on these
4 problems is replete with phrases like
5 "insufficient data," and, "more work needs to be
6 done."

7 There is far too much uncertainty
8 about these technical matters.

9 A more realistic appraisal of the
10 situation would lead one to believe that this
11 facility will be loaded to its utmost capacity
12 and then remain there many, many years into the
13 future.

14 No engineering staff, no matter how
15 conscientious or competent will be able to safely
16 operate a grossly-over-burdened system for
17 thousands of years to come.

18 If this is what must be, then we
19 have every right to take all the time we need to
20 make sure that the storage system finally
21 achieved is the safest long-term solution to this
22 growing problem; to make sure that every
23 reasonable effort is made to mitigate the risks
24 to as great an extent as is possible.

25 What's the hurry, anyway? This

1 stuff's going to be around for 10,000 years.

2 JUDGE COTTER: Thank you, Mr. Rich.

3 Let me correct an oversight. I

4 should --

5 I've already introduced myself as
6 Chairman of the Board.

7 To my left is Judge Richard Cole,
8 who is a Doctor of Engineering and his
9 specialties range over quite a -- quite a range
10 of subject matters.

11 To my right is Judge Bright, who is
12 a physicist.

13 Unless there are any further
14 matters, I think we ought to go directly into the
15 Contentions.

16 Let me mention one more issue. Do
17 I understand that both the Florida Power & Light
18 and the NRC have conceded Mr. Rich's standing in
19 this proceeding, insofar as his geographic
20 location and that sort of thing is concerned?

21 MR. BAUSER: As far as FPL is
22 concerned, his standing is not -- not in issue.

23 MS. YOUNG: The Staff concurs.

24 JUDGE COTTER: All right. Thank
25 you.

1 Then we turn now to the contentions
2 which Mr. Rich has offered to be litigated in
3 this proceeding.

4 And if you would begin -- I would
5 caution the parties not to repeat their written
6 materials which they have offered.

7 If they have something to add to
8 what they have submitted in writing, which we
9 have read, now would be the time.

10 So, we'll begin with Contention 1.
11 Mr. Rich?

12 MR. RICH: You want me to start?

13 JUDGE COTTER: Yes, sir. It's your
14 Contention.

15 MR. RICH: Okay.

16 Well, obviously, the No Significant
17 Hazards Consideration has been issued.

18 I would request that the Board
19 review the Staff's determination of No
20 Significant Hazard and consider suspending the
21 Amendment.

22 I feel the Staff did not adequately
23 consider the boraflex issue.

24 The problems with the boraflex
25 technology both increase the probability of an

1 accident previously evaluated and it increases
2 the probability of an accident not
3 evaluated -- an accident such as the one
4 described in the Brookhaven National Laboratory
5 Report.

6 Could we figure out a way to refer
7 to this throughout the proceedings?

8 JUDGE COTTER: BNL.

9 MR. RICH: The B -- Okay. The BNL
10 Report.

11 Boraflex is an unproven technology
12 and, therefore, a significant hazard
13 consideration and a hearing must be undertaken
14 for this particular plant.

15 It says in the final No Significant
16 Hazard Consideration that, "No unproven
17 technologies and methodologies were utilized in
18 the analysis and design of the proposed high-
19 density racks.

20 No unproven technology will be
21 utilized in the fabrication and installation
22 process of the new racks.

23 The basic reracking technology in
24 this case has been developed and demonstrated."

25 If you want me to go into this at

length, I could quote from the Quad Cities Point Beach Report that speaks very directly to the --

AUDIENCE: We cannot hear you back here.

MR. RICH: Okay.

Would it be appropriate for me to quote from the Quad Cities Report in support of my Contention?

JUDGE COTTER: It's a little bit far afield since it's a different reactor and a different proceeding.

MR. RICH: However, I think the Staff, NRC Staff, relied on FP&L's response to their -- their question was:

"Recent anomalies have been identified in the Quad Cities and Point Beach spent fuel pools due to boraflex shrinkage caused by irradiation.

Based on this, provide justification to demonstrate the continued acceptability of boraflex for application in the St. Lucie spent fuel pool."

So they're asking FP&L to respond specifically to the concerns brought up by that report.

1 Mr. Tourigny asked -- An NRC
2 Information Notice went out containing --
3 concerning boraflex.

4 "This Notice is to alert --" Okay.

5 This is NRC Information Notice
6 8743, "Gaps in neutron-absorbing material and
7 high-density spent fuel storage racks," dated
8 September 8th, 1987.

9 "The purpose of this --" "This
10 Notice is to alert recipients to a potentially-
11 significant problem pertaining to gaps identified
12 in the neutron-absorber component of the high-
13 density spent fuel storage racks of Quad Cities
14 Unit I.

15 The safety concern is that certain
16 gaps might excessively reduce the margin of
17 nuclear subcriticality in the fuel pool."

18 It goes on to say, "The concern is
19 that separation of the neutron-absorber material
20 used in high-density fuel storage racks might
21 compromise safety.

22 Efforts to understand the gap
23 formation have revealed several topics on which
24 information is needed.

25 The effect --"

1 I mean, if this isn't a definition
2 of "unproven," I don't know what is.

3 "The effect of rack design and
4 manufacturing methods and the consequences of
5 stress, temperature and chemical environment to
6 irradiated boraflex is uncertain."

7 And yet here we use -- we hear FP&L
8 stating, for example, again in their response of
9 October 20th, "These tests indicating --" --
10 referring to the tests done by Quad Cities, "that
11 boraflex maintains its neutron attenuation
12 capabilities when subject to an environment of
13 borated water and 1.03 times 10 to the 11th rads
14 gamma radiation."

15 Well, that's true, except it's
16 clearly stated in the Quad Cities report, " --
17 except where there are gaps."

18 And I quote in the report, "Whereas
19 where gaps exist, the back scattered neutrons
20 and go significantly less attenuation."

21 They also say, "In the gap region
22 --" This is in a subsection entitled,
23 "Reactivity effects of gaps in the fuel rack
24 neutron absorber."

25 "In the gap region the absence of

1 neutron absorber in one or more panels results in
2 a net local increase in reactivity as well as an
3 increase in the reactivity of the entire storage
4 cell."

5 So here we're getting an increase
6 in reactivity, so we're challenging the safety
7 standard of KF -- K effective.

8 JUDGE COTTER: Doesn't most of this
9 material relate to your Contentions on boraflex?

10 MR. RICH: Well, maybe they --
11 Yes, they do, and we could either do it here or
12 later.

13 But as to why the Board should
14 suspend the Amendment now, I would like to --

15 JUDGE COTTER: What authority does
16 the Board have to suspend the Amendment?

17 MR. RICH: I feel the Board has
18 authority in this area.

19 JUDGE COTTER: Well, unfortunately,
20 the Board feels it has all sorts of authority,
21 but it's limited to what the Regulations grant to
22 us.

23 MR. RICH: Well, let me read this
24 --

25 AUDIENCE: Will all the

1 neutron absorber in one or more panels results in
2 a net local increase in reactivity as well as an
3 increase in the reactivity of the entire storage
4 cell."

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6 in reactivity, so we're challenging the safety
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18 authority in this area.

19 JUDGE COTTER: Well, unfortunately,
20 the Board feels it has all sorts of authority,
21 but it's limited to what the Regulations grant to
22 us.

23 MR. RICH: Well, let me read this--

24 AUDIENCE: Will all the
25 participants please talk into a microphone?

1 MR. RICH: Well, this is why I feel
2 it's imperative that this happen quickly.

3 Again, to quote the Quad Cities
4 report: "The rate of boraflex shrinkage is
5 likely to --"

6 JUDGE COTTER: Excuse me, Mr. Rich.

7 The question is: What authority do
8 we have to do anything, so far as you know?

9 So far as we know, we do not have
10 authority to act on the No Significant Hazard
11 findings of the Staff.

12 MR. RICH: You don't have the
13 ability to act on an Amendment that you issued?

14 JUDGE COTTER: We did not issue it.

15 The Staff issued it --

16 AUDIENCE: You can make
17 recommendations --

18 JUDGE COTTER: Excuse me.

19 This is a formal proceeding and
20 there are parties who have obtained entry to it.
21 We cannot, if we're going to conduct our business
22 in an orderly fashion, have miscellaneous
23 comments from those who are observing it.

24 I would appreciate it if you
25 observe that, because we have a fair amount of

1 ground to cover here today.

2 The question is jurisdiction
3 authority, Mr. Rich.

4 MR. RICH: You did not issue the
5 Amendment, the Staff did?

6 JUDGE COTTER: That's right.

7 Under the scheme of things -- Maybe
8 we better let the other parties respond to this.

9 But so far as I know, with this
10 Contention you have a major problem in that it
11 would appear on the face of it that this Board
12 does not have authority to reverse a No
13 Significant Hazards Consideration Finding.....

14 MR. RICH: Even if there's -- it's
15 clearly established that the basis on which that
16 was issued is incorrect or inadequate in scope?

17 JUDGE COTTER: Well, we're not
18 taking evidence here at this point.

19 But even so, I believe that's --
20 that may be the case.

21 MR. RICH: It seems to me you're
22 saying that any evidence presented would not be
23 -- that would be senseless anyway, because --

24 JUDGE COTTER: No, no, no. We're
25 talking about the No Significant Hazards Finding,

1 which is a finding made by the Staff which
2 authorizes the licensed applicant to proceed with
3 the license Amendment work that they have
4 requested.

5 So far as I know, my recollection
6 off the top of my head, is that if that finding
7 is to be reversed at this point --

8 MR. RICH: Uh-huh. (Affirmative.)

9 JUDGE COTTER: -- the only avenues
10 that I know of are referred to in the Parties'
11 Pleadings, and one of them is to appeal directly
12 to the Commission and say, "Will you --" -- ask
13 the Commission to exercise their discretionary
14 authority to reverse that finding.

15 MR. RICH: That's what I was
16 looking for.

17 JUDGE COTTER: And the second would
18 be to go directly to court and ask the court to
19 reverse the finding.

20 MR. RICH: Well, would the --
21 Would you allow me to submit a motion to that
22 effect, then?

23 JUDGE COTTER: Well, there wouldn't
24 be any point in submitting it to us, because we
25 can't do anything about it.

1 If you want to submit something to

2 --

3 MR. RICH: Didn't you just indicate
4 that you had discretion to --

5 JUDGE COTTER: No, no, no.

6 The Commission does. This is a
7 Licensing Board.

8 MR. RICH: Oh, okay.

9 JUDGE COTTER: That means the five
10 Commissioners.

11 So, if you wanted to, you can file
12 a motion or a petition with the Commission itself
13 asking them to reverse the finding.

14 Okay?

15 Responses. Mr. Bauser?

16 MR. BAUSER: Mr. Chairman, FPL is
17 in agreement with the Board.

18 We believe that Contention 1 is
19 addressed to a purely legal matter of argument.
20 It's detailed in our written filing. I will not
21 burden the proceeding going through it again.

22 I would simply note that under
23 Informations Regulations Section 50.58b (6), the
24 Staff's determination is final subject only to
25 the Commission's discretion on its own initiative

1 to review the determination.

2 We believe the law on this matter
3 is clear and has been addressed not only
4 specifically in the Regulations, but in a number
5 of decisions.

6 I am also prepared to address the
7 technical matters to which Mr. Rich referred
8 pertinent to boraflex, but as the Board
9 suggested, that matter is also raised with some
10 precision in Proposed Contention 11 and I would
11 leave it to the Board as to whether they would
12 like to consider boraflex now or when we come to
13 that Contention.

14 JUDGE COTTER: I would prefer to
15 handle it when we reach Contention 11.

16 MR. BAUSER: Fine.

17 That's all I have on this
18 Contention.

19 JUDGE COTTER: Thank you, Mr.
20 Bauser.

21 Ms. Young?

22 MS. YOUNG: Just as a summary, the
23 Staff's position still is that this Contention is
24 not acceptable for litigation.

25 The purpose of the Staff's No

1 Significant Hazards Finding is determining the
2 timing of any hearing held on the Amendment.

3 And since the Staff on March 11th,
4 1988, issued the Amendment with the Finding of a
5 final No Significant Hazards Determination, no
6 request for hearing that is pending can stay the
7 effectiveness of that Amendment.

8 Therefore, there's no need for
9 there to be either a prior hearing or that the
10 effectiveness of the Amendment should be stayed.

11 JUDGE COTTER: Anything further,
12 Ms. Young?

13 MS. YOUNG: No, that's all, sir.

14 JUDGE COTTER: All right.

15 Mr. Rich, Contention 2?

16 MR. RICH: It's my contention that
17 an environmental assessment is inadequate in this
18 hearing -- that the consequences of a zirconium
19 palladium fire accident in the spent fuel pool
20 are so severe that an environmental impact
21 statement is needed, not just an
22 assessment.

23 I think the problems at this site
24 make this more likely and thus that must be
25 evaluated.

1 The Staff did not even consider the
2 results of such an accident, ruling them highly
3 unlikely.

4 If you look at the Environmental
5 Assessment issued February 29th, -- Look at the
6 section entitled, "Radioactive Material Released
7 to the Atmosphere," I would say that this section
8 is inadequate.

9 They're relying on too high a --
10 They're relying too much on the adequate
11 performance of the boraflex over extended periods
12 of time.

13 I feel that clearly the boraflex is
14 at issue, and that if the degradation of the
15 boraflex occurs, as we would predict, that these
16 releases will be far greater than predicted in
17 here.

18 In addition, in "Sever Accidents
19 Considerations, 5.0," they simply dismiss the
20 facts of such an accident by saying that the
21 Staff believes that the probability of this type
22 of accident occurring is very low.

23 In light of the B & L Report; in
24 light of their statements about the presence of
25 so many uncertainties regarding the initiating

1 events that could cause such an accident, I feel
2 that to dismiss that out of hand is -- is
3 inadequate and that in light of the disastrous
4 environmental impact of such an accident, that
5 such -- that an Environmental Impact Statement
6 should be made.

7 JUDGE COTTER: I think the nature
8 of your response to your position that an
9 environmental impact statement is required is
10 essentially, again, a legal response and that the
11 parties have responded that there is no
12 requirement under the Regulations for an
13 environmental impact statement in this situation
14 -- that an environmental assessment is
15 sufficient.

16 Do you have anything to add in that
17 area?

18 MR. RICH: I think an -- is
19 sufficient because they're choosing -- an
20 environmental assessment is sufficient only
21 because they're choosing not to assess the most
22 disastrous, you know, the most severe accident
23 that could occur.

24 Now, in light of the extensive
25 environmental damage that could occur as a result

1 of an accident postulated by Brookhaven National
2 Laboratory resulting from exactly the kind of
3 situation that would be established -- in other
4 words, a high-density storage system -- that the
5 assessment is inadequate in scope.

6 JUDGE COTTER: All right. I think
7 we understand your position, then.

8 Mr. Bauser?

9 MR. BAUSER: Mr. Chairman, our
10 position is that this matter is a question of law
11 and that the law in this area is clear.

12 With respect to the matter of the
13 BNL Report, the question has already been
14 addressed; most recently, I believe, by the
15 Appeals Board in Alab-880 where the Appeals Board
16 ruled that absent a mechanism which would take
17 the incident in question from the realm of being
18 remote and speculative to credible,
19 considerations of such incidents are not
20 appropriate.

21 That is our position.

22 This is discussed in some detail in
23 or written response to Contention 2, and I would
24 refer the Board, to wit, for further discussion
25 insofar as a boraflex issue is concerned, I would

1 suggest that we address that with Contention 2,
2 also.

3 JUDGE COTTER: All right.

4 Ms. Young?

5 MS. YOUNG: The Staff has nothing
6 to add to the comments in its Pleading.

7 JUDGE COTTER: All right.

8 MR. RICH: If I could just add, it
9 seems that you're saying that I have to respond
10 the assertion that somehow I'm ignoring a
11 requirement that the action significantly impact
12 the quality of the human environment.

13 Brookhaven National Laboratory, the
14 BNL Report, has indicated, "A more sensitive
15 indication of the severity of a spent fuel pool
16 -- spent fuel accident is the interdiction area.
17 The area with such a high level of radiation that
18 it is assumed that it cannot ever be
19 decontaminated.

20 For these long-lived isotopes, the
21 interdicted area increases directly with the
22 release fraction and provides a convenient
23 measure of the societal consequences as indicated
24 in Table 4.7."

25 The worst --

1 JUDGE COTTER: Mr. Rich, the Board
2 is aware of the BNL Report. It's a public
3 document.

4 The difficulty that we have in
5 relating that into this specific instance is that
6 the BNL Report is a generic report, which is
7 based on specific accident scenerios -- specific
8 initiators. And it's an attempt to model and
9 estimate the consequences if particular events
10 take place.

11 MR. RICH: I agree. Well, I don't
12 think it's unlikely or certainly impossible that
13 we could have -- They say, "Accident initiate
14 events. Pool heatup due to loss of cooling water
15 circulation capability" -- is certainly not a
16 scenerio that we've all considered, and is a
17 possibility.

18 JUDGE COTTER: I know. But in this
19 kind of a proceeding, you have to specify exactly
20 how that might happen, not just say generally it
21 might happen.

22 MR. RICH: Well, if you want, I can
23 bring in --

24 As I understood it, the hearing
25 was not evidentiary.

1 JUDGE COTTER: No. I understand
2 that. I'm not saying that you have to put on
3 evidence of that fact.

4 I'm saying that you have to suggest
5 a specific mechanism or event that would cause
6 that to -- something like, for example, a loss of
7 coolant to --

8 MR. RICH: Structural failure of
9 pool due to heavy load -- A cask could be
10 dropped into the pool, a full spent fuel pool.

11 JUDGE COLE: Well, you're getting
12 away from the specific Contention now, sir.

13 I think the issue of this
14 Contention is that the probability of certain
15 kinds of accidents happening -- the probability,
16 if it's quite small is not required to be
17 considered in an environmental impact statement.

18 MR. RICH: Well, I would --

19 JUDGE COLE: And is it your
20 argument, sir, that certain kinds of accidents
21 are not in that category?

22 MR. RICH: I would say I am not
23 competent to address the probability of a
24 structural failure of the pool due to a heavy
25 load drop when the pool is fully loaded -- that

1 that would be -- That seems to me to be
2 evidentiary.

3 We need to assess the vergility of
4 the pool after the extended exposure to the
5 incredible weight of the storage rack assembly to
6 the excessive heat over long periods of time, and
7 that the experts would speak to the --

8 I don't think we could decide
9 about the probability of that sort of accident
10 occurring.

11 I think the experts would have to
12 decide that.

13 It seems to me to be clearly
14 evidentiary

15 I think we have to admit that --
16 that BNL has said that that sort of incident
17 can initiate the disastrous accident as
18 described in this, and that it's not completely
19 out of the realm of possibility that that sort of
20 accident can occur.

21 In fact, it is likely --

22 JUDGE COTTER: You've just stated
23 the range -- somewhere between likely and not
24 beyond the realm of possibility.

25 And what Judge Cole is asking you

1 is if there's -- you have some specific way of
2 narrowing that range.

3 MR. RICH: The specific way would
4 be evidence, wouldn't it?

5 JUDGE COTTER: Well, yes,
6 ultimately.

7 MR. RICH: Well, ultimately that's
8 what -- Aren't we concerned with the ultimate
9 determination?

10 JUDGE COTTER: No, not at this
11 point.

12 MR. RICH: I would be happy to
13 present technical evidence concerning this matter
14 as to the likelihood of the structural failure of
15 a pool due to a heavy load drop.

16 JUDGE COTTER: Okay. All right.

17 I think we understand your position
18 on Contention 2.

19 Contention 3?

20 MR. RICH: I think we've been
21 discussing Contention 3 to some extent.

22 JUDGE COTTER: This is the cask
23 drop question.

24 MR. RICH: In fact, we were just --
25 You know, you're asking me to

1 provide certainty.

2 JUDGE COTTER: No, no.

3 MR. RICH: -- and yet --

4 JUDGE COTTER: All we're asking is
5 for bases and specificity --

6 MR. RICH: Okay. Even in the BNL
7 Reports, they say that for heavy load drops,
8 human error probabilities, structural damage
9 potential's and recovery actions are the primary
10 sources of uncertainties.

11 So, the BNL, Brookhaven National
12 Laboratory is itself injecting a great deal of
13 uncertainty to our ability to predict the likeli-
14 hood of such an accident and the severe
15 consequences of such an accident.

16 To impose that burden on me here is
17 -- seems unreasonable.

18 Based on that uncertainty as
19 evidenced in this report, and we can find many
20 other examples of such uncertainty --

21 There is uncertainty in the fission
22 product release estimates.

23 These uncertainties are due both to
24 uncertainty in the accident progression.

25 And the uncertainty in fission

1 product decontamination. There's a lot of
2 uncertainty here and yet the Staff is saying that
3 this is a conservative estimate of the results of
4 a cask-drop accident.

5 That seems a very unreasonable
6 assumption to make in light of those statements.

7 If you look at the Executive
8 Summary -- I think this was in the SER -- Am I
9 right in that? This was in the SER?

10 JUDGE COTTER: Mr. Rich, why do you
11 think that the Florida Power & Light radiological
12 radiation release estimates are not conservative?

13 MR. RICH: They are not
14 conservative because -- because there's too much
15 uncertainty surrounding the issue.

16 I don't see how they can be judged
17 to be conservative when this document itself
18 indicates that there's a great deal of
19 uncertainty surrounding the issue still.

20 JUDGE COTTER: All right.

21 MR. RICH: And I'd also like to
22 quote from this --

23 This was, again, the Brookhaven
24 National Laboratory looking at the facts,
25 consequences of a dropped fuel accident.

1 One, dropped fuel accident; two,
2 jammed fuel handling equipment.

3 They say, "The model was found to
4 be unconservative in calculating the pressure
5 buildup within a cell.

6 The model assumed that as a fuel
7 assembly -- or rack cell, all the water in the
8 cell is forced out through the base plates --

9 MR. BAUSER: Excuse me, Mr.
10 Chairman, could we have a reference to --

11 JUDGE COLE: What page or section
12 were you reading from?

13 MR. RICH: I'm on page 20 -- 18.

14 JUDGE COLE: This is of the BNL
15 Report?

16 MR. RICH: Yes.

17 JUDGE COTTER: Is this the final
18 report or the draft report, Mr. Rich?

19 MR. RICH: Do you know that,
20 please?

21 MS. YOUNG: It appears it's not the
22 final.

23 MR. RICH: This was in back of --
24 These two documents came --

25 JUDGE COLE: Is that Appendix A to

1 the Safety Evaluation?

2 MR. RICH: It just says, "Executive
3 Summary."

4 JUDGE COLE: The page before that
5 is identified as Appendix S?

6 MR. RICH: I don't -- I don't have
7 a --

8 JUDGE COLE: I want to make sure
9 we're looking at the same document.

10 MR. RICH: It's just entitled --
11 It begins, "This report describes and presents
12 the results of the BNL Technical Evaluation of
13 the Structural Analysis submitted by Florida
14 Power & Light."

15 JUDGE COLE: Yes. That's a --
16 That appears -- In the bottom line of that page, the
17 words, "environmental," and "normal loads,"
18 appears?

19 The page that you just quoted.

20 JUDGE COTTER: The page captioned,
21 "Executive Summary," and --

22 MR. RICH: Yeah, yeah. Yes.

23 JUDGE COTTER: Roman numeral four
24 and Roman numeral three.

25 JUDGE COLE: That's identified as

1 Appendix A to the NRC Safety Evaluation Report.

2 You were pointing out, Mr. Rich --

3 MR. RICH: Okay. Actually, this is
4 applying to a fuel assembly drop and not a cask
5 drop, so --

6 I'm sure FP&L would like to point
7 that out, that that's probably not appropriate in
8 this case.

9 I would concede that -- that I feel
10 it's adequate to rely on the uncertainty as
11 indicated so often in the BNL Report, and I feel
12 that the consequences of a cask-drop accident --
13 cask-drop accident are not conservative because
14 you have to -- the prolonged exposure of the pool
15 liner and pool structure to excessive heat will
16 increase the pool vergility and I contend this
17 has not been taken into consideration, and thus
18 an accident will not meet the 10 CFR -- criteria.

19 JUDGE COTTER: All right. Thank
20 you, Mr. Rich.

21 Mr. Bauser?

22 MR. BAUSER: Mr. Chairman, I refer
23 the Board to the discussion of this Contention in
24 our written response.

25 I would point out, though, that it

1 is obvious that there's a significant leap from
2 the existence of substantial uncertainty to the
3 conclusion that such uncertainty cannot be
4 provided for through the use of conservatisms,
5 and the leap is wholly inconsistent with both
6 engineering practice and the practice of --
7 authorized by the Commission.

8 In fact, Section 5.3 of the Safety
9 Analysis Report accompanying FPL's request for
10 the Amendment is entitled, "Accident Evaluation,"
11 and contains Subsection 5.3.1.2.2 entitled,
12 "Radiological consequences."

13 A description of the methodology
14 applied by FPL for the calculation of
15 radiological consequences potentially resulting
16 from a cask-drop accident.

17 The analysis presented there is
18 consistent with the appropriate prescriptions of
19 the NRC Standard Review Plan and the relevant
20 Regulatory Guide.

21 In the circumstances, the sweeping
22 and unsupported statement that no estimate can be
23 determined to be conservative is insufficient to
24 establish a basis for the Contention.

25 As a minimum, the basis must

1 contain an assertion as to why the calculational
2 methods employed are unsatisfactory.

3 Beyond our response in our written
4 reply, I have nothing to add, Mr. Chairman.

5 JUDGE COTTER: All right, thank
6 you.

7 Ms. Young?

8 MS. YOUNG: The Staff would just
9 reiterate what it said in its Pleading, that the
10 uncertainties in fission product estimates
11 associated with beyond design-basis accidents in
12 spent fuel pools does not provide a basis for
13 applying the existence of those uncertainties to
14 analyses of cask-drop accidents, which are
15 design-basis accidents, in general.

16 So, therefore, the Contention lacks
17 sufficient basis and should not be admitted.

18 JUDGE COTTER: All right. Thank
19 you.

20 MR. RICH: May I?

21 I would agree, certainly, that the
22 ALAR principle does not apply here.

23 I would agree with Mr. Bauser, too,
24 that an unsubstantiated assertion that this is
25 not conservative is not acceptable.

1 But I feel that to substantiate
2 that, again, is evidentiary.

3 I would be happy to provide the
4 Board with technical evidence relating
5 specifically to the inadequacy of those
6 calculations.

7 If you want me to get into that
8 now, I would have to bring forward witnesses.

9 I understood that that was not the
10 function of this meeting.

11 But to dismiss the issue out of
12 hand, I feel is to deny evidence that may be able
13 to be presented relating specifically to that
14 issue.

15 JUDGE COTTER: All right.

16 I think we understand your
17 position.

18 We'll return to Contention 4, then.

19 MR. RICH: My contention here is
20 that the Staff did not adequately consider all
21 the scenarios that can result from the presence
22 of the crane falling into the pool.

23 I think they've examined the
24 effects of the hook falling into the pool, but I
25 don't know if they've examined the effect of one

1 or more of the five individual pieces of the
2 crane falling into the pool. Or have they
3 examined a rack falling into the pool.

4 I don't think they've examined one
5 -- the effects of one of the new racks falling
6 into the pool.

7 They've also admitted that a cask
8 could be dropped onto the crane, and that's --

9 And they said that in the case of
10 that, they would -- FP&L would remove the crane
11 from the building and examine it to make sure
12 that its integrity was not damaged.

13 So, I don't feel that they've
14 examined what happens if a cask is dropped onto
15 the crane, and the cask and part or all of the
16 crane falls into the pool.

17 Again, referring to the BNL Report
18 as a particularly significant aspect of the
19 report is, again, the uncertainty introduced by
20 the -- any recovery action that would have to be
21 improvised in order to deal with this unexpected
22 situation.

23 As I said, BNL, again, says that
24 this is one of the primary sources of
25 uncertainty, so that --

1 To the Contention, the consequences
2 of an effect -- accident whose effects are
3 clearly undesirable are greatly increased is
4 based primarily on the large number of various
5 accidents that could occur because of the
6 presence of the crane and the unusual recovery
7 actions that might be have to initiated -- that
8 might have to be initiated in order to deal with
9 that.

10 JUDGE COTTER: All right.

11 Mr. Bauser?

12 MR. BAUSER: Yes, Mr. Chairman,
13 first of all, with respect to the drop of a cask
14 on the crane, I think it's important to clarify
15 something that seems to be a basic point of
16 confusion.

17 There is no cask in the pool. There
18 is no cask at the site. FPL does not have a
19 cask.

20 There will be no cask on site, let
21 alone in the vicinity of the pool, let alone in
22 the pool, during the rerack proceeding.

23 Accordingly, it's impossible to
24 drop a cask on the crane or anywhere, in fact,
25 because there is no cask on site and FPL does not

1 possess a cask anywhere.

2 JUDGE COTTER: Will there be casks
3 on site after the rerack work is completed?

4 MR. BAUSER: There are no
5 currently-planned evolutions, Mr. Chairman, that
6 would call for the use of a cask beyond eventual
7 removal of the spent fuel from the pool.

8 JUDGE COTTER: Then there would be
9 casks at the time that the pool -- the spent fuel
10 is removed from the pool to be put in a cask to
11 be shipped? Is that what you mean?

12 MR. BAUSER: That's correct.

13 JUDGE COTTER: Would that be only
14 in the event of a shipment to something like a
15 permanent -- waste depository?

16 MR. BAUSER: That is what would be
17 currently envisioned.

18 JUDGE COTTER: Would there -- Is
19 there any possibility that there might be
20 shipment to another spent fuel pool --

21 MR. BAUSER: That's --

22 JUDGE COTTER: -- using a cask?

23 MR. BAUSER: That's a possibility,
24 but that is certainly not in the contemplations
25 of FPL, nor is it being planned for.

1 With respect to the drop of --

2 MR. RICH: Mr. Bauser, I'm sorry to
3 interrupt you, but I'm just wondering why the
4 Licensee committed to remove the temporary crane
5 and to perform a load test on it if a heavy load
6 is dropped onto it?

7 MR. BAUSER: Where -- Are you
8 reading from a document?

9 MR. RICH: This is from the SER,
10 Page 10, 5.0.

11 MR. BAUSER: Just a second.

12 Mr. Chairman, I would like to look
13 at that section a little bit later.

14 But, if I may continue addressing
15 the points that have already been raised.

16 With respect to the drop of the
17 crane into the pool, that has been considered.
18 It is addressed on Page 3-17 of FPL's Safety
19 Analysis Report associated with the Amendment and
20 it notes in the discussion that the consequences
21 of the postulated accident involving the drop of
22 the temporary construction crane in the pool are
23 bounded by the cask drop evaluations.

24 The drop of a rack into the pool
25 has also been considered and is bounded by the

1 consequences of a drop of the spent fuel cask.

2 In particular, Mr. Chairman, with
3 respect to the drop of a cask -- excuse me, of a
4 spent fuel storage rack into the pool, that
5 matter was addressed in FPL's letter dated
6 December 22, 1987.

7 JUDGE COTTER: Do we have that?

8 MR. BAUSER: It's part of the
9 docket of record in this proceeding.

10 In particular, it's the response to
11 NRC's Question No. 2, that considers a drop of
12 the heaviest rack over the pool in the event of a
13 hook failure.

14 JUDGE COTTER: We don't have that
15 letter.

16 It may be in the docket in the --
17 with the Staff.

18 MS. YOUNG: I don't believe it's
19 evidence in this proceeding.

20 MR. BAUSER: No. I didn't mean to
21 imply that it was evidence in the proceeding, but
22 it is FPL's position that it is a duty of the
23 Petitioner -- Where a matter has been considered in
24 the record underlying the application in
25 question, it is his duty to consider that

1 information in formulating contentions and
2 address the information so that we might know,
3 among other things, precisely what error it is in
4 the analysis that the Petitioner feels exists.

5 JUDGE OTTER: Well, we know all
6 that, but we still don't have the letter.

7 MR. BAUSER: We'd be happy to
8 provide the Board with a copy of the letter.

9 SPEAKER: And the parties.

10 MR. BAUSER: And the parties, too,
11 of course.

12 MR. RICH: What was that?

13 MR. BAUSER: And the parties. You,
14 too, Mr. Rich.

15 JUDGE COTTER: Anything further,
16 Mr. Bauser?

17 MR. BAUSER: No, that's all I have.

18 JUDGE COTTER: Ms. Young?

19 MS. YOUNG: The Staff has nothing
20 to add to its Pleading, but we just reiterate its
21 position that we feel that the Contention is
22 admittedly sufficient on the basis offered, and
23 the Staff does not oppose the admission of the
24 Contention.

25 JUDGE COTTER: All right. Thank

1 you.

2 MR. BAUSER: Mr. Chairman, I would
3 like to address that comment.

4 Contention 4 takes the position
5 that the consequences of a cask-drop accident or
6 similar accident are greatly increased by the
7 crane installed in the spent fuel building and
8 used in connection with the reracking.

9 FPL has objected to the admission
10 of this Contention and the Staff has not.

11 The different positions on this
12 Contention manifest a basic difference between
13 the Staff and FPL.

14 This difference is evidenced not
15 only in connection with this Contention, but also
16 with respect to Contentions 5, 6, 9, 11 and 15.

17 We believe the differing positions
18 grow out of a difference in views as to what
19 constitutes "adequate basis" for a contention.

20 As you know, the NRC's Rules
21 require the bases for each contention to be set
22 forth with reasonable specificity.

23 That prescription appears in
24 Section 2.714(b) of the Commission's Regulations.

25 This does not require the asserted

1 bases be supported by evidentiary material.

2 JUDGE COTTER: Mr. Bauser, I've
3 written that several times in several decisions
4 and what's the point?

5 MR. BAUSER: I would like to
6 emphasize at this point and I think it will come
7 up probably a number of other times in connection
8 with the contentions that I have just recited,
9 that there is a fundamental difference between
10 the Staff and FPL as to the need for a Petitioner
11 to examine the record material underlying the
12 application formulating his contentions.

13 This duty is prescribed quite
14 clearly in the Catawba Decision, ALAB-687 (sic),
15 16 NRC 460.

16 That Decision states that an
17 intervenor, Petitioner to Intervene, has an iron-
18 clad obligation to examine the publically-
19 available documentary material pertaining to the
20 facility in question, with sufficient care to
21 enable it to uncover any information that could
22 serve as a foundation for a basic contention.

23 In its response to the Amended
24 Petition, the Staff simply ignored this
25 obligation, as articulated by the Commission and

1 the Appeal Board in Catawba.

2 The Staff didn't argue, for some
3 reason, that the obligation was inapplicable or
4 that is overridden here by some other
5 consideration. It ignored it.

6 From the Staff's response to the
7 Amended Petition, there is no way of knowing that
8 the Catawba Decision even exists, or that FPL
9 relied upon it.

10 And I would like to emphasize for
11 the Board's benefit in considering these matters,
12 that the decisions do exist and FPL did cite and
13 rely upon them.

14 In any decision considering the
15 admissibility of Petitioner's Contentions, this
16 Board should either apply the Catawba
17 requirement, or determine that it is
18 inapplicable.

19 I also submit that the requirement
20 is applicable, dispositive and appropriate.

21 No application for a license or
22 amendment of a license can be granted unless the
23 applicant demonstrates that the safety and
24 environmental requirements imposed by the
25 Commission will be satisfied.

1 Those requirements are imposed and
2 interpreted by a body of Commission issuances,
3 including regulations, policy statements,
4 regulatory guides, Licensing Board decisions and
5 the like.

6 The complex of material embodies
7 the norms against which the application is
8 measured.

9 The application itself, the safety
10 analysis supplied in support of the application,
11 the letters reflecting the dialogue between the
12 applicant and the Staff --

13 JUDGE COTTER: Excuse me, Mr.
14 Bauser.

15 Is this a memo you're reading from?

16 MR. BAUSER: I have made some notes
17 here because I would like to address this matter
18 with some precision.

19 JUDGE COTTER: You don't think,
20 if that's not the form, you could simply submit
21 it?

22 MR. BAUSER: We could do that, but
23 I think that it might be more efficient for me to
24 provide a clear statement of our position and the
25 basic underlying law --

1 JUDGE COTTER: If you submit it, I
2 can read it faster than you can say it out loud.

3 MR. BAUSER: Well, let me just --
4 Let me just summarize at this point and say that
5 even with the Board's discretion to decide the
6 matters that we are considering here today, it is
7 our position that the Board cannot ignore an
8 iron-clad obligation.

9 And that particularly where a
10 number of contentions are copied virtually
11 verbatim from another proceeding where they have
12 been extensively litigated, the obligation of --

13 JUDGE COTTER: Mr. Bauser, you know
14 that copying contentions from another proceeding
15 is not a ground for throwing them out of a second
16 proceeding.

17 MR. BAUSER: No, but the -- The
18 point is this, Mr. Chairman.

19 There is a requirement under
20 Catawba that underlying record material, where it
21 exists, be addressed by a petitioner in seeking
22 to inject a contention.

23 There's a very good, practical
24 reason for that.

25 Without a specification of what the

1 problems are with the solution developed by the
2 Staff, the Board will be unable to determine
3 whether or not the problems in the mind of the
4 Petitioner are within the proper scope to be
5 considered in a hearing; and all of us, both the
6 Board and the parties will be unable to determine
7 precisely what it is that the Petitioner finds
8 wrong with the existing analysis so that it might
9 be addressed.

10 This same logic applies to a
11 situation where contentions are simply copied out
12 of another -- from another proceeding.

13 Without a specification of why the
14 consideration given to that contention was
15 inadequate, you will be unable to determine what
16 it is the Petitioner is raising and, therefore,
17 judge whether or not it is within the appropriate
18 scope of the proceeding and, again, you and the
19 parties will be unable to determine precisely
20 what it is that they are to address.

21 I might suggest, Mr. Chairman, that
22 if a petitioner is to simply copy out, using a
23 Xerox machine --

24 JUDGE COTTER: Mr. Bauser, I think
25 I understand your position, and, you know, I

1 don't think we need any further lectures on what
2 the law is and that sort of thing.

3 So, I think we ought to move on to
4 Contention 5.

5 MR. BAUSER: Thank you.

6 JUDGE COTTER: Mr. Rich?

7 MR. RICH: I would just like to say
8 in leaving Contention 4, that if --

9 JUDGE COTTER: It's a tough one to
10 leave.

11 MR. RICH: Yeah. -- if the Board
12 admits this Contention, I would be glad to
13 provide Mr. Bauser with substantial technical
14 evidence to verify our assertion -- to verify our
15 assertions in that Contention; however, I didn't
16 think that the original Petition, nor this
17 hearing was the proper place for that.

18 I will admit here that my original
19 basis for this Contention is probably
20 inapplicable.

21 Basically what I would ask for on
22 this Contention now is that it appears to me that
23 the NRC requested that FP&L do an analysis. And
24 that was indicated on a document dated December
25 23rd, 1987, L-87-537.

1 Again, Page 13 of the SER -- It
2 says on Page 13, "In their December 23rd, '87,
3 submittal, the Licensee presented a conservative
4 analysis of the radiological consequences of the
5 boiling of the SFP water.

6 The Staff has reviewed the
7 Licensee's analysis of --"

8 I would insist that FP&L -- I mean
9 that the NRC Staff do their own analysis,
10 considering the dangers of such an accident in
11 order to sort of error on the side of caution and
12 to verify all the assumptions and calculations
13 that FP&L did, rather than relying on their
14 analysis.

15 So, I guess in a way I'm amending
16 this Contention.

17 Have I made myself clear?

18 JUDGE COTTER: If I understand you
19 correctly, you're saying that in place of the
20 Contention 5 that you filed, you are now
21 restating the Contention to provide that because
22 you believe the FP&L analysis cites specific
23 radiological releases following a spent fuel
24 boiling event is inadequate, that you want the
25 NRC Staff to conduct a study and analysis.

1 MR. RICH: Yeah, that's a good one.

2 JUDGE COTTER: Yes. On what grounds
3 would you -- what grounds would the Staff have
4 for conducting such an analysis other than your
5 own dissatisfaction wi the FP&L analysis, which
6 apparently seems satistisfied the Staff?

7 MR. RICH: As I say, I see it as
8 erring on the side of caution. They need to --
9 to do their own analysis and verify that the
10 results are within the guidelines.

11 JUDGE COLE: Mr. Rich, I'm looking
12 at Page 13 of the Staff Safety Evaluation Report
13 and I believe the section that you quoted, in the
14 sentence -- two sentences after that, it says
15 that the Staff analysis differs only slightly.

16 That implies to me that the Staff
17 -- Staff did do an analysis.

18 MR. RICH: I agree. It's
19 confusing.

20 I'm not saying that I know for sure
21 the Staff did not do it.

22 As I indicated, there's two
23 documents. One indicates that the Staff
24 requested the analysis and then this -- that they're
25 saying they reviewed the license --

1 JUDGE COTTER: Mr. Rich, would you
2 be satisfied if the Staff did an analysis?

3 MR. RICH: Yes, certainly that
4 would satisfy that Contention.

5 JUDGE COTTER: Ms. Young, do you
6 know whether the Staff did an analysis?

7 MS. YOUNG: It is my understanding
8 that they did.

9 The nature and extent of that, now,
10 I can't speak to.

11 And I'm not sure what Mr. Tourigny
12 would be testifying --

13 JUDGE COTTER: Well, Mr. Tourigny
14 has said that the Staff did its own independent
15 analysis.

16 I take it, then, that you will be
17 satisfied with that.

18 MR. RICH: Is that available in the
19 public documentation?

20 MS. YOUNG: Give us a moment,
21 please.

22 JUDGE COTTER: We will go off the
23 record for a moment.

24 (Off the record.)

25 JUDGE COTTER: Back on the record.

1 If, in fact, an analysis has been
2 done and it satisfies Mr. Rich, that would
3 dispose of the Contention, and satisfy all
4 parties.

5 MR. RICH: As long as that analysis
6 is made available.

7 MR. BAUSER: Well, Mr. Chairman, I
8 would object to amending the Contentions here.

9 There is a procedure for filing of
10 Contention --

11 JUDGE COTTER: I understand that,
12 Mr. Bauser.

13 If I can get rid of this now and
14 everybody's happy, I'd just as soon do that.

15 MR. BAUSER: Well, I would be
16 interested in knowing, as would the Board,
17 whether or not this separate analysis has been
18 done.

19 But, I believe that we can address
20 the acceptability of this Contention without
21 delving into that.

22 JUDGE COTTER: All right.

23 Ms. -- Ms. Young?

24 MS. YOUNG: The Staff -- I'm
25 informed by Mr. Tourigny that the Staff has done

1 a separate analysis, the results of which are
2 reflected in the Safety Evaluation.

3 The Staff would be happy to submit
4 a more detailed summary of that to Mr. Rich at a
5 later date.

6 JUDGE COTTER: Okay.

7 Mr. Rich, on that basis, do you
8 want us to rule on Contention 5 and continue this
9 argument, or do you want to withdraw it?

10 MR. RICH: Well, do you want to
11 rule on it at this time, or --

12 JUDGE COTTER: No, we do it in
13 writing if we rule on it, but what I'm asking is
14 whether you want to withdraw it at this point,
15 based on the representations of the Staff.

16 MR. RICH: We will abandon that
17 Contention.

18 JUDGE COTTER: All right. Thank
19 you.

20 Let's go to Contention 6.

21 MR. RICH: Just a general
22 inquiry.

23 As I understand it, the object of
24 the pre-conference (sic) hearing is to clarify
25 the Contentions and that as a result of our

1 discussions I am able to amend them at some point
2 in time.

3 JUDGE COTTER: There's a specific
4 rule that governs amendment of Contentions, and
5 that's not precisely what we're doing at this
6 point.

7 We're trying to decide whether or
8 not what you've offered is -- is admissible as a
9 Contention.

10 MR. RICH: Okay.

11 JUDGE COTTER: At the conclusion of
12 this oral argument, we will go back and sit down
13 and issue a written decision on what Contentions
14 are admissible and which are not.

15 MR. BAUSER: Mr. Chairman, FPL
16 would request that the Staff provide it with a
17 copy of the analysis.

18 MS. YOUNG: The Staff would be
19 happy to, Mr. Bauser.

20 JUDGE COTTER: I'm sorry. I didn't
21 mean to overlook you on that.

22 MR. RICH: What are we on? Six
23 here?

24 JUDGE COTTER: Six.

25 MR. RICH: This -- My Contention

1 is very -- is very simple here.

2 I feel there's little more I can
3 add at this point.

4 The basis for my Contention is
5 substantial to technical evidence showing that
6 the spent fuel pool liner, the spent fuel pool
7 itself and any components that are subject to
8 exposure to the spent fuel pool will suffer
9 severe degradation over time as a result of the
10 increased heat load which will occur as a result
11 of the number of greater assemblies.

12 We're getting into now some
13 Contentions that begin to run together, but I
14 feel that FP&L's projections of water
15 temperatures that will be in the pool -- spent
16 fuel pool are inadequate; that higher
17 temperatures will occur on a normal basis and
18 that as a result much greater stresses will be
19 placed on the materials.

20 You've got -- I feel that concrete
21 is subject to severe degradation as a result of
22 these higher temperatures.

23 The pool liner itself, both the
24 temperatures again, and the radioactivity, the
25 concrete -- exposure to the radioactivity and

1 simply the presence of all that material, the
2 weight, will add to the vergility.

3 Clearly inadequate calculations
4 have been made concerning those questions.

5 JUDGE COTTER: All right. Thank
6 you, Mr. Rich.

7 Mr. Bauser?

8 MR. BAUSER: With respect to
9 calculations of temperature in the pool, those
10 matters are raised with more precision in some
11 other Contentions and I would -- I would address
12 them there.

13 Our position is outlined in our
14 written response.

15 Basically, again, the problem here
16 is that there has been consideration of matters
17 pertaining to the durability of materials in the
18 pool, including those specific items that Mr.
19 Rich has referenced.

20 And he has failed to specify what
21 he views as deficiencies with respect to
22 consideration of those matters.

23 JUDGE COTTER: Thank you.

24 Ms. Young?

25 MS. YOUNG: The Staff does not

1 oppose the admission of this Contention, so long
2 as the Contention is limited in scope to the
3 period of storage authorized by this Amendment.

4 MR. RICH: And that storage period
5 is two thousand and -- eight or something?

6 JUDGE COLE: Something like 30 or
7 40 years, I believe, Mr. Rich.

8 MR. RICH: Is it that long?

9 So the Board need not provide a
10 specific date for the removal of the material and
11 yet argument can be limited to a essentially
12 arbitrary date sometime in the future.

13 JUDGE COLE: Well, I think it's the
14 date when the operating license extends, and I
15 believe that's 30 or 40 years, or something like
16 that.

17 MR. RICH: When the operation
18 license expires, does that require that all
19 hazardous material be removed --

20 JUDGE COLE: If they were to carry
21 it beyond the period of that license, they would
22 then have to reapply for a license to do that, at
23 which time the issues associated with prolonging
24 it would be --

25 MR. RICH: To simply store the fuel,

1 they would need to renew the operation license?

2 JUDGE COLE: Yes.

3 MR. RICH: Good.

4 JUDGE COTTER: Contention 7.

5 MR. RICH: We do this reluctantly,
6 but we abandon this Contention.

7 This Contention deals with the
8 exposure of the workers during the reracking
9 process.

10 We wish them the best of luck, but
11 we just were not able to compile enough evidence
12 to feel competent to proceed with this
13 Contention.

14 JUDGE COTTER: Is that to say that
15 you are withdrawing it at this point?

16 MR. RICH: We withdraw that
17 Contention.

18 JUDGE COTTER: All right.

19 MR. RICH: My apologies to the
20 workers. They'll have to watch out for
21 themselves.

22 JUDGE COTTER: Contention 8.

23 MR. RICH: In this Contention, I'm
24 concerned with the capabilities and inadequate
25 capacities of an antiquated and deteriorating

1 system.

2 This basically comes down to
3 technical calculations.

4 I contend that the temperatures as
5 calculated by FP&L will not be met and that the
6 NRC Standard Review Plan, Section 9.1.3
7 guidelines will not be adhered to.

8 As a result of these higher
9 temperatures, there's a greater probability that
10 this could lead to a boiling accident, which could
11 cause a severe accident in the spent fuel pool.

12 We are more than willing to provide
13 substantial technical evidence to verify that
14 those calculations are inadequate and that those
15 temperatures will be exceeded.

16 JUDGE COTTER: As I understand it,
17 this is a loss-of-cooling accident Contention,
18 and you state in your bases that there's a
19 possibility of a delay in makeup water.

20 MR. RICH: Uh-huh. (Affirmative.)

21 JUDGE COTTER: What would cause the
22 delay in makeup water?

23 MR. RICH: We're also talking
24 about the time to boil calculations.

25 I feel their time to boil

1 calculations are too generous -- that the time to
2 boil will be far less than they calculated, and
3 that therefore that the rate of makeup water
4 would be inadequate to compensation -- to
5 compensate for the boiling off.

6 JUDGE COTTER: Whether or not it's
7 delayed?

8 MR. RICH: Whether or not it's --
9 No.

10 Even at maximum capacity we feel
11 that there is a probability -- a great
12 probability that it will be inadequate to
13 compensate for the water loss due to boiling.

14 JUDGE COTTER: All right.

15 MR. RICH: So we're talking about,
16 you know, two or three sets of calculations here.
17 We're basically dealing with -- the normal
18 temperatures in the pool and then the time-to-
19 boil calculations.

20 I don't know if they should be two
21 separate contentions, but I just put them
22 together.

23 JUDGE COTTER: All right.

24 Mr. Bauser?

25 MR. BAUSER: I agree with

1 Petitioner. We're talking about two or three
2 different things here.

3 The Contention pertaining to the
4 analysis of pool boiling has been withdrawn, and
5 I presume that as a result further consideration
6 of that matter here today is not pertinent.

7 But, I would like to address Mr.
8 Rich's statement here that there is something
9 wrong with the analysis of loss of cooling that
10 has been provided.

11 First of all, the Contention
12 asserts facts crucial to its admission which are
13 clearly incorrect and fails to address FPL's
14 relevant analysis.

15 We have reformed in Section 3.2.2.3
16 of the SAR submitted in conjunction with this
17 application. It shows that after reracking the
18 maximum bulk temperature of the fuel pool
19 following a normal discharge of fuel will be
20 133.3 degrees Fahrenheit.

21 And following a full core
22 discharge, the temperature will be no greater
23 than 150.8 degrees Fahrenheit.

24 Under the NRC Standard Review
25 Plan, Section 9.1.3, the allowable temperatures

1 are 140 degrees Fahrenheit and below boiling.

2 Neither the Contention, nor its
3 bases undertake to demonstrate why FPL's analyses
4 and calculations are incorrect.

5 And without a specification of
6 where the Petitioner sees deficiencies, it's
7 impossible for me to either demonstrate why
8 those deficiencies do not exist or to correct
9 them.

10 MR. RICH: I would certainly agree
11 with Mr. Bauser in that we need -- we certainly
12 need to present evidence as to why we feel
13 they're inadequate.

14 But again, I don't believe that
15 this is the proper forum for that presentation.

16 JUDGE COTTER: All right.

17 Ms. Young?

18 MS. YOUNG: Mr. Chairman, I'm
19 confused.

20 It appears that Mr. Rich is now
21 offering bases which would go to Contention 5.

22 MR. RICH: Yeah, I made a mistake

23 --

24 MS. YOUNG: Yes.

25 He's challenging the analyses of

1 spent fuel pool boiling with respect to the time
2 to boil and also, I guess, the rate of regaining
3 or makeup water, so I'm kind of confused how it
4 goes to this Contention.

5 MR. RICH: We have to go back to
6 five, and until we review the NRC Staff's
7 analysis I would ask that that Contention remain.

8 MS. YOUNG: I guess to complete my
9 remarks, the Staff had objected to this
10 Contention because he had not alleged any lack of
11 compliance with any safety standard or regulation
12 and he hadn't provided a credible scenario for
13 why the single failure criterion and general
14 design criterion 44 entitled, "Cooling water,"
15 would be defeated.

16 So it was on that basis that the
17 Staff had objected to the admission of the
18 Contention.

19 JUDGE COTTER: As I understand your
20 position now, Mr. Rich, you have withdrawn your
21 abandonment of Contention 5.

22 MR. RICH: Great.

23 JUDGE COTTER: All right.

24 But I'm still not clear. Are you
25 changing then the bases for Contention 8?

1 MR. RICH: Am I changing it in what
2 way?

3 JUDGE COTTER: Well, you've talked
4 here about the temperature changes, I guess,
5 which is consistent with bases A for the
6 Contention.

7 But then on B I thought you also
8 heard -- I thought I also heard you say that
9 you're not so much concerned with the delay in
10 makeup, you're saying that the Contention is that
11 temperatures have been simply under-calculated
12 and there is going to be an accident as a result
13 of boiling away.

14 MR. RICH: Well, obviously, if we
15 feel that the ability of the system to provide
16 makeup water is inadequate when operating at its
17 full capability, a delay would only make such an
18 accident progress more quickly and far more
19 likely.

20 I don't see --

21 JUDGE COTTER: You're contending,
22 then, that one of the bases for the Contention is
23 that the makeup system is inadequate?

24 MR. RICH: Yes. Yes.

25 JUDGE COTTER: All right.

1 MR. RICH: The make-up system and
2 its attendant power supply.

3 JUDGE COTTER: I think we're
4 halfway through the Contentions at this point.

5 This might be a good place to take
6 a ten minute break.

7 MR. BAUSER: Excuse me, Mr.
8 Chairman.

9 Just to complete the Contentions to
10 this point. We did not address Contention 5
11 because it had been withdrawn and I would like to
12 respond briefly now to the merits of that.

13 Not to the merits of that
14 Contention, but to the acceptability of that
15 Contention.

16 JUDGE COTTER: All right.

17 MR. BAUSER: Again, we have con-
18 sidered the boiling of the pool. The results of
19 that analysis have been presented.

20 In addition, the make-up system for
21 that pool is a route from the discharge of the
22 intake cooling water pumps, up a standpipe and
23 into that pool.

24 That is a Seismic Category I system
25 and as a result, we feel that it is incumbent upon

1 the Petitioner to specify what he sees as a defi-
2 ciency in the design of that system in terms of
3 causing this Board to address that matter.

4 JUDGE COTTER: Miss Young, did you
5 want to add anything?

6 MS. YOUNG: I guess my only question to the Peti-
7 tioner would be, in terms of his Contention 8 as
8 stated, is he providing more specificities to the
9 Contention to the extent that the systems -- I'm
10 quoting from the Contention.

11 The expression he has here is, "The
12 System is designed for decay heat and other resi-
13 dual heat removal."

14 Is he now stating that the system
15 that he's concerned with is megable.

16 MR. RICH: Well, we're talking --
17 you know, there's A and B.

18 JUDGE COTTER: I don't think so. I
19 think he said that there were two bases.

20 One, he's saying that the normal
21 temperature has been under-calculated and that
22 the time to boil has been under-calculated on the
23 one hand, to the point that the normal make-up
24 wouldn't maintain regulatory temperatures.

25 Then, secondly, that he's alleging

1 that the make-up system itself would be inade-
2 quate anyway and there would be further delay.

3 Is that correct?

4 MR. RICH: That's corr -- And I'm
5 also alleging that just the normal temperatures
6 of the pool.

7 JUDGE COTTER: That's what I said
8 first.

9 MR. RICH: Yes, okay.

10 This Contention 8 then -- as I said
11 we're running -- a lot of these contentions are
12 running together, are trying to make the same
13 points.

14 But, I think you understand.

15 MS. YOUNG: I guess to the extent
16 that it tries to raise the same point as Contention
17 5, maybe you are suggesting that it should
18 be rejected?

19 MR. RICH: Well, I --

20 MS. YOUNG: Or maybe I totally
21 misunderstand your contentions.

22 MR. RICH: No, I withdrew my abandonment
23 of that Contention until we've had an
24 opportunity to look at the analysis.

25 You see, this is very similar to

1 temperature -- Contention 6 in a way. In that I
2 am alleging that the higher temperatures are
3 going to be increasing the spent fuel pool verg-
4 ility, which could cause a loss of cooling
5 action.

6 And then I am also addressing the
7 issue of make-up water in the event of a pool
8 boiling accident.

9 So, maybe I'm trying to put two
10 contentions in one here and that's inappropriate,
11 but I guess we have to deal with them as they are
12 written.

13 Did I confuse you more, Mitzi?

14 MS. YOUNG: I hope not.

15 MR. BAUSER: Mr. Chairman, we now
16 perhaps have three contentions mixed together
17 here.

18 We have a pool temperature conten-
19 tion as I understand it.

20 We have now the reassertion of
21 Contention 5 pertaining to pool boiling.

22 And I heard Mr. Rich just refer to
23 "increased temperatures affecting the vergility
24 of the pool," which sounds to me like a materials
25 contention.

1 JUDGE COTTER: That's six.

2 MR. RICH: Right. That's what I
3 was saying.

4 MR. BAUSER: I'd like to have -- I
5 guess I'd like to understand, first of all, if
6 we're reasserting Contention 5, because I also
7 heard Mr. Rich refer to subject to review --

8 JUDGE COTTER: Clearly, Contention
9 5 is being reasserted. It is not being aban-
10 doned. It is for us to consider as to whether or
11 not it can be admitted in this proceeding.

12 Secondly, I think to a certain
13 extent, we are hearing some ruminations out loud
14 from Mr. Rich about the fact that he's seeing
15 temperature as a factor in more than one of his
16 contentions.

17 MR. RICH: Yes.

18 JUDGE COTTER: And thirdly, we will
19 recess for ten minutes and be back here --

20 (Off record)

21 JUDGE COTTER: Back on the record.

22 The next contention is Contention
23 9. And it deals with the cooling failure by
24 either a pump or electrical failure.

25 Mr. Rich? Do you have anything you

1 want to add to your written --

2 MR. RICH: I'm just reading it to
3 make sure.

4 I feel the Contention is adequate.
5 I want to just reinforce the notion that the the
6 electrical power supply is vulnerable; the ef-
7 fects of humidity, wear, corrosion, elevated
8 temperatures, exposure to radiation on relays,
9 circuit breakers, electric meters -- electric
10 motors rather, and batteries makes this very
11 likely.

12 And that we also agree with the
13 Licensee's response that the mere assertion that
14 the cooling system will be unable to accomodate
15 the heat load in the event of certain failure is
16 insufficient.

17 We would hope that we would be
18 allowed to present our technical data in this
19 case.

20 JUDGE COTTER: You agree only in
21 the sense that you want to put on evidence I take
22 it, not in the sense --

23 MR. RICH: That's correct. That's
24 correct.

25 JUDGE COTTER: Okay. Mr. Bauser?

1 MR. BAUSER: I would suggest we do
2 not agree in that event. But, I will only refer
3 the Board to our written reply.

4 The analysis referenced in that
5 reply does assume electrical failure and the loss
6 of one pump. And the analysis referenced in our
7 written reply demonstrates that the results are
8 within regulatory safety requirements.

9 JUDGE COTTER: Thank you.

10 Miss Young?

11 MS. YOUNG: The staff has nothing
12 to add to his pleading. It did not oppose admis-
13 sion of this Contention.

14 MR. RICH: I believe our specific
15 bases is that it will be in violation of 10 CFR,
16 Part 50, Appendix A. I believe that's one of the
17 criteria we contend will be violated.

18 JUDGE COTTER: What was that again,
19 Mr. Rich?

20 MR. RICH: 10 CFR, Part 50, Appen-
21 dix A.

22 JUDGE COTTER: Is that referenced
23 in the --

24 MR. BAUSER: No, it's not.

25 JUDGE COTTER: -- Contention?

1 MR. RICH: No, it's not.

2 JUDGE COTTER: Contention 10 --

3 Did you have something?

4 JUDGE COLE: Yes.

5 JUDGE COTTER: I'm sorry.

6 JUDGE COLE: Isn't Appendix A a
7 listing of the general design criteria? Can you
8 be a little more specific than that?

9 MR. RICH: Maybe I should have men-
10 tioned, because I actually lost that particular
11 document and been unable to find out -- I was
12 just trying to recall that from memory. It's not
13 there, I guess.

14 I probably shouldn't have thrown
15 that in. The Contention is adequate as it is.

16 JUDGE COTTER: All right, Conten-
17 tion 10, again, deals with time to boil analysis
18 and differing assumptions.

19 Mr. Rich?

20 MR. RICH: Well, we were correct
21 that FP&L had utilized a different set of assump-
22 tions in calculating time to boil.

23 We contend that the time to boil
24 calculations are not conservative. And we ask
25 that we be allowed to present technical data

1 relevant to this matter.

2 We don't see why they used a diffe-
3 rent set of assumptions.

4 JUDGE COTTER: Are you talking
5 about a difference between their --

6 MR. RICH: Not a difference between
7 our calculations and their calculations, rather a
8 difference between the calculations as derived in
9 the original FSAR, and the calculations used to
10 provide data for the SER or SAR.

11 JUDGE COTTER: Then you're talking
12 about the difference between a draft FP&L report
13 and a final report?

14 MR. RICH: The draft document being
15 which one?

16 JUDGE COTTER: I'm not sure. I'm
17 trying to find out.

18 You said FP&L -- the Contention
19 reads:

20 "In calculating time to boil after
21 loss of cooling, after completion of full core
22 discharge, with the presence of the proposed 1706
23 assemblies, FP&L utilized a different set of
24 assumptions than in determining the original fi-
25 gures for time to boil as indicated in the final

1 Safety Analysis Report for the St. Lucie Plant."

2 And then you reference a paragraph
3 and table.

4 MR. RICH: Right. I guess the --
5 well, that was a draft document then.

6 Is that correct about my quote? Is
7 that from a draft document?

8 MR. BAUSER: I don't believe so.
9 Again, this illustrates the difficulty of failing
10 to address, with some specificity, the contents
11 of specific documents so that we can see what
12 we're talking here.

13 I interpreted this Contention to be
14 referring to the final Safety Analysis Report
15 pertinent to the operating license
16 for the plant, and referring on the other hand,
17 to the Safety Analysis Report submitted by Flori-
18 da Power and Light Company in connection with the
19 spent fuel pool expansion Amendment.

20 MR. RICH: Right. I agree with
21 that.

22 JUDGE COLE: And what's wrong with
23 what they did, Mr. Rich?

24 MR. RICH: I say those assumptions
25 are not conservative. Those new assumptions are

1 not conservative.

2 I'm not competent to address that
3 issue. That issue needs to be addressed by an
4 engineer.

5 JUDGE COTTER: You are saying both
6 assumptions. Both the one for the final operat-
7 ing license report and the one for the spent fuel
8 pool expansion report --

9 MR. RICH: I don't think it's that
10 I need to make an attempt to understand the ade-
11 quacy of the original calculations, since those
12 calculations pertain to a pool configuration
13 that, well no 1 per exists.

14 Certainly, what is of concern to us
15 is that the calculations used to determine the
16 time to boil in a pool with 1706 assemblies, the
17 adequacy or inadequacy of those calculations are
18 what concern us.

19 JUDGE COTTER: It sounds to me like
20 you're modifying the Contention.

21 You're not so much concerned with
22 the discrepancy as you are with the adequacy or
23 the conservatism with the calculations offered in
24 support of the reracking of the spent fuel pool.

25 MR. RICH: Clearly we're concerned

1 with the inadequacy. I think the discrepancy
2 just served to point up the fact that a different
3 set of assumptions were being used in order to
4 generate more acceptable figures.

5 And that the discrepancy itself
6 would not serve to render invalid the latter
7 assumptions, or the latter calculations rather.

8 JUDGE COTTER: I am still a little
9 confused as to why you think -- I guess I
10 haven't heard why you think the assumptions un-
11 derlying the calculations for the spent fuel pool
12 expansion are inadequate?

13 MR. RICH: I am not qualified to
14 speak to that --

15 JUDGE COTTER: Well, for argumenta-
16 tive purposes then, if you're not qualified then
17 somebody else could say they adequate.

18 You have to give us a reason --

19 MR. RICH: That's good, but I could
20 supply a person who has experience in that area
21 who would challenge the conservative natures of
22 those assumptions and say that they are inadequate
23 or inaccurate.

24 JUDGE COTTER: Well, that's okay.
25 What's his reason?

1 Aside from going through the me-
2 chanics of the calculations and the assumptions
3 and that sort of thing, why does he think they're
4 in --

5 MR. RICH: I'm not prepared to
6 present that technical evidence.

7 JUDGE COTTER: It's not evidence,
8 it's a reason why we should go on and hear the
9 evidence.

10 JUDGE COLE: Are you saying that
11 you're prepared to bring someone forth to provide
12 testimony on the validity of the assumptions?

13 MR. RICH: Yes.

14 JUDGE COTTER: Okay. Mr. Bauser?

15 MR. BAUSER: Mr. Chairman, I think
16 our problem is the same as the Board's.

17 I would again simply refer to our
18 response. We have listed the assumptions to
19 which we believe Mr. Rich is referring in the
20 Safety Analysis Report.

21 Those assumptions are clearly as-
22 sumptions which are conservative to the extent
23 that they would give higher temperatures rather
24 than lower temperatures.

25 And it is our conclusion as a re-

1 sult of those analysis that the temperatures
2 pertinent to spent fuel pool are within safety
3 regulatory requirements.

4 JUDGE COTTER: Miss Young?

5 MS. YOUNG: The staff had opposed
6 admission of this Contention. And I think, as I
7 listen to Mr. Rich today, it appears he's offer-
8 ing a similar proposition that was stated in his
9 Contention 5, that is questioning the calcula-
10 tions of time to boil and what-have-you.

11 To that extent, even apart from the
12 objections being set forth in our pleadings, this
13 Contention should be rejected as repetative.

14 JUDGE COTTER: Contention 11 deals
15 with the potential problems with the Boraflax and
16 the -- I'm sorry, boraflex -- in the Joseph Potes
17 (phonetic) fabricated storage racks.

18 Mr. Rich?

19 MR. RICH: Okay. Clearly, we are
20 dealing with an unproven technology.

21 We are dealing with a technology
22 that has developed a number of problems, as evi-
23 denced by the NRC information notice here, which
24 I read from previously.

25 It mentions, "The safety concern is

1 that certain gaps might excessively reduce the
2 margin of nuclear subcriticality in the fuel
3 pool."

4 Certainly an important issue.

5 "The concern is that separation of
6 the neutron absorbing material used in high den-
7 sity fuel storage racks might compromise safety."

8 It's clearly pertinent.

9 And, again, if this is not a defi-
10 nition of unproven, I don't know what is.

11 The NRC states in the information
12 notice, "The effective rack design and manufac-
13 turing methods on the consequences of stress,
14 temperature and chemical environment to irradi-
15 ated Boraflexes are uncertain."

16 This was issued September 8th. I
17 find it hard to believe that between September
18 8th and even this date that substantial advances
19 have been made in boraflex technology to render
20 it safe and reliable on a long-term bases.

21 Clearly, it poses an increase in
22 the potential threat to the health and safety of
23 the public.

24 If I can just, as an example of the
25 confusion that seems to reign concerning the

1 reliability of boraflex -- if I can find one
2 document I'll do a lot better.

3 I'd like to reveal the, either
4 incorrect or misstatements that were made in
5 FP&L's response to the NRC's request for a des-
6 cription of corrective measures to be taken in
7 order to respond to the problems, myriad of pro-
8 blems, that were described in the Quad Cities
9 Point Beach study.

10 Does everyone know what I'm talking
11 about?

12 MR. BAUSER: Is there a reference
13 to the document from which --

14 MR. RICH: Which one?

15 MR. BAUSER: The FPL response that
16 you've just referred to?

17 MR. RICH: It was a document dated
18 October 20th of last year.

19 It was entitled "Re Spent Fuel Pool
20 Rerack boraflex and Pool Cleanup."

21 The question was: "Recent anomo-
22 lies have been identified in the Quad Cities and
23 Point Beach spent fuel pools due to boraflex
24 shrinkage caused by irradiation.

25 Based on this, provide justifica-

1 tion to demonstrate the continued acceptability
2 of boraflex for application in the St. Lucie
3 spent fuel pool."

4 This is a three-page response --

5 MR. BAUSER: Are you referring to
6 the attachment to the FPL letter dated October
7 20th, 1987?

8 MR. RICH: It was attached too,
9 yes.

10 MR. BAUSER: Thank you.

11 MR. RICH: FP&L goes on: "boraflex
12 has undergone extensive qualification testing to
13 study the effects of gamma and neutron irradiation
14 in various environments and to verify its
15 structural integrity and stability as a neutron
16 absorbing material.

17 Yes, it has, but as we all know,
18 high level radiation testing over short periods
19 of time can produce dramatically different re-
20 sults than continuous long term low dosage ex-
21 posure.

22 So, the results of many of these
23 studies are highly speculative and in fact they
24 will admit that.

25 FP&L states that "These tests indi-

1 cated that boraflex maintains its neutron attenu-
2 ation capabilities when subjected to an environ-
3 ment of borated water and 1.03 times 10 to the
4 11th rads of gamma radiation."

5 As I quoted previously, "Quad City
6 says except where there are gaps," and they
7 clearly state that.

8 "In the gap region the absence of
9 neutron absorber in one or more panels results in
10 a net local increase in rack reactivity as well
11 as an increase in the reactivity of the entire
12 storage cell."

13 This is under Section, Reactivity.
14 "Reactivity affects of gaps. The net over-all
15 affect, however, is an increase in fuel rack
16 reactivity, which is a function of gap size,
17 number of panels per cell with gaps and actual
18 location of the gaps."

19 It seems to me that clearly that
20 statement is incorrect.

21 Additionally, "further tests have
22 recently been conducted" -- FP&L says again --
23 "and preliminary results indicate that some
24 shrinkage, a maximum of about two percent, can
25 occur in boraflex."

1 That's incorrect according to Quad
2 Cities. The Quad Cities report says:

3 "The measurements of physical di-
4 mensions show in most cases a net shrinkage of
5 the samples after radiation. The data is vari-
6 able, but the general trend is about two to three
7 percent."

8 Their figure of a maximum of two
9 percent is off by 50 percent.

10 "...shrinkage in width and up to
11 eight percent in thickness." Well, they didn't
12 even mention that.

13 "The accuracy of these measurements
14 is not know, but it is suspected that accurate
15 dimensional measurements on small samples would
16 be difficult."

17 There is many -- perhaps that data
18 is not even -- you know, could change drast-
19 ically.

20 They go on, "Three plants, Point
21 Beach, Prairie Island and Quad Cities have re-
22 ported the results of their boraflex surveil-
23 lance.

24 Of these three, boraflex used at
25 Point Beach nuclear power has received the high-

1 est accumulated dose.

2 This material has been in use for a
3 total of five years and some of the boraflex
4 panels have received a 20 year equivalent radi-
5 ation dose."

6 I would make the point there again
7 that that short term, high level exposure is not
8 an accurate demonstration of the long term reli-
9 ability.

10 They go on, again, to say, "That as
11 a result of this exposure, the nuclear character-
12 istics of the samples have not experienced any
13 unexpected changes and the boron absorbing pro-
14 perties of the samples met the acceptance criter-
15 ia."

16 I guess they didn't have any unex-
17 pected changes, 'cause I guess they expected that
18 when the SF -- this is Point Beach speaking --
19 conclusions:

20 "With gamma irradiation, the bora-
21 flex polymers appear to change in a manner that
22 allows SFP water to permeate the boraflex along
23 the edges. When the SFP water does penetrate the
24 boraflex, the material changes character, changes
25 in material of good integrity and retention to

1 one that is friable and yields a particular like
2 powder.

3 Once it has reached the gray state,
4 thinning, weight loss and general degradation
5 appear to follow."

6 And another conclusion: "In either
7 case, when SFP water permeation occurs, the bora-
8 flex material changes from a material of good
9 integrity, to one that is easily degraded."

10 So, I guess they just expected it
11 to degrade easily. So, we can call that unexpec-
12 ted.

13 JUDGE COTTER: I take it essential-
14 ly you're addressing really both Contentions 11
15 and 12.

16 MR. RICH: Twelve being?

17 JUDGE COTTER: That's the filling
18 of boraflex to the pool floor.

19 MR. RICH: Twelve is based on a
20 document that I read incorrectly, and that I
21 don't -- I can provide no evidence for the appea-
22 rance of boraflex on the floor of the pool

23 It's not mentioned in either the
24 Quad Cities or the Point Beach, so.

25 JUDGE COTTER: Does that mean

1 you're withdrawing --

2 MR. RICH: I withdraw that.

3 JUDGE COTTER: All right. Thank
4 you.

5 MR. RICH: Now, FP&L, in order to
6 accomodate the supposed formation of gaps, which
7 we realize increases the reactivity clearly.
8 They say that it's mainly due -- okay.

9 "Gaps were noted in the boraflex
10 panels and a review of the size and number of
11 gaps was performed. This review indicated that
12 the gaps were attributed to a rack design and
13 fabrication process which did not allow the bora-
14 flex to shrink without cracking."

15 Yes, they agree that that is one of
16 the causes. It can also be caused by radiation.

17 Again, Quad Cities: "When a poly-
18 mer such as boraflex is subject to irradiation
19 fields, changes in the atomic molecular structure
20 occur. Radiation results in the breaking of
21 atomic bonds and subsequent cross-linking between
22 atoms and the adjacent polymers -- "

23 MR. BAUSER: Excuse me. Mr. Chair-
24 man, if Mr. Rich is reading from a document, I
25 would like to have that identified.

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2 powder.

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21 atomic bonds and subsequent cross-linking between
22 atoms and the adjacent polymers -- "

23 MR. BAUSER: Excuse me. Mr. Chair-
24 man, if Mr. Rich is reading from a document, I
25 would like to have that identified.

1 MR. RICH: This is the Quad Cities,
2 Point Beach --

3 JUDGE COTTER: Does it have a date?

4 MR. RICH: -- NRC document. June
5 15th of '87. Subject: "Board Notification re-
6 garding Anomalies in Boraflex Neutron Absorbing
7 Material. BN-87-11."

8 JUDGE COTTER: Thank you.

9 MR. BAUSER: The Board notifica-
10 tion; what case was that?

11 MR. RICH: Dockets number 50-250,
12 OLA-2 and 50-251, OLA-2.

13 MR. BAUSER: Do you know, Mitzie,
14 do both documents fall under this title page.

15 MS. YOUNG: I think it's Turkey
16 Point. This Board notification that was made in
17 Turkey Point and appended to that notification is
18 the Quad Cities report.

19 MR. RICH: No, there are two re-
20 ports --

21 MS. YOUNG: And the Point Beach
22 report.

23 MR. RICH: They come under this one
24 title page.

25 MS. YOUNG: But, you were reading

1 from the Quad Cities report.

2 MR. RICH: Well, I read from the
3 Point Beach and the Quad -- that's what I'm ask-
4 ing. Do they both come under the same --

5 MS. YOUNG: They're attachments to
6 the --

7 MR. RICH: Okay.

8 MS. YOUNG: Yes, you're fine.

9 MR. RICH: Again, FP&L claims the
10 construction, how the boraflex is assembled into
11 the racks is the primary cause. Clearly, that is
12 incorrect according to the Point Beach, Quad
13 Cities rather --

14 Okay, radiation. It can be caused
15 by radiation. It can be caused by temperature.

16 Equation 7.5 also indicates that
17 the elastic modulus is a function of temperature.
18 There they are talking about the ability of the
19 material to withstand.

20 Or it can be -- the gaps can be
21 caused by cool chemistry. At some point the pool
22 chemistry may be an important factor in influenc-
23 ing the rate of degradation with irradiation and
24 exposure to the aqueous pool environment.

25 Schizogening might cause specific

1 atoms to be released from the polymer matrix
2 resulting in highly localized voids pits (phonetic)
3 ic) microcracking. This in turn would introduce
4 porosity, allowing the material to absorb water."

5 Well, it seems I'm getting eviden-
6 tiary here. Let me just summarize what they're
7 saying.

8 Owing to the lack of specific data
9 for boraflex at low dose, as well as lack of
10 knowledge of the condition of the silicone adhe-
11 sive, the discussion presented is only qualita-
12 tive.

13 It does, however, suggest a mechan-
14 ism by which local stresses could exceed the
15 yield stress of boraflex leading to the inception
16 of tears.

17 It also provides one potential
18 explanation of the observed actual distribution
19 of gaps observed in the special task conducted by
20 the National Nuclear Corp.

21 "The long term stability of the
22 dimethylpolysiloxane (phonetic) matrix which
23 contains the B4C powder in boraflex cannot be
24 projected at this time.

25 The qualification program conducted

1 by Visco (phonetic) examined radiation effects on
2 long term exposure to an aqueous environment
3 separately.

4 The combined effects after cross-
5 linking saturates and schizogening predominates
6 may likely depend on such factors as pool water
7 chemistry, water temperature and local flow con-
8 ditions around the boraflex panel."

9 Clearly, to state that simply, by
10 changing the construction process of the boraflex
11 panels is going to solve the problem, is not
12 taking into consideration the evidence as provid-
13 ed in these studies.

14 Also, the Quad Cities determined
15 that in a statement in the K-effective guide-
16 lines, and yet their fuel is only -- what is --
17 their fuel is --

18 I'm going to have to find this; if
19 I could take a minute.

20 "The fuel regions contains 3.2
21 weight percent U235."

22 And clearly, so that their calcula-
23 tions which FP&L relies on to assure that the K-
24 effective standard will be met, it's not applic-
25 able, because in FP&L we're dealing with 4.5

1 percent U235.

2 So, certainly those K-effective
3 calculations would seem to be inadequate.

4 I'm a little confused, I must ad-
5 mit, by the last paragraph in this response.
6 Their contention is that the boraflex develops
7 gaps because of stresses created by the assembly
8 process. In other words, it's holding it in
9 place, it allows it to shrink.

10 So, they say that they're -- "The
11 boraflex sheets in FP&L's case will not be glued
12 or clamped in place but instead are supported by
13 the stainless steel cell walls, stainless steel
14 cover sheets -- "

15 MR. BAUSER: Excuse me, Mr. Chair-
16 man, could I have a reference to the page from
17 which --

18 MR. RICH: I'm continuing to read
19 from the response, which was the attachment to
20 the letter of October 20th.

21 I'm on page -- this doesn't have a
22 page. I'm sorry.

23 JUDGE COTTER: How many pages after
24 the attachment cover sheet.

25 MR. RICH: I don't have the cover

1 sheet. It's 0093L/0017L.

2 JUDGE COTTER: They all have that
3 at the bottom.

4 MR. RICH: It's "Response contin-
5 ued, Question No. 1." The one with the footnote.

6 MR. BAUSER: I think I have it.

7 MR. RICH: Footnote two.

8 MR. BAUSER: Yes.

9 MR. RICH: All right. "This ar-
10 rangement allows the boraflex sheets to contract
11 freely." So, it is their feeling they are going
12 to be able to avoid these stresses.

13 But, then at the bottom they say:
14 "The boraflex is similarly allowed to contract
15 without restraint, unless and until the potential
16 boraflex shrinkage is sufficient to result in
17 contact between the boraflex cut-outs and the
18 cell wall to cover sheet spot welds.

19 Should the spot welds act as a
20 restraint on the boraflex, it would effectively
21 pin the boraflex in place, preventing formation
22 of any large gaps due to further shrinkage of
23 boraflex."

24 On the one hand they seem to say
25 that they need to eliminate any restraint on the

1 boraflex in order to eliminate the cause of the
2 gaps, and yet here they are saying that by provi-
3 ding restraint on the boraflex they are going to
4 prevent the formation of any large gaps.

5 Maybe I'm not seeing it and it's
6 something there, but that was just very confusing
7 to me.

8 I think why the boraflex is so
9 important is summed up in one paragraph. This
10 is, again, in the Quad Cities report. I'm on
11 10.6:

12 "The rate of boraflex shrinkage is
13 likely to be greatest at low doses when there are
14 many sites available for cross-linking. As
15 cross-linking saturates, the rate is likely to
16 diminish. Accordingly, the boraflex in the Quad
17 Cities racks may have experienced the greatest
18 rate of gap growth during the first two refueling
19 outages and rate of growth with increasing dose
20 may diminish during subsequent outages.

21 In order to prove this hypothesis
22 data in the exposure range of 10^{-8} to 10^{-10} rad
23 is needed."

24 In other words, the greatest poten-
25 tial for gap formation, which would promote ex-

1 cessive criticality, may occur with the initial
2 higher density refueling.

3 And these are just a few of the
4 quotes. I don't want to go on and on.

5 But, in light of all that uncer-
6 tainty, in the light of the possibility that that
7 gap formation may occur in the initial refueling,
8 I would say it's essential that the Board make
9 every effort to insure that the boraflex is bet-
10 ter understood and the causes of the gaps are
11 better understood.

12 If those quotes don't indicate an
13 unproven technology, I don't know what does. And
14 as far as new, I'm not aware of any other facil-
15 ity that has used the assembly methods that FP&L
16 is proposing to use for the boraflex panel that
17 has had them in place for any length of time.

18 So, that would indicate to me that
19 this is new.

20 JUDGE COTTER: Mr. Bauser?

21 MR. BAUSER: Mr. Chairman, I would
22 simply refer the Board to our written response.

23 Essentially, we have addressed the
24 issue of boraflex performance in a letter dated
25 October 20, 1987, which is in the docket of this

1 proceeding and an additional letter dated Decem-
2 ber 23rd, 1987.

3 We have demonstrated that with
4 respect to the experience at other plants which
5 have resulted in gaps, FPL has employed an im-
6 proved design which will preclude the formation
7 of gaps.

8 We will, as described in our sub-
9 mittals, monitor the performance of boraflex
10 material, using sample coupons, which will be
11 withdrawn periodically. This is also described
12 in our submittals.

13 And, in addition, if any degrada-
14 tion is observed, we have describe' in our sub-
15 mittals the remedial action which can be taken to
16 address that degradation.

17 As a result, we believe that the
18 Petitioner's failure to specifically identify
19 deficiencies in our response to questions raised
20 in connection with boraflex performance render
21 this Contention unacceptable.

22 In addition, we have heard consid-
23 erable reading today from reports having to do
24 with Quad Cities and Point Beach. And to the
25 extent that in the process Mr. Rich has amended

1 the bases for his Contention, we would object to
2 that here today.

3 JUDGE COTTER: Miss Young.

4 MS. YOUNG: The staff would not
5 oppose admission of this Contention. And in
6 light of Mr. Rich's remarks today, would maintain
7 that position. It does not oppose the Contention.
8 tion.

9 MR. RICH: I would like to add
10 Judge Cotter that a --

11 JUDGE COTTER: Why don't you quit
12 while you're ahead.

13 MR. RICH: Well, just a comprehensive
14 surveillance program does not warranty the
15 long term integrity of the material itself.
16 That's quite a different matter.

17 JUDGE COTTER: All right. Contention
18 13. That Contention provides: "That Licensee
19 has not analyzed the affect a hurricane or
20 tornado could have on the spent fuel storage
21 facility or its contents.

22 And that the SER, safety evaluation
23 report, neglects certain accidents that could be
24 caused by such natural disasters."

25 MR. RICH: Clearly, they have con-

1 sidered a tornado and hurricane, other natural
2 disasters.

3 I would be concerned about the
4 consequences of a fully fueled Grumman jet slam-
5 ming into the spent fuel pool building, which is
6 not an unlikely event at all considering the
7 proximity --

8 JUDGE COTTER: Do you consider that
9 a natural disaster?

10 MR. RICH: No.

11 JUDGE COTTER: There is no mention
12 of anything like that in here to date. Are you
13 saying that you are amending the Contention?

14 MR. RICH: Yes.

15 JUDGE COTTER: Are you abandoning
16 the natural disasters?

17 MR. RICH: No.

18 JUDGE COTTER: Why don't you start
19 with the natural disaster and then go to the
20 jets.

21 MR. RICH: Well, I'll let the Con-
22 tention speak for itself in that case, and simply
23 add the jet.

24 JUDGE COTTER: Mr. Bauser?

25 MR. BAUSER: I would simply refer

1 the Board to discussion in our written response
2 to Contention 13 and I would also object to the
3 addition of a Contention at this point absent the
4 required showings.

5 JUDGE COTTER: What kind of show-
6 ings did you have in mind?

7 MR. BAUSER: Those that are perti-
8 nent to late filed Contention --

9 JUDGE COTTER: To late filed Con-
10 tentions?

11 MR. BAUSER: Yes, sir.

12 And let me just mention for the
13 benefit of the public here that what I'm refer-
14 ring to in terms of our written response is the
15 discussion therein which describes the considera-
16 tion which was given to hurricanes, tornados and
17 other natural events such as seismic events,
18 during the licensing of St. Lucie facilities.

19 JUDGE COTTER: Miss Young?

20 MS. YOUNG: I am surprised by the
21 reference to the jet. But, I would just reiter-
22 ate the conclusion in our pleading that the ef-
23 fect of natural disasters was analyzed at the
24 operating license stage.

25 To the extent that Mr. Rich is con-

1 cerned about potential impacts from over-flying
2 aircraft --

3 MR. RICH: Fully loaded.

4 MS. YOUNG: Fully loaded, right.

5 MR. RICH: Fully fueled.

6 MS. YOUNG: I am not sure that
7 there is a bases within the scope of this pro-
8 ceeding for assuming that potential for that
9 event is related at all to the expanded storage
10 authorized by this Amendment.

11 So, to that extent, that concern
12 should be rejected for lack of nexus to this
13 proceeding.

14 JUDGE COTTER: Contention 14 pro-
15 vides: "That FP&L has not properly considered or
16 evaluated the radiological consequences to the
17 environment and surrounding human population in
18 an accident at the spent fuel pool."

19 MR. RICH: I would point out the
20 inadequacies of the site analysis at the time of
21 licensing. They certainly did not consider or
22 project the present population density.

23 That would obviously create a more
24 severe impact from any accident.

25 JUDGE COTTER: Do you know roughly

1 what the difference in the population was from
2 the --

3 MR. RICH: I do not have those
4 specific figures. I can make them available to
5 you in a fairly short period of time though.

6 JUDGE COTTER: Well, can you tell
7 me something about order of magnitude between
8 1976 and today?

9 MR. RICH: No.

10 The staff did not consider the
11 effects of a severe accident in the spent fuel
12 pool as described in the BNL Report, but we have
13 challenged and continue to challenge that assump-
14 tion as not conservative.

15 As far as an accident initiated
16 event which would cause such an accident to oc-
17 cur, again we refer to the BNL Report in which
18 they describe an accident initiating event that
19 could cause such an accident, being the "struc-
20 tural failure of a pool due to a heavy load drop;
21 pool heatup due to loss of cooling water circu-
22 lation capability."

23 Both these events being within the
24 realm of possibility.

25 JUDGE COTTER: How might they

1 occur?

2 MR. RICH: How might a heavy load
3 drop occur?

4 JUDGE COTTER: Uh-huh (affirma-
5 tive).

6 MR. RICH: A fuel assembly may be
7 dropped being loaded; casks may be dropped in
8 removing some of the fuel for some reason.

9 As I understand it, they're going
10 to have to -- well, this goes to the next Contention -- but they'll be moving the fuel, isolating
11 the most recently discharged fuel in Region 1, I
12 believe, and then they move it into Region 2 when
13 it's cooled down thermally and radioactively.

14 So that there will be a -- spent
15 fuel pool assembly will be moved over. So there
16 will be a pool heatup through the loss of cool-
17 ing water circulation capability, and I think we
18 addressed that in a previous Contention.

19 JUDGE COTTER: Anything further,
20 Mr. Rich?

21 MR. RICH: No.

22 JUDGE COTTER: Mr. Bauser?

23 MR. BAUSER: I would refer the
24 Board to our written response to this Contention.
25

1 With respect to population, it's
2 not clear to me what the nature of Mr. Rich's
3 Contention is, to the extent that it raises an
4 objection to the siting of the facility at its
5 present location. It's beyond the scope of this
6 proceeding and it's not related to the expansion
7 of spent fuel storage pool.

8 But, this matter of population and
9 population projections was considered in great
10 detail during the licensing the St. Lucie facili-
11 ty.

12 As a result of that consideration,
13 there was a spectrum of possible population
14 growth identified and that was addressed in the
15 decision allowing for the licensing of St.
16 Lucies, Unit II.

17 In addition, with respect to the
18 drops of heavy loads into the pool, these have
19 all been considered, including the drop of a
20 spent fuel assembly into the pool.

21 And the result of the analysis
22 which have been performed have indicated that all
23 regulatory safety requirements have been met and
24 in fact the radiological results of drops of
25 spent fuel assemblies, spent fuel storage racks

1 and spent fuel casks are all significantly less
2 than allowable regulatory limits.

3 JUDGE COTTER: Miss Young?

4 MS. YOUNG: The staff had objected
5 to this Contention because it did not put forth,
6 or was not supported by an adequately specific
7 bases for consideration of beyond design bases
8 design accidents.

9 And Mr. Rich's comments today do
10 not further enlighten the staff on that point.

11 I might also add that Mr. Rich has
12 expressed a concern about heavy loads which would
13 include fuel assemblies.

14 At least as indicated on page nine
15 of the staff's safety evaluation supporting the
16 issuance of this Amendment, fuel assembly is not
17 considered a heavy load. It's more appropriate--

18 MR. RICH: Casks.

19 MS. YOUNG: -- to address that term
20 to casks and storage racks.

21 JUDGE COTTER: Anything further?

22 MS. YOUNG: No, that's all.

23 MR. RICH: I believe I mentioned
24 the possibility that casks would be transported
25 over the pool.

1 JUDGE COTTER: You did.

2 All right. Contention 15 states:

3 "That the increase of the spent fuel pool capac-
4 ity which includes fuel rods which have experi-
5 enced fuel failure in fuel rods that are more
6 highly enriched, to oppose the requirements of
7 ANSI N16 1975 not to be met and will increase the
8 probability that a criticality accident will
9 occur in a spent fuel pool and will exceed 10
10 CFR, Part 50, Appendix -- or is that A62 cri-
11 teria."

12 Mr. Rich?

13 MR. RICH: I would simply amend
14 that Contention to exclude: "...which have
15 experienced fuel failure...."

16 JUDGE COTTER: You are deleting
17 that from the Contention?

18 MR. RICH: Yes. And I believe the
19 Contention speaks for itself.

20 JUDGE COTTER: Mr. Bauser?

21 MR. BAUSER: I would simply refer
22 to our written response to this Contention and I
23 would object also to amending the Contention here
24 without following the necessary procedures perti-
25 nent to late filing of contentions.

1 JUDGE COLE: Well, it's not really
2 an Amendment. He's just deleting a section. It
3 makes it less of a Contention.

4 MR. BAUSER: The problem that I'm
5 having is, again, without reference to the anal-
6 ysis that we have performed, which is cited in
7 the response we have filed, it is difficult for
8 me to tell exactly what he is doing by deleting
9 various aspects or adding to them with respect to
10 his Contention.

11 MR. RICH: I think the point is
12 that there will not be rods that have experienced
13 failing the pool, as I understand it. Or. I
14 don't know that to be a fact.

15 But, certainly we know that the
16 fuel rods that are more highly enriched will be
17 present, in fact will dominate in the pool.

18 MR. BAUSER: Well, then I would
19 simply again refer to our referenced analysis
20 which considers reactivity as a result of the
21 storage of 4.5 percent enriched fuel in the spent
22 fuel storage pool.

23 JUDGE COTTER: All right. Miss
24 Young?

25 MS. YOUNG: Without addressing the

1 merits of the Contention as proposed, the staff
2 did not object to its admission so long as it was
3 modified along the lines that Mr. Rich has done
4 today.

5 JUDGE COTTER: All right. Contention 16 provides: "That FP&L has not responded
6 to the concerns as presented by the NRC by outlining a loading schedule for the spent fuel pool
7 detailing how the most recently discharged spent
8 fuel will be isolated from other recently discharged fuel, and/or a full core discharge in
9 order to mitigate potential risks from fires in
10 the spent fuel pools resulting in releases of
11 radioactivity into the environment in excess of
12 10 CFR 100 criteria."

13 Mr. Rich?

14 MR. RICH: My vague reference to
15 NRC concerns was those concerns as expressed by
16 the BNL Report. I may have mistakenly attributed
17 them to the NRC, as it was the NRC that published
18 the document.

19 I'm not sure of how the responsibility works in that area. But, that was what I
20 was talking about.

21 They have, as I have read, detailed

1 a loading schedule; however, I feel it does not
2 fully respond to the concerns as presented by the
3 BNL Report.

4 I don't believe that recently dis-
5 charged fuel will be isolated by a foot or more
6 from the rest of the fuel; nor do I believe that
7 -- B&L recommended that such isolation last for
8 as long as two years and I don't believe that
9 FP&L plans to isolate the most recently dis-
10 charged fuel in that manner for that period of
11 time.

12 So, I would say although they have
13 made a cursory attempt to respond to the concerns
14 as presented in this Contention, that it does not
15 address the concerns as presented in the BNL
16 Report and that it is therefore inadequate.
17 Okay.

18 JUDGE COTTER: Mr. Bauser?

19 MR. BAUSER: I would refer to our
20 written response with respect to the Contention
21 16.

22 That response discusses the nature
23 of the BNL scenario. It indicates that the BNL
24 scenario involves a complete and rapid loss of
25 water in the pool.

1 The Petitioner has not provided any
2 credible mechanism that has not been fully ana-
3 lyzed for that result to occur.

4 And, consequently, the Contention
5 is wholely without bases.

6 JUDGE COTTER: Miss Young?

7 MS. YOUNG: The staff had opposed
8 admission of this Contention because it failed to
9 state an adequately specific bases to support the
10 proposed that a beyond design bases accident
11 could occur in the spent fuel pool.

12 MR. RICH: Well, we're back to the
13 BNL Report. And again they address the probabil-
14 ity -- or they don't address the probability.

15 But, they indicate that an acci-
16 dent, due to pool heatup, due to loss of cooling
17 water circulation capability or a structure fail-
18 ure of pool due a heavy load drop can initiate an
19 event, as they later describe, and permanently
20 contaminating 224 square miles.

21 JUDGE COTTER: The problem here,
22 Mr. Rich, is that the BNL Report is sort of a
23 generic analysis.

24 Unless you can specify a specific
25 mechanism or initiating event at St. Lucie which

1 would cause or give reason for us to think that
2 there is reason to look further into the possib-
3 ility of a beyond-design-bases accident occurring,
4 unless you give us that nexus, then there is
5 little grounds for us to do that.

6 MR. RICH: I understand -- our
7 concern, of concern is based on the fact TMI was
8 a beyond-design-bases accident; you know, such
9 accidents can occur. And, therefore, in our eyes
10 this Contention must be considered.

11 You are asking me to predict speci-
12 fically, detailing a specific mechanism how an
13 accident can occur, how it will progress and the
14 reaction of the pool to that accident. That's
15 very complicated.

16 JUDGE COTTER: It is. And the
17 problem that we're dealing with here is that
18 we're dealing with litigation.

19 MR. RICH: That's right.

20 JUDGE COTTER: And you can't ask us
21 to go off on a speculative tack in dealing with
22 these issues.

23 MR. RICH: Well, I would urge the
24 Board to err on the side of caution here. That
25 you're asking me to speculate as to the cause --

1 JUDGE COTTER: No, I'm asking you
2 to give us a --

3 MR. RICH: No, you're -- go ahead.

4 JUDGE COTTER: - reason why such
5 an accident, a beyond-design-bases accident might
6 occur at St. Lucie.

7 MR. RICH: And I say a low drop in
8 the pool could cause structural failure of the
9 pool. And, I would add, the uncertainly evi-
10 denced by BNL again for heavy load drops.

11 Human error probabilities, structu-
12 ral damage potentials and recovery actions are
13 the primary sources of uncertainty.

14 MR. BAUSER: Mr. Chairman, I would
15 like to address this in some specifics.

16 There are uncertainties, certainly.
17 One of the uncertainties depends upon the config-
18 uration of spent fuel pool in question, a fact
19 that is specifically noted in the BNL Report.

20 One of the mechanisms hypothesized
21 for draining of the pool is the failure of an
22 inflatable seal. St. Lucie I does not have an
23 inflatable seal, the failure of which will cause
24 a loss of water from the pool.

25 These are the types of --

1 JUDGE COTTER: You are not going to
2 try and prove the negative on me, Mr. Bauser.

3 MR. BAUSER: I am simply trying to
4 illustrate the nature of uncertainties here.

5 The nature of uncertainties does
6 not mean the worst can happen. Uncertainties
7 will also encompass the spectrum to include acci-
8 dents that cannot happen because of the physical
9 configuration of the pool.

10 MR. RICH: We are dealing with the
11 potential to permanently contaminate this area.
12 Those are not -- that is not my conclusion,
13 that's the conclusion of the Brookhaven National
14 Laboratory in a report that you sponsored, I
15 would imagine, or that you certainly --

16 JUDGE COTTER: It's a research that
17 the NRC staff requested.

18 MR. RICH: Right.

19 JUDGE COTTER: But, I do not recall
20 anything in that report which mentions St. Lucie.

21 MR. RICH: As you say, it's a ge-
22 neric study of spent fuel pools. We have a spent
23 fuel pool here that may have indicated that acci-
24 dent initiating events -- I don't believe I men-
25 tioned the pneumatic seal failure one in this

1 hearing at any time.

2 It is not beyond the realm of pos-
3 sibility that the pool will heatup due to loss
4 of cooling water circulation capabilities.

5 In fact, we've asked to address
6 those issues.

7 And it is not unlikely that struc-
8 tural failure of the pool through a heavy load
9 drop will occur.

10 We have asked to address that spec-
11 ifically.

12 JUDGE COTTER: Yes, but you just
13 mentioned two different standards.

14 You said "not beyond the realm of
15 possibility." That's not what we're here to look
16 at, the beyond the realm of possibility.

17 Then you said "not unlikely."
18 That's a much stiffer standard or a tighter stan-
19 dard.

20 MR. RICH: Then I would adhere to
21 the stiffer standard; it's not unlikely at all
22 that a heavy load drop can occur at that pool -
23 compounded with human error probabilities and
24 recovery actions that may aggravate the situa-
25 tion.

1 It just seems odd to me that we're
2 trying to limit the scope of accident probabilit-
3 ity, when the results are so catastrophic.

4 The effort should be made to under-
5 stand the effects of any likely accident.

6 JUDGE COTTER: Well, that is done.
7 I mean, for example, you have one of those pro-
8 ducts right there in your hand in the BNL Report.

9 That is an effort to understand
10 what the potential problems are.

11 MR. RICH: Right.

12 I think we're going back to Conten-
13 tions that I have introduced earlier, in that we
14 are willing to devise scenarios that will show
15 how a pool heatup due to loss of cooling water
16 circulation capability can occur.

17 And we are willing to devise a
18 scenario to show you how a structural failure of
19 the pool due to a heavy load can occur, in light
20 of the increased vergility of the pool.

21 So, some of the former Contentions,
22 in my mind, lead up to justifying Contention 16.

23 JUDGE COTTER: All right. I think
24 we understand your position.

25 That completes the Contentions.

1 Let's go off the record here for a
2 moment.

3 (Off record)

4 JUDGE COTTER: Back on the record.

5 We have completed oral argument on
6 the 16 Contentions offered by the Intervenor,
7 Campbell Rich. And we have had a somewhat far-
8 ranging discussion off the record relating in
9 part to the Board's desire to tour the facility
10 while we are here so that we can have that exper-
11 ience with us in ruling on these Contentions.

12 That tour will take place 2 o'clock
13 this afternoon. Mr. Rich has indicated that he
14 will accompany us.

15 We consequently are not able to
16 receive oral limited appearance statements at
17 this time. We will receive written limited ap-
18 pearance statements now and continuing through
19 the course of the proceeding, whenever people
20 want to make their views known to the Board.

21 I should point out, with respect to
22 limited appearance statements, that they are not
23 evidence in the proceeding.

24 They are expressions of the con-
25 cerns and thoughts of those living in the commun-

1 ity, and they have historically in rare occa-
2 sions, but on certain occasions led Boards to
3 initiate inquiry further into particular areas of
4 proceeding -- the subject matter of the proceed-
5 ing.

6 We have also had some discussion
7 briefly off the record on the possible automation
8 of this proceeding if it goes forward, which will
9 be pursued with the parties later.

10 Is there anything anyone wants to
11 add at this point?

12 Mr. Rich?

13 MR. RICH: May I make a closing
14 statement?

15 JUDGE COTTER: I don't think we
16 need closing statements. I think everybody's
17 position has been pretty well aired.

18 Mr. Bauser?

19 MR. BAUSER: Just one or two house-
20 keeping matters, Mr. Chairman.

21 Earlier this morning I committed to
22 provide to the Board and parties with copies of a
23 letter dated December 22nd, 1987. And I have
24 those here and I will distribute them.

25 In addition, Mr. Rich referred to a

1 number of potential load drop accidents which are
2 referenced on page ten of the NRC staff's safety
3 evaluation in this proceeding.

4 Those potential load drop accidents
5 are discussed in the letter which I will be dis-
6 tributing.

7 One final matter. I would like to
8 suggest that, should the Board find any Conten-
9 tions suitable for litigation, the Board might
10 impose or offer an opportunity for the parties to
11 submit a proposed schedule.

12 My thoughts here are really two.

13 One, to the extent that an agreed
14 upon schedule can be developed among the three
15 parties, that might be helpful to the Board in
16 giving them the benefit of the conveniences of
17 the parties.

18 And, secondly, setting a schedule
19 will allow the parties maximum advance notice of
20 what they'll be looking forward to over the re-
21 mainder of, for example, this year.

22 JUDGE COTTER: I appreciate the
23 suggestion, and I would expect after we've made a
24 decision if a Contention is admitted, that we
25 will probably hold a conference call to get the

1 parties view on that and then we ultimately will
2 issue an order.

3 MR. BAUSER: Thank you.

4 JUDGE COTTER: Miss Young?

5 MS. YOUNG: Just one small matter.
6 To reiterate a statement or a commitment the
7 staff made earlier today, it will provide a dis-
8 cussion of its analysis of the boiling of the
9 spent fuel pool water, which is indicated in the
10 second full paragraph on page 13 of the staff's
11 safety evaluation.

12 And we will provide that discussion
13 to both Licensee and the Petitioner, Mr. Rich.
14 Unless the Board wants a copy too.

15 JUDGE COTTER: No, that will be
16 fine as you described it.

17 MS. YOUNG: Okay.

18 JUDGE COTTER: All right. I want
19 to thank all of you for a careful and thoughtful
20 presentation. It has made this an efficient pro-
21 ceeding.

22 And I would hope to issue a deci-
23 sion -- the Board will issue its decision approx-
24 imately two weeks from the close of today's hear-
25 ing.

There being nothing more to consider, we will adjourn. Thank you.

(Whereupon the proceedings were concluded at 12:35 p.m.)

* * * * *

1 REPORTER'S CERTIFICATE

2 DOCKET NUMBER: 50-335-OLA, ASLBP No. 88-560-01-LA

3 CASE TITLE: In the Matter of: FLORIDA POWER & LIGHT
4 COMPANY, St. Lucie Plant No. I.

5 HEARING DATE: March 29, 1988

6 LOCATION: Jensen Beach, Florida

7
8 I hereby certify that the proceedings and
9 evidence herein are contained fully and accurately on
10 the tapes and notes reported by me at the hearing in
11 the above case before the NUCLEAR REGULATORY COMMIS-
12 SION, B. PAUL COTTER, GLEN O. BRIGHT, DR. RICHARD F.
13 COLE, and that this is a true and correct transcript
14 of the same.

15
16 Date: March 30, 1988

17
18 Jeffrey A. Roesser
19 JEFFREY A. ROESER - Notary
20 Public State of Florida at
21 Large.

22 Notary Public, State of Florida
23 My Commission Expires Dec. 16, 1993
24 Noted This Tray Falls Insurance Inc.
25