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NUCLEAR REGULATORY COMMISSION

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Catawba Nuclear Station

Docket Number: 50-413/414-OLA; ASLBP No.: 03-815-03-OLA

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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ATOMIC SAFETY AND LICENSING BOARD
ORAL ARGUMENT

In the Matter of:

DUKE ENERGY CORPORATION

Catawba Nuclear Station,
Units 1 and 2

Docket Nos. 50-413-OLA,
50-414-OLA
ASLBP No. 03-815-03-OLA

Thursday, January 15, 2004

Courtroom 2
Charles R. Jonas Federal
Building and U.S. Courthouse
401 W. Trade Street
Charlotte, North Carolina

The above-entitled matter came on for hearing,
pursuant to notice, at 9:00 a.m.

BEFORE:

ANN MARSHALL YOUNG	Chair
ANTHONY J. BARATTA	Administrative Judge
THOMAS S. ELLEMAN	Administrative Judge

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Also Present:

Frank Akstulewicz, NRC
Bert Dunn, Framatome
Robert Harvey, Duke Energy

Edwin S. Lyman, Ph.D.
Robert Martin, NRC
Stephen Nesbit, Duke energy
Greg Swindlehurst, Duke Energy
James Wilson, Duke Energy
Janet Zeller, BREDL
Louis Zeller, BREDL

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

9:45 a.m.

1
2
3 CHAIR YOUNG: All right. Let's go on the
4 record. I'm Ann Marshall Young, Chair of this
5 Licensing Board. Judge Elleman and Judge Baratta,
6 would you introduce yourselves for the record?

7 JUDGE ELLEMAN: My name is Thomas Elleman.
8 I'm a former educator and participant in nuclear
9 energy programs through a variety of means.

10 JUDGE BARATTA: Like Judge Elleman my name
11 is Anthony Baratta, I'm a former educator and a
12 participant in various nuclear energy programs.

13 CHAIR YOUNG: Why don't we start over here
14 on the right. Mr. Repka, you want to introduce
15 yourself and whoever's with you and then move across
16 the room?

17 MR. REPKA: Yes. I'm David Repka with the
18 law firm of Winston & Strawn representing Duke Energy,
19 and on my left today you'll remember from last month,
20 Mr. Stephen Nesbit who's the Duke Energy MOX Fuel
21 Project Manager. And I wanted to introduce a few of
22 the other individuals that are behind me. First,
23 there's Ms. Cottingham, my colleague at Winston &
24 Strawn. And then immediately behind me is Mr. Bert
25 Dunn who's with Framatome, and he's an Accident

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1 Analysis Manager. And the next row behind is Mr. Greg
2 Swindlehurst with Duke Energy. He's the Safety
3 Analysis Manager for Duke Energy in the Fuels area.
4 And sitting next to him is Mr. Robert Harvey, a senior
5 engineer safety analyst for Duke Energy. And then one
6 more row behind them, I believe, is Ms. Timika
7 Shafeek-Horton, and I can spell that: T-I-M-I-K-A,
8 Shafeek is S-H-A-F-E-E-K, dash, H-O-R-T-O-N. And
9 she's an attorney with Duke Energy.

10 CHAIR YOUNG: Thank you. Mr. Fernandez?

11 MR. FERNANDEZ: Antonio Fernandez for the
12 staff.

13 MS. UTTAL: Susan Uttal for the staff.

14 CHAIR YOUNG: Do you want to introduce any
15 of the people with you?

16 MS. UTTAL: With us today is the Project
17 Manager for this project, Robert Martin from NRR; the
18 Environmental Project Manager, James Wilson; and way
19 in the back is Frank Akstulewicz who is the supervisor
20 in NRR.

21 CHAIR YOUNG: What was the last name?

22 MS. UTTAL: Akstulewicz. Don't ask me to
23 spell it.

24 CHAIR YOUNG: It would probably be better
25 -- Mr. Akstulewicz, could you spell your name for the

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1 court reporter?

2 MR. AKSTULEWICZ: Sure. It's A-K-S-T-U-L-
3 E-W-I-C-Z.

4 CHAIR YOUNG: Thank you. Anyone else for
5 the staff?

6 CHAIR YOUNG: No.

7 MR. FERNANDEZ: No, Your Honor.

8 CHAIR YOUNG: All right. Ms. Curran?

9 MS. CURRAN: Good morning. I'm Diane
10 Curran here representing Blue Ridge Environmental
11 Defense League. Sitting next to me is our expert, Dr.
12 Edwin Lyman, and I'd like to introduce, or
13 reintroduce, Janet and Louis Zeller who are the
14 Directors of BREDL.

15 CHAIR YOUNG: Thank you. All right. Just
16 to recount some discussion that we had before the
17 record, before we went on the record, the oral
18 argument on BREDL's Motion for Extension will be held
19 January 21 at two o'clock in the Atomic Safety and
20 Licensing Board Hearing Room in Rockville, and that
21 will be a closed hearing since we will be dealing with
22 security-sensitive material. And only those who have
23 clearances will be admitted to that hearing. And I
24 think at this point that, Ms. Curran, you and Dr.
25 Lyman's clearances are finished, right?

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1 MS. CURRAN: Yes.

2 CHAIR YOUNG: Okay. And, Mr. Repka, you
3 were waiting on yours. Is yours done?

4 MR. REPKA: No, that's complete.

5 CHAIR YOUNG: Okay.

6 MR. REPKA: For safeguards material.

7 CHAIR YOUNG: Great. All right. Well,
8 for Safeguards.

9 MR. REPKA: For Safeguards. As is Ms.
10 Cottingham.

11 MS. CURRAN: But Dr. Lyman and I both
12 have, in addition to the Safeguards clearance, Level
13 L security clearances for classified information.

14 CHAIR YOUNG: All right. Now, what do you
15 have?

16 JUDGE BARATTA: I just have safeguards at
17 this point.

18 CHAIR YOUNG: Okay. All right. So that
19 hearing will be held next week. That oral argument
20 will be held next week.

21 Meanwhile, the staff and Duke provided to
22 us Ms. Curran's motion along with one of the exhibits
23 to that, the January 13 letter to Ms. Curran from Mr.
24 Fernandez, and we have read that letter and read
25 through most of the motion. There are several things

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1 that come to mind. One, we all agree that we do think
2 that it's appropriate to put on the record that
3 obviously some delay is involved here and that the
4 staff's failure to reply in the letter that I just
5 mentioned until January 13, the day before the
6 security-related contentions were due, has obviously
7 contributed significantly to any delay that may be
8 caused by this issue. And this does run counter to
9 our concern to move this case along as quickly as
10 possible --

11 MR. FERNANDEZ: Your Honor, can I say
12 something?

13 CHAIR YOUNG: -- which we will still in
14 our capacity as a Board make every effort to continue
15 to facilitate.

16 Another issue -- we'll hear from you in a
17 minute -- another issue that arises out of all this is
18 the one raised by Mr. Repka right before we went on
19 the record having to do with clearance and access to
20 the materials that are being requested and that are in
21 dispute or that -- on which the need-to-know question
22 has arisen. Some of these materials are classified.
23 I have acute clearance, I'm cleared to see those
24 materials. Judge Baratta and Judge Elleman are
25 currently cleared to see safeguards material, but

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1 their clearances have not been completed to see the
2 classified material, and, Mr. Repka, yours is only for
3 safeguards. Is there anyone at Duke who has a
4 clearance to see classified?

5 MR. REPKA: Mr. Nesbit has an L clearance
6 for classified.

7 CHAIR YOUNG: Any attorney? Is Ms.
8 Vaughn?

9 MR. REPKA: We do not believe so.

10 CHAIR YOUNG: Okay. One thing that we
11 have discussed and we do think that we will need to
12 see those materials, and I presume that's what the
13 staff was referring to before we went on the record
14 about the need to look at those in order to make these
15 determinations, since -- well, Judge Elleman won't be
16 available because of a previously planned -- because
17 of previously made plans which would have been fine
18 had this issue not arisen at this point, but since
19 Judge Baratta doesn't have clearance, we may be
20 talking to the Chief Judge about seeing if, at least
21 temporarily, we can get substitute members appointed
22 to deal with any classified material. We're going to
23 have to look at it in order to make the determination.
24 That obviously is going to hang us up unless we can
25 get another Board member so that we can get a majority

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1 decision by the Board at least.

2 So without getting into discussing
3 anything that's inappropriate here today, I wanted to
4 make the staff aware that we will probably be
5 contacting you, and to the degree that involves any
6 telephone calls to facilitate that, we will -- I guess
7 we'll try to -- if there's anything going to be
8 discussed -- that's going to be discussed that would
9 affect -- would be to an advantage or disadvantage of
10 any party, we'll try to get the parties involved.
11 Otherwise unless any of the parties object today,
12 we'll just undertake whatever communications we need
13 to undertake simply in order to get access to the
14 materials or go to look at them in a secure location,
15 whatever that involves.

16 I suppose if we get another Board member
17 temporarily appointed who has clearance to see the
18 classified material, then -- well, the problem is if
19 those were brought to the January 15 proceeding, then
20 some people like Mr. Repka and Judge Baratta wouldn't
21 be able to look at those materials. One thing that we
22 definitely want is to have a security person there.
23 It may be possible that the items can be in the room
24 as long as people who don't have proper clearance
25 don't look at them, but I'm not sure. Mr. Fernandez?

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1 MR. FERNANDEZ: Your Honor, I think the
2 best thing would be for us to -- we would provide the
3 documents, of course, to the Board, and the board, I'm
4 sure, would ensure, the Board itself, to just manage
5 it the way that they have managed safeguards and
6 classified information before. I think for purposes
7 of the hearing on the motion itself, there probably
8 won't be a need to have the actual documents because
9 of the nature of what we will be discussing. I think
10 the Board will probably have to review the documents
11 in camera on its own without the parties being there
12 to make their determination of whether there is a need
13 to know on the part of the Intervenors. But I don't
14 think that you'll need to have the documents right
15 then and there when the parties are there.

16 CHAIR YOUNG: Let me just ask on that,
17 won't counsel be arguing about the contents of those
18 in such a way that might --

19 MR. FERNANDEZ: No. The staff will not.

20 MR. REPKA: I also wouldn't expect that to
21 be the case. My point before going on the record was
22 I think it's important that the Board see the Duke
23 submittal, which is what's the focus of this case,
24 which is safeguards material, not classified material.
25 And if there's something we can do expedite you

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1 getting a copy of that, we would be happy to try to do
2 that.

3 CHAIR YOUNG: Well, the staff has it,
4 right? I mean so we --

5 MR. REPKA: The NRC obviously has it,
6 that's correct.

7 CHAIR YOUNG: Right.

8 MR. REPKA: If you wanted it here today,
9 we could have a copy brought over at lunchtime. If
10 you'd rather not travel with it, you could get it when
11 you return.

12 CHAIR YOUNG: I think we'd probably better
13 just get it from the NRC staff when we get back.

14 MR. REPKA: But having said that, I don't
15 have an opinion as to whether the Board needs to see
16 the classified material. In fact, I think that when
17 you see the Duke submittal and you see really what's
18 involved here, it will clarify the issue greatly, and
19 I think it's at that level that we would intend to
20 discuss it next week.

21 CHAIR YOUNG: Ms. Curran, what about you
22 in terms of discussing classified as opposed to
23 safeguards?

24 MS. CURRAN: Well, it seems to me if I
25 were the Judge, I'd want to see what was being

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1 disputed and be able to ask, I guess, the staff who's
2 the only party who has access to these standards
3 right, ask them questions about it having those things
4 in hand that I could look at. We certainly have the
5 sense of shooting in the dark, to some extent, because
6 we only have pieces of information, but one would hope
7 that the Board would not be put in that position also
8 and could ask questions of the staff.

9 MR. FERNANDEZ: Your Honor, can I say one
10 more thing? The classified documents that we're
11 talking about are two orders.

12 CHAIR YOUNG: Are what?

13 MR. FERNANDEZ: Are two orders issued to
14 the Category I facilities around the country, there's
15 only two, one to BWXT and one to NFS. The staff's
16 position is that those orders were issued to specific
17 licensees and as such they're not applicable to the
18 Licensee in this litigation. Those orders are of
19 limited scope and applicability and therefore as a
20 legal standard that Ms. Curran is talking about are
21 only applicable to the licensee to whom it is issue.

22 CHAIR YOUNG: Okay. We're -- I think
23 you're --

24 MR. FERNANDEZ: I know, I know. But the
25 reason why I'm bringing that up is because we wouldn't

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1 have to talk about the contents of the classified
2 portion of that order. The publicly available portion
3 of the order explains that the terms contained within
4 the attached version, which is the classified version,
5 only apply to X and Y Licensee, BWXT and NFS. So we
6 wouldn't have to get into what actually BWXT and NSF
7 were ordered to do in order to talk about whether, I
8 guess, on a jurisdictional argument whether they're
9 actually even relevant in this proceeding.

10 CHAIR YOUNG: Well, let me just say this:
11 Why don't we make -- the Board would request at this
12 time that we be given access to the documents, that I
13 be given access to the two that are classified, and
14 we'll let you know if the Panel determines to appoint
15 another temporary member who has clearance to see the
16 classified, and we'll make the determination whether
17 we need to have them in the hearing between now and
18 then.

19 MR. FERNANDEZ: Can I ask one question,
20 Your Honor?

21 CHAIR YOUNG: Sure.

22 MR. FERNANDEZ: The documents are -- you
23 just need an L level clearance. Do Judge Elleman and
24 Baratta not even have the L level clearance yet? It's
25 the yellow badge.

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1 JUDGE BARATTA: My clearance is in
2 processing now.

3 MR. FERNANDEZ: Okay.

4 JUDGE BARATTA: Judge Elleman does have an
5 L level --

6 MR. FERNANDEZ: Okay. He does.

7 CHAIR YOUNG: And he's not going to be
8 here.

9 MR. FERNANDEZ: Oh, okay. Okay. You
10 don't need a blue badge to see these documents is what
11 I'm trying to get at.

12 JUDGE BARATTA: There was one other
13 document, I just wanted to ask the classification
14 level on it. I have a pretty good idea what it's at.
15 That's the design basis threat for a Category I
16 facility. Isn't that classified?

17 MR. FERNANDEZ: The design basis threat
18 for the two Category I facilities, the two orders that
19 we're talking about, those two documents are
20 classified, but they are specific to those two
21 licensees.

22 JUDGE BARATTA: I understand. Thank you.

23 MS. CURRAN: Judge Young?

24 CHAIR YOUNG: Yes.

25 MS. CURRAN: I just want to make a comment

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1 to clarify this a little bit. I think there's another
2 dispute that's being woven in here, and it just needs
3 to be identified. This is a dispute which I think we
4 are going to have in this case over what standard is
5 -- which Category I standard is applicable here in
6 this licensing case. Before September 11 or before
7 April 29, 2003, which is when the revised Category I
8 design basis threat was issued to these two
9 facilities, NSF Erwin and BWXT, there was a classified
10 Category I design basis threat for Category I
11 facilities, and I think the staff is taking the
12 position and is conceding that that's the standard
13 that governs here and that the April 29 orders, the
14 revised standards, the post-9-11 standards don't apply
15 because they haven't been imposed by enforcement order
16 on this particular Licensee.

17 CHAIR YOUNG: Because they have not, is
18 that what you said?

19 MS. CURRAN: Right. Because no order has
20 been issued to Duke saying, "This is your revised
21 Category I standard," and it seems to be that NRC's
22 practice of waiting until after a license is issued
23 and then issuing that by enforcement order, which we
24 believe is illegal and we plan to raise that as an
25 issue in this case. But I just wanted to clarify that

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1 you have to pull those things apart. Even if the
2 Board ultimately decides that the April 29, 2003
3 orders are not relevant in this proceeding, there's
4 still a pre-9-11 standard that's classified, a
5 Category I standard, that's applicable to Catawba by
6 virtue of the fact that they are going to be using
7 plutonium at the facility.

8 CHAIR YOUNG: Okay. I don't think we want
9 to get into argument on the merits, but I do
10 appreciate that it's good to identify issues.

11 One other that strikes me, and I'm just
12 going to ask and all parties can answer to the degree
13 you feel is appropriate, but, Mr. Repka, you just said
14 a minute ago that you wanted us to look at your
15 request, your submittal.

16 MR. REPKA: The September '03 submittal
17 with Security.

18 CHAIR YOUNG: Right. And --

19 MR. REPKA: Because I think that explains
20 what's really happening here.

21 CHAIR YOUNG: My question is this: Am I
22 to assume from that that it's your view that the only
23 security-related contentions that might be submitted
24 would be related to those? And I would ask all of
25 you, probably more Ms. Curran, whether what we're

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1 talking about here is limited to Duke's submittal or
2 involves broader questions of security? And not
3 having seen them, obviously, I'm in the dark somewhat,
4 but it did strike me that that might be an issue, and
5 if you can provide any clarification on that just for
6 purposes of getting us on the same track, that would
7 be helpful.

8 MR. REPKA: Well, certainly, the submittal
9 defines what Duke is planning to do with respect to
10 security for the MOX fuel lead assemblies, and that's
11 the issue in this case.

12 CHAIR YOUNG: Is there any other -- I
13 guess my question went to are there any other things
14 that provide any context that would be relevant that
15 we need to be aware of?

16 MR. REPKA: We think that's the relevant
17 document. Catawba is a Part 50 reactor and has
18 substantial security. The submittal explains the
19 additional security that will be provided --

20 CHAIR YOUNG: Okay.

21 MR. REPKA: -- and that's the issue in the
22 case, the adequacy of that.

23 CHAIR YOUNG: Okay. Is everyone in
24 agreement on that, just to simplify things?

25 MS. CURRAN: Well, yes. We're limited by

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1 law to challenging the adequacy of the license
2 application to meet NRC safety and security
3 requirements, so our contentions will focus on the
4 adequacy of -- there's two parts of the security
5 submittal. One is the revisions to the security plan;
6 the other part is a request for an exemption from
7 certain of the Category I requirements. So our
8 contentions will focus on the adequacy of the plan to
9 satisfy NRC requirements and whether an exemption is
10 justified under the NRC standards for exemptions. In
11 order to be able to make those contentions, we have to
12 be able to describe what the standards are, and that's
13 our handicap here, we don't know what the standard is
14 for these things.

15 CHAIR YOUNG: Okay. Well, again, not to
16 get into arguments on the merit, it helps me to have
17 a little clarification. Do either of you have any --

18 JUDGE ELLEMAN: No.

19 CHAIR YOUNG: Do you want any more
20 clarification? All right. Then at the moment I had
21 not planned to be in the office on Tuesday because I
22 had a scheduled a doctor's appointment. I may need to
23 come in. But in any event if you could -- contact
24 will be made with you in one way or another on
25 possibly tomorrow, possibly Tuesday but at the very

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1 latest if we could arrange for me to -- for us to see
2 all that we can see, Judge Baratta and I, on Wednesday
3 morning and for me to see the classified on Wednesday
4 morning at the latest. I don't know whether I'll be
5 able to come in on Tuesday or not.

6 MR. FERNANDEZ: And there are some of the
7 documents that you will need to see that we don't
8 have.

9 CHAIR YOUNG: Okay.

10 MR. FERNANDEZ: So we need to have a good
11 idea of which documents you do want to see and which
12 you --

13 CHAIR YOUNG: The ones that are listed in
14 the --

15 MR. FERNANDEZ: So you want to see all the
16 documents?

17 CHAIR YOUNG: I think we need to.

18 MR. FERNANDEZ: Okay. So what I will do
19 is I will contact the people on the staff to have
20 access to all of those documents --

21 CHAIR YOUNG: Okay.

22 MR. FERNANDEZ: -- and make sure that they
23 contact somebody on the Board. Would you like to give
24 me a contact name now or do you want to be contacted
25 personally?

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1 CHAIR YOUNG: I guess Judge Bollwerk
2 either tomorrow -- I'm not going to be -- we're going
3 to be staying down here in North Carolina.

4 MR. FERNANDEZ: Right.

5 CHAIR YOUNG: Judge Elleman won't be in
6 the office tomorrow.

7 MR. FERNANDEZ: Okay.

8 CHAIR YOUNG: And as I say, I may or may
9 not be able to get in Tuesday, so I'd say if you
10 cannot reach me, try to reach Judge Bollwerk.

11 MR. FERNANDEZ: Okay. I will --

12 CHAIR YOUNG: And also include in the
13 information -- I don't know what volume of documents
14 you're talking about.

15 MR. FERNANDEZ: Not very much.

16 CHAIR YOUNG: Okay. So it's not something
17 that would be difficult to carry over to our office.

18 MR. FERNANDEZ: No, not at all.

19 CHAIR YOUNG: Good.

20 MR. FERNANDEZ: I will have somebody from
21 the Office of Nuclear Security and Incident Response
22 contact Judge Bollwerk tomorrow.

23 CHAIR YOUNG: Okay. And then if they
24 could also be available to us if we have any
25 questions. Do you have any objection to that, Ms.

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1 Curran, to us talking to any security people just
2 about procedures with regard to classified? We've
3 dealt with safeguards and we're more familiar with
4 that, but --

5 MR. FERNANDEZ: I have Cindy Harbaugh,
6 which --

7 CHAIR YOUNG: Okay. Great.

8 MR. FERNANDEZ: -- doesn't work at NSIR so
9 she may not --

10 CHAIR YOUNG: She helps us on setting up
11 security arrangements for hearing, so --

12 MS. CURRAN: I don't have any objections
13 at all.

14 CHAIR YOUNG: Okay.

15 MR. FERNANDEZ: I'll have Cindy contact
16 Judge Bollwerk as well.

17 CHAIR YOUNG: Okay. Great. Call me
18 first. If I'm not there, call him.

19 MR. FERNANDEZ: Yes.

20 JUDGE BARATTA: I would ask for perfect
21 clarity the list of documents doesn't include the Duke
22 submittal, and I just confirmed that --

23 CHAIR YOUNG: Then add that to the list.

24 JUDGE BARATTA: Add that to the list,
25 right.

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1 CHAIR YOUNG: Thank you.

2 JUDGE BARATTA: And which is a safeguards
3 document, not a classified document.

4 CHAIR YOUNG: Please, yes. Please add
5 those to the list. Anything else on that?

6 MR. FERNANDEZ: Just one thing, Your
7 Honor, and for clarity of the record, and there's
8 something that you said at the beginning that I wanted
9 to clarify, which is with regards to the delay in the
10 filing of the contentions and something you said that
11 the staff has caused this delay. I don't think that's
12 perfectly accurate and that just reflects BREDL's side
13 of the story, and the staff's position has been from
14 the beginning that these documents were not going to
15 be provided and she has known -- I mean the counsel
16 has known that the staff's position all along was that
17 these documents were not going to be provided to
18 BREDL, and she has known specifically about the need-
19 to-know determination since January 9 that Ms. Uttal
20 talked to her on the phone.

21 Particularly, also, in a Board order that
22 I can't remember the specific date right now, we were
23 ordered to file for Motions of Extension of Time three
24 days prior to when the documents that were scheduled
25 to be due on a particular date were due, and if

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1 there's been any delay here, it has been by the
2 Intervenor and not by the staff, so I just wanted to
3 make sure that the staff's position was clear and
4 accurate for the record.

5 CHAIR YOUNG: Ms. Curran, do you want to
6 respond to that and also to the timing of the motion?

7 MS. CURRAN: Well, when we first
8 negotiated the terms of the protective order, the
9 staff said, "We're not relying on these standards."
10 And not having access to any documents at all, I
11 wasn't in much of a position to argue with that. And
12 so we went to look at the documents, Dr. Lyman and I
13 went to look at the application, the security plan and
14 exemption request, as quickly as possible, two days
15 after they became available. We sent a letter to the
16 staff two days after that in which we set out, "Here's
17 what we read. These facts contradict, in our view,
18 your position." And I was in contact with the staff
19 counsel during December and early January asking when
20 can we expect a response to our letter, and it was my
21 understanding we were going to get a response sometime
22 the week ending January 9, but I got a telephone call
23 on the 9th saying, "We want you to know we've made the
24 determination and you'll be getting a letter." And I
25 have to say I wasn't thinking about the three-day

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1 requirement. I was kind of waiting on this response
2 partly thinking, well, I've written a pretty detailed
3 letter here, the staff's going to engage me on these
4 issues, and then we'll have something to go forward
5 with. We have a dispute here and we need to work this
6 out.

7 So it's true, I didn't leave the three
8 days because I was waiting to see if I could get more
9 of an explanation to see if this could be worked out.
10 But really we did our best to bring this to the
11 Board's -- to work it out with the staff without going
12 to the Board first, and then we filed a motion when it
13 was clear that we weren't going to get anywhere.

14 MS. UTTAL: Judge, I have to dispute what
15 Ms. Curran said, to a certain extent. I called her up
16 on the 9th and I --

17 CHAIR YOUNG: What time?

18 MS. UTTAL: What time? About three-
19 thirty, I was home at the time.

20 CHAIR YOUNG: Three-thirty Friday
21 afternoon?

22 MS. UTTAL: Yes, as soon as I found out
23 what the staff's determination was. And I told her
24 what the staff's determination and I told her the
25 basis, and she wanted a letter, but I specifically

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1 called her on that date so that she would know and
2 take whatever action she had to take. It was her
3 insistence upon getting a written response, but she
4 had all the information when I spoke to her on Friday.

5 MS. CURRAN: Well, it's true that I had --
6 Ms. Uttal gave me orally all the information that was
7 ultimately in the letter, but I remember saying,
8 "Aren't I going to get more of an explanation of this
9 because the answer was you don't have a need to know,
10 the staff isn't relying on these documents," which is
11 what I had been told at the outset and I had seen
12 information that seemed to contradict that. So I was
13 asking for an answer that would explain some of these
14 contradictions that I had found. That's what I was
15 expecting in the letter on the following week, and I
16 was waiting to see if there was something more that
17 could be engaged here so we could move forward.

18 CHAIR YOUNG: Okay. Well, thank you for
19 your clarification. It looks as though the
20 determination was made Friday afternoon and the motion
21 was submitted on Tuesday after receiving the Tuesday
22 letter. And so that's all clear on the record. At
23 this point, I think probably everything else can wait
24 until the 21st, and by that time we will have looked
25 at the documents and we'll hear more from you then.

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1 MR. REPKA: Judge Young, I would like to
2 make a brief statement on that point.

3 CHAIR YOUNG: Go ahead.

4 MR. REPKA: Without trying to assign blame
5 to that particular issue. I'd like to make a brief
6 statement about schedule in this case, and I was going
7 to make this statement later, but I'll make it now
8 since it seems to fit. The lead assembly application
9 is a critical segment of a major international
10 nonproliferation program. To support DOE's schedule,
11 to support use of the MOX fuel lead assemblies in the
12 spring cycle, to support the schedule for fabrication
13 at Cadarache in France, Duke has asked for the NRC's
14 amendment by August of this year, and that schedule is
15 necessary for lots of reasons, including the fact that
16 the Cadarache facility is scheduled to close at the
17 completion of fabrication of these assemblies and no
18 later than July of '05. So the August deadline is a
19 real deadline, and it's the date that we've asked for
20 this license amendment, again to support a major
21 nonproliferation effort. So time does matter in this
22 case, and I just want the record to reflect that.

23 CHAIR YOUNG: We are acutely aware that
24 time does matter in this case, and that is one of the
25 reasons why we have been trying to move this case

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1 along, and that is one of the reasons why we are not
2 pleased when it seems as though things are not moving
3 along on the part of the parties as quickly as they
4 might otherwise be. And the only effect that that
5 will have is that obviously it's going to push things
6 back.

7 This Board is committed to doing
8 everything that's humanly possible to get this case
9 resolved as quickly as possible. The parties, all
10 parties need to keep that in mind in all the actions
11 you take, in clarifying things with each other. So,
12 for example, that you don't tell us one thing about a
13 protective order and then later on we find out that
14 you're not in agreement. We don't have to go through
15 all that again, but I think that it bears repeating
16 that, yes, we're under some time pressure but that
17 means everyone needs to pay attention to doing
18 whatever is possible to make it possible for us to
19 move this along as quickly as we can. I don't think
20 there's anything more that needs to be said on that.
21 All right.

22 Okay. Just to look at the list here,
23 speaking of timeliness, I think the next issue that
24 we're going to talk about is the general issue of good
25 cause under 10 CFR 2714 for late filed contentions.

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1 And since the contentions were filed by BREDL, I think
2 we'll let BREDL argue first, then Duke and then the
3 staff. And we'll hear all your arguments on good
4 cause first. If you need to refer back to them as we
5 go into the individual contentions, that's
6 appropriate, but we thought that it would be more
7 efficient to deal with that first. Does anyone need
8 a break before we start on that? Otherwise we can
9 hear the arguments on timeliness and then take a break
10 and then move into the contentions. Okay. All right.
11 Go ahead, Ms. Curran.

12 MS. CURRAN: Okay. I would like to start
13 by making some corrections to Contentions 10 and 11.

14 CHAIR YOUNG: Corrections? All right.

15 MS. CURRAN: As a result of reviewing the
16 materials that were provided in the responses and
17 looking over some things, we've seen that some
18 unfortunate use of vocabulary in the IRSI viewgraphs
19 that are attached to our contentions -- IRSN
20 viewgraphs that were attached to our contentions led
21 us to misunderstand a little bit, but I don't think
22 it's significant for purposes of the admissibility of
23 these contentions. I just want to make these changes
24 to make sure that we've got it correct.

25 These viewgraphs used the word,

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1 "relocation of fuel," in two different context, in the
2 context of loss-of-coolant accidents, LOCAs, and
3 severe accidents. And in fact, while relocation is an
4 issue for both types of accidents, the phenomena are
5 different for each type of accident so that we had
6 cited some severe accident information under the LOCA
7 contention that should not have been cited there.

8 So on Page 3, at the bottom of Page 3, the
9 paragraph beginning, "The IRSN presentation points
10 out," well, that sentence -- most of that sentence
11 should be deleted. All the words of that sentence
12 after the words, "MOX fuel relocation," in the first
13 line should be deleted. And then the first word of
14 the following sentence, "This," should also be
15 deleted. As a result, the first sentence of that
16 paragraph should read, "The IRSN presentation points
17 out that plutonium MOX fuel relocation would increase
18 power and negatively affect heat transfer with a
19 deleterious impact on important LOCA parameters." The
20 reason for this is because the information that's
21 deleted relates to severe accidents.

22 And then I want to make a corresponding
23 change to Contention 11, which is a contention that
24 addresses severe accidents. On Page 5, in the
25 paragraph beginning, "Another part of the IRSN Phebus

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1 proposal," -- are you with me?

2 CHAIR YOUNG: Yes.

3 MS. CURRAN: On the fifth line down, at
4 the end of that line, there's a phrase, "as discussed
5 in the basis of Contention 10," going on to the sixth
6 line. I would like to cross out the phrase, "in the
7 basis of Contention 10," and also the footnote.

8 CHAIR YOUNG: Cross out the footnote.

9 MS. CURRAN: Yes. And in substitution
10 insert, "at Page 6 of the Phebus proposal." So the
11 sentence now reads, the whole sentence, "Phenomena
12 that could affect the probabilities of severe
13 accidents," --

14 CHAIR YOUNG: I'm sorry.

15 MS. CURRAN: I'm sorry, I'm just going
16 back to the beginning of the sentence.

17 CHAIR YOUNG: Oh, "the probability," I'm
18 sorry, I was on the wrong sentence. Go ahead.

19 MS. CURRAN: "Phenomena that could affect
20 the probabilities of severe accidents include the
21 poorer performance of MOX fuel during a LOCA compared
22 to LEU fuel," capital L, capital E, capital U, "which
23 could increase the chance that the accident cannot be
24 mitigated, as discussed at Page 6 of the Phebus
25 proposal." Phebus is spelled P-H-E-B-U-S, and there's

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1 an accent on the B.

2 Again, I don't think that changes --
3 except for removing the confusing reference to the
4 severe accident information in Contention 10, that
5 does not change the content of either contention.

6 In evaluating the admissibility or the
7 equitable criteria for admitting late filed
8 contentions, the most important criterion is good
9 cause. Both the NRC staff and Duke have opposed the
10 admission of the contentions that are based on these
11 IRSN viewgraphs on a lack of good cause, and I think
12 it's necessary to take a step backwards and talk about
13 the whole sequence of events here that they claim
14 occurred beforehand that we could have seen this
15 information from and that we should have therefore
16 based a contention at the outset on.

17 In the fall of 2001, the NRC held
18 something called a nuclear safety research conference.
19 During that conference, according to the staff, the
20 IRSN presented a paper discussing fuel behavior during
21 a LOCA and fuel relocation and the effects thereof.
22 According to the staff, we could have seen from this
23 information some of the information that is presented
24 in our contentions. Now, this particular conference
25 had to do with LOCAs, had to do with design basis

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1 accidents, which is the subject of Contention 10.
2 There was a poster presented at this conference, the
3 staff says a paper, that had to do with fuel behavior
4 during a LOCA, but this was in the context of a
5 general meeting on nuclear safety research. And the
6 staff claims that we should have been aware of the
7 information in that meeting.

8 Well, in the first place, this meeting was
9 generally described as a nuclear safety research
10 conference. It was not billed as a meeting about
11 plutonium MOX fuel. There was no reason, if one was
12 looking at the title of this proceeding, to think that
13 this was a meeting that would be relevant to the use
14 of plutonium Mox fuel. The NRC holds many meetings on
15 nuclear safety issues. There's nothing in the title
16 of that conference that would indicate, red flag, this
17 is something that has to do with plutonium MOX fuel.

18 CHAIR YOUNG: Let me just interrupt and
19 ask one question. I've been to a conference like
20 this. I think it may have been the same one at maybe
21 a different year, and I went to some of the programs.
22 If I'm recalling correctly, it was one of these, and
23 there were a lot of programs. Are you saying that
24 there wasn't anything in the agenda or anything in the
25 announcement or --

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1 MS. CURRAN: I don't know what the meeting
2 notice said.

3 CHAIR YOUNG: Okay. But is what you're
4 getting to that Dr. Lyman didn't see the particular
5 presentation? Is that what you're getting to? That
6 he was at the conference --

7 MS. CURRAN: I don't know if Dr. Lyman
8 recalls all the meetings that he went to in the fall
9 of 2001.

10 CHAIR YOUNG: Let me just, and the staff
11 can correct me if I'm wrong too, but just for my
12 understanding, my recollection of the conference that
13 I went to, which was not long after I came to the NRC
14 and I went to learn as much as I could, that there
15 were -- it's like a lot of conferences where there are
16 a lot of workshops, there's some plenary sessions and
17 then there's some periods of time where it breaks out
18 into different workshops. Is that more or less what
19 we're talking about?

20 MS. UTTAL: That's correct. And there was
21 an agenda published, and the agenda indicates that
22 there will be a session on fuel research and indicates
23 that there will be poster paper given on high burnup
24 and MOX fuels. There were several sessions over two
25 days on various aspects of fuel research, so it wasn't

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1 a hidden paper by any means.

2 CHAIR YOUNG: Go ahead. I just --

3 MS. CURRAN: Well, it certainly was long
4 before this proceeding was noticed, and whether BREDL
5 can be aware of every paper, every proceeding,
6 everything that is presented over the course of a
7 number of years it's very difficult to do that.

8 Another issue is, okay, this meeting took
9 place in 2001, and it says in the NRC staff's response
10 that the IRSN paper itself references documents dating
11 back to the 1980s. So at that point it seems that
12 this meeting was going over existing research on the
13 issue of fuel relocation, which is an issue for
14 uranium fuel as well as for plutonium fuel. If you
15 look at the attachments that are attachments to our
16 contention, the IRSN presentation from October 2003 --

17 CHAIR YOUNG: You're talking about the
18 attachments to your contention?

19 MS. CURRAN: Yes.

20 CHAIR YOUNG: I may have to apologize that
21 none of us may have the -- have brought the
22 attachments.

23 MS. UTTAL: I have an extra copy.

24 CHAIR YOUNG: If you have an extra copy,
25 that would be helpful. We apologize for our

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1 oversight. I thought we had everything. Thank you.

2 MS. CURRAN: Okay. If you look at Page 36
3 of this attachment, it's a list of references. Some
4 of these references go back to the 1980s, but some of
5 them are dated 2002 and 2003, and one has no date at
6 all. So if you look at Number 8, Reference Number 8,
7 it's a paper written in December 2002 that discusses
8 the influence of hydrogen content on the alpha-beta
9 phase transformation temperatures and on the thermal-
10 mechanical behavior of Zy4, M4 and M5 alloys during
11 the first phase of LOCA transient. Now, that -- okay,
12 then there's Number 9, which is dated April 2003,
13 which is entitled, "Behavior of M5 Alloy Under LOCA
14 Conditions as Compared to Zy4 Behavior." And then
15 Number 10 is called, "Unpublished IRSN Results," and
16 has no date.

17 There are also a couple of references,
18 Number 13 and 14, that are dated 2002 October and
19 March of 2002. I don't think these particular
20 references are relevant to our contentions. The most
21 important ones are 8, 9 and 10. Eight and 9 clearly
22 relate to the behavior of M5 alloys, which is
23 something that's a relatively new thing; it's under
24 study.

25 And these references are noted in the --

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1 earlier in the viewgraphs. For instance, on Page 24,
2 there's some information about the behavior of modern
3 clad alloys with respect to ballooning of the
4 cladding, and the reference here -- references that
5 are given are 7 to 9, so they include references that
6 are newer than the reference -- whatever might have
7 been discussed in the 2001 meeting. And if you turn
8 to Page 25, it refers to References 8 and 10. Again,
9 those are relatively recent studies.

10 So this information on the behavior of the
11 M5 cladding and the new alloys, that's new information
12 that would not have been discussed at the October 2001
13 meeting. And it is relied upon in the contention as
14 a basis for requiring a further inquiry and resolution
15 of these issues.

16 JUDGE BARATTA: I apologize for
17 interrupting. The point that you're making is those
18 references are after the 2001 meeting.

19 MS. CURRAN: That's right.

20 JUDGE BARATTA: Okay.

21 MS. CURRAN: And that some of these
22 assertions that are made in the viewgraphs, if you
23 turn back to, say, Pages 24 and 25, have to do with
24 the behavior of the M5 cladding and with these modern
25 clad alloys and low tin alloys under LOCA conditions.

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1 And this is relevant to the question of the size of
2 the balloon that develops in a LOCA. I'm sorry?

3 JUDGE BARATTA: The degree to which
4 blockage occurs because of the ballooning is what I
5 believe your contention refers to.

6 MS. CURRAN: Both the blockage, that's one
7 issue, and also the amount of relocation that occurs
8 because the ballooning is what creates the space for
9 the fuel to fall. And the issue in a LOCA, one of the
10 issues is not just blockage but it's that the -- when
11 the fuel crumbles and falls it can become compressed,
12 and so you have these hot spots that have higher
13 energy than the rest of the fuel, which is an issue
14 with respect to uranium fuel as well, but it's more of
15 an issue with respect to plutonium fuel because the
16 energy of that fuel is higher in general.

17 JUDGE BARATTA: So your argument then is
18 that some of this information was not available at the
19 2001 meeting, it's more recent than that, and the
20 compounding of that information with previous
21 information then led you to the concern that is
22 expressed in your contention.

23 MS. CURRAN: And not only that but the
24 information that's new here is significant. It's not
25 just some new information, it's significant

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1 information.

2 JUDGE BARATTA: No, I understand that.

3 MS. CURRAN: And this is -- well, this
4 process is an iterative process; the Agency learns
5 more and more. This to us represents a significant
6 step in understanding acquisition of information, this
7 information that's presented in the October 2003
8 viewgraphs.

9 Another distinction here is the context of
10 this presentation in October 2003. This was a
11 proposal in which IRSN put together available
12 information about what is known about plutonium and
13 high burnup fuel under LOCA and severe accident
14 conditions and posed questions about what more needs
15 to be known and made a proposal for a testing program.
16 So it's a focused -- it was a focused presentation on
17 issues relating to plutonium MOX fuel and high burnup
18 fuel with a very focused discussion of what are the
19 outstanding questions and a proposal to do testing.
20 And, certainly, this was something that drew our
21 attention as being highly relevant to this proceeding.
22 So we do not believe -- or we believe that we have
23 good cause for filing this contention late, Contention
24 10 I'm referring to, which is the LOCA contention, and
25 that the existence of this 2001 meeting does not

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1 demonstrate that we lack good cause.

2 Another thing that I would point out is I
3 think good cause needs to be measured against what was
4 the original deadline for filing contentions. I
5 believe the original deadline was -- well, we filed
6 our initial set of contentions on October 21, 2003.
7 This IRSN presentation was made on the 23rd of
8 October, shortly after that deadline passed, and we
9 drafted -- once we were able to get the materials --
10 Dr. Lyman went to the presentation. Once we were able
11 to get the written materials, we got a contention in
12 with all deliberate speed, we made it within the 30-
13 day deadline that the Board has set for if there is
14 good cause for a new contention.

15 So in terms of what the admission of this
16 contention would do to the proceeding, which I think
17 is the main concern behind the good cause standard,
18 this contention is being filed relatively soon after
19 the initial deadline for filing contentions, and,
20 certainly, the presentation that was made by IRSN was
21 right at the outset of the time for submitting issues
22 in this proceeding.

23 Now, the second meeting, and this is one
24 that Duke -- oh, no, I need to back up. The staff
25 also refers to a meeting of the Advisory Committee on

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1 Reactor Safeguards that took place on May 3, 2002 at
2 which the staff says IRSN made a presentation to the
3 NRC on this same issue, making many of the same points
4 as in their October 21, 2003 presentation. In support
5 of this argument the staff cites the transcript of
6 that meeting at Pages 296-300. Now, I cannot say I
7 have read the transcript of that entire ACRS meeting
8 but on those particular pages of the transcript there
9 is no reference to plutonium MOX fuel. It appears
10 that what the ACRS was discussing was the issue of
11 uranium fuel relocation or general fuel relocation,
12 not the specific question of the characteristics of
13 plutonium fuel in relation to relocation.

14 And later on this morning in response to
15 arguments that are made by either Duke or the staff on
16 the admissibility of the contention, I would like to
17 address the general issue of fuel relocation and its
18 status, because that's relevant to the admissibility
19 issue, but I'm going to set that aside for now. So
20 that meeting did not provide information on which we
21 should have based a contention, at least not the
22 portion that the staff has cited here.

23 So then I'd like to go on to the meeting
24 that was cited by Duke in its response to our
25 contention. That was a meeting in February of 2002

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1 where IRSN also presented slides regarding some
2 testing, some severe accident testing or testing using
3 -- simulating severe accident conditions that were
4 done at the VERCORS plant in France. And these tests
5 are -- there were two tests. One was referred to as
6 RT2 and one was referred to as RT7. According to
7 Duke, we could have based our contention on that
8 information.

9 Once again, I think a standard of
10 reasonableness has to be applied here in evaluating to
11 what degree BREDL should be aware of all the details
12 of various meetings that go on at the NRC. This
13 meeting in February 2002 was billed as an expert panel
14 that had come together to review the source terms for
15 plutonium MOX fuel and high burnup fuel. The slides
16 to which Duke refers were presented by one of the
17 panel members from France. The behavior of plutonium
18 MOX fuel, including relocation, was not the specific
19 subject of that meeting which took place over several
20 days, even though some of that information may have
21 been presented.

22 The meeting in 2002 had a fairly broad
23 purpose but one of the subjects that was discussed was
24 the data points that had been yielded by these tests,
25 RT2 and RT7, and what some of the implications of that

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1 might be. If you compare that to the meeting in
2 October 2003, the meeting in October 2003 was -- the
3 purpose of that meeting was to focus attention on the
4 information that is known as a result of those tests
5 but also to bring to bear as much understanding as
6 possible of the characteristics of the fuel and the
7 relevance of those characteristics to the severe
8 accident issue and to kind of synthesize the available
9 information and drive home the point that further
10 research is needed in order to understand the behavior
11 of this fuel in severe accident conditions.

12 Once again, the purpose of that meeting
13 was very clearly delineated: More testing is needed,
14 not enough is known here, we need to do something.
15 And certainly if the people who presented the
16 information in 2002 had nothing new to say, it's not
17 clear to us why they would have come all the way
18 across the ocean to simply repeat what they had said
19 in 2002. And if you look at the slides, there's
20 analysis in the slides, there's information in the
21 slides that puts together some of this information and
22 takes it a step further.

23 Okay. For instance -- and this
24 information is summarized on Page 6 of the viewgraphs
25 from October 2003. Now, some of the -- if you look at

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1 the -- on Page 6, there's a list of issues with check
2 marks in the left hand side. The first set of check
3 marks is six issues there. Now, if you compare that
4 to the viewgraphs that were presented in 2002,
5 especially toward the end in the last two elements,
6 you see those pieces of information in the 2002
7 presentation. What you don't see is the information
8 about the fuel structure, the stoichiometry, which I
9 think they garbled the spelling of, the very high
10 burnup in plutonium-rich clusters and that impact on
11 the fission product distribution in the fuel phase,
12 the difference between plutonium and uranium
13 chemistries with regard to oxygen. All these issues
14 have a fundamental impact on the rate and magnitude of
15 fission product releases and are highly relevant to
16 our contention. Again, this reflects a development in
17 increased understanding and increased theoretical
18 application of ideas to the data that was yielded by
19 these two earlier tests.

20 CHAIR YOUNG: So you're saying that all of
21 the checked items on Slide 6 or are you saying all or
22 most of those were not presented in the earlier --

23 MS. CURRAN: I would say if you look at
24 the viewgraphs that are cited by Duke in its response,
25 you see the last two items, but we did not see the

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1 other four.

2 CHAIR YOUNG: The first six.

3 MS. CURRAN: Yes.

4 JUDGE BARATTA: So you're in part saying
5 that there was a synthesis of a number of items that
6 occurred in this paper that was not present in the
7 previous papers, and that as a result you came to the
8 conclusion that you did.

9 MS. CURRAN: Yes.

10 CHAIR YOUNG: Are you about finished on
11 good cause?

12 MS. CURRAN: Almost.

13 CHAIR YOUNG: Okay. Great.

14 MS. CURRAN: I thought it might be helpful
15 if I passed out the viewgraphs from the February 2002
16 meeting so that you could compare them.

17 CHAIR YOUNG: Ms. Uttal, do you need this
18 back?

19 MS. UTTAL: No, I have an extra.

20 CHAIR YOUNG: You have an extra. Thanks.
21 So you don't mind if I keep this and mark on it?

22 MS. UTTAL: No.

23 CHAIR YOUNG: Okay. Great. Thank you.

24 (Curran passes out viewgraphs.)

25 MS. CURRAN: Okay. I'd like to move on to

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1 the other factors.

2 CHAIR YOUNG: Let's -- well, we were
3 thinking that the other factors might be more specific
4 to each different contention. If all of you agree
5 that they're not, then do you have any problem with
6 them going ahead with those? We thought there might
7 be some issues that would be more specific to the
8 different contentions, but what about -- let me hear
9 from Duke and the staff. Would you say it would be
10 more efficient to go ahead on all five factors?

11 MR. REPKA: I think it would be more
12 efficient to go ahead, just deal with the factors.

13 CHAIR YOUNG: And staff doesn't disagree?

14 MS. UTTAL: I don't disagree.

15 CHAIR YOUNG: Okay. Then go ahead.

16 MS. CURRAN: Okay.

17 JUDGE ELLEMAN: May I ask a question
18 before moving ahead?

19 CHAIR YOUNG: Yes. Sure.

20 JUDGE ELLEMAN: Before we move ahead on
21 those, the fuel performance of concerns seem to be
22 broadly divided into two issues. One is behavior of
23 the cladding -- ballooning, distortion, whatever -- in
24 MOX fuel. The other part of the concern is the
25 behavior of MOX itself, the slumping, relocation of

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1 the fuel within the clad. You pointed out the
2 cladding data are more recent, but was not the fuel
3 relocation information older, available information
4 that's a part of this concern?

5 MS. CURRAN: We don't think that you can
6 separate the cladding issues from the fuel issues.
7 There's issues of bonding between the fuel and the
8 cladding, there's the issue of the amount of space
9 that's available as a result of the ballooning for the
10 fuel to collapse into, and there's also the question
11 of whether the issue of fuel crumbling, which was
12 Generic Safety Issue-92, has actually been resolved
13 adequately. It appears that the staff recently
14 reopened the issue after it had been dropped. Again,
15 I was going to get into that a little bit later in
16 response on the admissibility of the contention.

17 As I said before, the good cause standard
18 is the single most important standard in evaluating
19 the admissibility of a late filed contention, aside
20 from whether it meets the admissibility criteria, and
21 we believe that we do have good cause for late filing
22 this contention. We've believed that from the start.
23 The other criteria for late filing the other four
24 criteria are not nearly as important and need be given
25 very little consideration if there is good cause.

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1 I'd like to read you a characterization of
2 those four other criteria that was made by the counsel
3 for the Commission before the U.S. Court of Appeals in
4 a 1990 case in which the new Part 2 standards that
5 were promulgated in 1989 were appealed. One of the
6 issues on that appeal, which I participated in, was
7 the fairness or legality of the Commission's applying
8 the late filing standard to contentions based on
9 environmental documents that became available after
10 the initial deadline for filing contentions. And I
11 represented the Union of Concerned Scientists in that
12 case, and it was our position that it was a violation
13 of the hearing requirement of the Atomic Energy Act to
14 apply such an equitable standard to the admissibility
15 of a contention where the --

16 CHAIR YOUNG: I'm sorry, say that again.
17 It was a violation to apply such an --

18 MS. CURRAN: Equitable standard. The only
19 relevant standard would have been the admissibility
20 standard and that one shouldn't have to leap over
21 other hurdles in order to gain admission of a
22 contention that couldn't possibly have been filed
23 earlier because the staff document wasn't available.

24 In opposing our argument, and the NRC did
25 prevail in that case, the NRC argued that these four

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1 factors, the four factors in addition to good cause,
2 I'll quote the sentence by the Commission's lawyers.

3 CHAIR YOUNG: And can you give us a cite
4 for this?

5 MS. CURRAN: Yes. This brief is the
6 Commission's brief, brief for Respondents in Number
7 89-1617. The caption of the case is, "Union of
8 Concerned Scientists v. U.S. Nuclear Regulatory
9 Commission." The brief is dated August 30, 1990. And
10 I'm sorry to say I didn't bring the citation for the
11 case in which the -- the decision in which the case
12 was cited, and I can provide that to the Board if
13 you'd like it.

14 CHAIR YOUNG: Yes, please.

15 MS. CURRAN: This is a quote from the
16 brief: "The remaining four factors, which according
17 to Petitioner give the NRC, quote, 'broad discretion
18 to deny,' close quote, sound contentions, in
19 parenthesis, Petitioner's brief at 17, close
20 parentheses, simply give the NRC the authority to
21 prevent unnecessary or duplicative litigation by
22 latecomers. Any adjudicatory body must reserve
23 authority of that sort or it loses all control over
24 its proceedings." And then I won't give you the
25 citations to the Federal Rules of Civil Procedure that

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1 are given there.

2 In other words, the way the Commission's
3 attorneys characterized these four standards to the
4 Court of Appeals was as limited -- having a limited
5 purpose to prevent unnecessary or duplicative
6 litigation by latecomers and also to protect the
7 Commission from losing all control over its
8 proceedings. And I would submit that we are far from
9 that situation here. We are not latecomers. This is
10 very close to the beginning of this proceeding. We
11 are Petitioners who have put in a contention within a
12 matter of weeks after the deadline for initial
13 contentions closed. Discovery hasn't even started.
14 We haven't had a ruling on the admissibility of any of
15 the other contentions. We haven't resolved the issue
16 of whether we're going to be able to file contentions
17 on the safeguards information.

18 It's clear that this litigation that we
19 seek to do is not duplicative. There's no other party
20 that's raised this issue; we're the only party. And
21 the question of whether it's unnecessary, to us it's
22 very clear that we have raised significant safety
23 issues that should be addressed in this proceeding for
24 the experimental use of plutonium fuel in a U.S.
25 reactor for the first time.

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1 So I think that the evaluation of those
2 four criteria has to be put in that context, that the
3 Commission intended to limit the application of those
4 criteria to prevent unnecessary and duplicative
5 litigation.

6 CHAIR YOUNG: Can you also address those
7 four criteria from the standpoint of assuming without
8 giving any indication one way or the other, but if we
9 were to rule against you on good cause, what would
10 your argument be on the other four factors?

11 MS. CURRAN: Okay. Well, we believe we --
12 the most important criterion here in those four is the
13 one that relates to the Petitioner's ability to
14 contribute to the development of a sound record. And
15 there's no question here that we have based this
16 contention or these several contentions that relate to
17 the IRSN presentation on the wisdom, on the expertise
18 of a qualified expert, Dr. Lyman, whose curriculum
19 vitae we attached, who we have stated has extensive
20 experience in analysis of nuclear safety issues. So
21 we are not an intervenor that's coming in and
22 proposing to litigate this contention by cross
23 examining the witnesses of Duke and NRC staff. We
24 have an expert who is going to present testimony.

25 Now, both Duke and the staff criticized us

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1 for not presenting a summary of Dr. Lyman's testimony.
2 I think that requirement becomes more important if
3 you're at the end of a case and you're trying to
4 figure out if you should hold the whole case up while
5 it's very close to concluding while you go through
6 some new safety issue, but that's not where we are
7 here. We're at the very beginning of the case. There
8 may be more that Dr. Lyman will say, but given that we
9 believe we have good cause, what we put in, we put in
10 as much information as we reasonable could without
11 delaying even further to do more research and come up
12 with actual testimony.

13 There's always a balance here between
14 trying to get issues in as quickly as possible and
15 then if -- if we were to have prepared a summary of
16 Dr. Lyman's testimony going into much more detail as
17 to how all these issues related, I think that would
18 have taken weeks, if not months, to do, and we want to
19 get that issue before you. So we certainly put as
20 much information as we possibly could in to support
21 the contention and to show that it has a strong basis,
22 that the basis includes data as well as theory, that
23 it's supported by the expertise of the French Research
24 Agency, which is an arm of the entire French
25 regulatory agency. We think that should be sufficient

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1 to go ahead and admit this contention.

2 CHAIR YOUNG: Just to wrap up, do you have
3 anything further on the remaining factors?

4 MS. CURRAN: Well, the only other factor
5 here that might be relevant is the extent to which the
6 Petitioner's participation will broaden the issues or
7 delay the proceeding. Again, I think that criterion
8 has to be judged against where in the proceeding it
9 comes up. We're right here at the outset of the
10 proceeding, and I don't see that the -- of course it's
11 going to broaden the proceeding in the sense that it's
12 another issue that hasn't been put into contention
13 yet. If it were left off, there might be some time
14 saved, but it's a marginal amount of time because for
15 the entire case we're just at the inception. If this
16 issue is admitted with the other issues, then all the
17 various steps that have to do with this hearing can go
18 forward at the same pace. Discovery can go forward at
19 the same pace, summary judgment, the hearing. We're
20 not talking about adding a huge amount of time here,
21 just the marginal amount of time that it would take to
22 add one more issue to, say, a hearing that takes a
23 couple weeks. So I don't think that's a significant
24 factor.

25 CHAIR YOUNG: All right. If you want to

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1 wrap up, I think we need to move on.

2 MS. CURRAN: Okay. That's all I have on
3 this issue.

4 CHAIR YOUNG: Okay. Mr. Repka?

5 MS. UTTAL: Judge, I have to take a short
6 break before we continue.

7 CHAIR YOUNG: Okay. Let's take five
8 minutes and come back and finish on this and then
9 we'll break for lunch, I guess, after this.

10 (Whereupon, the foregoing matter went off
11 the record at 11:12 a.m. and went back on
12 the record at 11:26 a.m.)

13 CHAIR YOUNG: Okay. Mr. Repka, go ahead.
14 And I just -- I'm sure everyone is probably on the
15 same wavelength as we are here. We're going to finish
16 up on the factors argument, the timeliness and other
17 factors argument, before lunch. When we come back
18 we're really going to have to move quickly through the
19 more general admissibility requirements with regard to
20 the four contentions, because we do have to be out of
21 here by five again. We have to end by five. So just
22 to let you know so you can prepare we're going to be
23 keeping you to some real tight deadlines this
24 afternoon, timelines. Okay. Mr. Repka.

25 MR. REPKA: Thank you, Judge Young. I'll

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1 try to be brief and to the point on these. I want to
2 address good cause first. But having listened to the
3 argument this morning, the first thing I'll say is
4 nothing I heard changes the positions we took in our
5 written response. I don't want to repeat all those
6 arguments this morning, but we believe those arguments
7 are still very much valid arguments.

8 Beyond that I want to respond to the
9 general tenor and some of the specifics this morning
10 on good cause. I think the basic point is what we've
11 heard from counsel would establish for BREDL a far too
12 lax standard for good cause. It seems to us that
13 BREDL is arguing on the one hand that they have an
14 expert on these issues that's going to significantly
15 aid in the development of the record, yet on the other
16 hand when it comes to good cause that same expert
17 could attend a number of meetings on these very issues
18 and yet not be held responsible to provide any
19 contentions on those issues on the appropriate date.

20 The Commission's standard again at the
21 time of filing contentions is that there's an iron
22 clad obligation to search the public record and raise
23 issues on the appropriate date.

24 A number of meetings have been discussed,
25 and I want to trace that history just a little bit

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1 again because I think it's very significant. The
2 essential point, the seminal point of the October IRSN
3 presentation to the NRC really dates back to the
4 VERCORS tests, which were 1998 tests. And those were,
5 as I think BREDL is recognizing in some of its
6 modifications to its contention this morning, are
7 severe accident tests. They're at conditions far in
8 excess of LOCA conditions, design basis LOCA
9 conditions, and really don't relate to MOX fuel
10 behavior at LOCA conditions. Just to clarify that a
11 little bit, a LOCA, design basis LOCA assumes 2200
12 degrees fahrenheit. The VERCORS tests from 1998 were
13 severe accident tests close to 2000 degrees hotter
14 than that. Essentially, they were cooking the fuel
15 till it melted to monitor performance with respect to
16 slumping the relocation. But 1998 those tests were
17 conducted. That's the seminal point here.

18 The staff cited to the fact that there was
19 a discussion at the meeting of October 2001. I just
20 want to emphasize again that based on that testing
21 representatives from the French research agency, IPSN,
22 did give the poster paper at that meeting. The title
23 of it is very clear from the agenda. It's, quote,
24 "Need for Experimental Program on LOCA Issues Using
25 High Burnup and MOX Fuels." Note the title talks

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1 about LOCA issues, not just severe accident issues but
2 LOCA issues, and it refers to MOX fuel. As can be
3 seen in the agenda or the attendants page that's
4 attached those materials, Dr. Lyman was one of the
5 attendees of that meeting.

6 CHAIR YOUNG: Can you tell whether he
7 attended that particular part of the program?

8 MR. REPKA: Cannot. I cannot. Now, if
9 you look at the paper itself, there are a number of
10 figures in that paper. And just by way of examples,
11 those that seem to be directly relevant to the
12 contention would include Figure 1, which is a graph of
13 performance during, quote, "a typical LOCA transient."

14 CHAIR YOUNG: When you're talking about
15 the paper, you're talking about --

16 MR. REPKA: Oh, I'm sorry. This is the
17 paper that's included by the NRC staff as an exhibit
18 to their filing. The paper from --

19 CHAIR YOUNG: Two thousand one.

20 MR. REPKA: -- October 2001. Figure 1 is
21 the transient response. Figure 2 shows pictures of
22 the fresh fuel rod and some of the characteristics of
23 those fuel rods. Those same pictures repeat
24 themselves in the October 2003 presentation. So there
25 is a direct analog here between what IPSN was

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1 presenting in 2001 and what was presented in October
2 2003 and that's presented here as the basis for the
3 contention.

4 What we have, essentially, is an ongoing
5 story that really dates again from the VERCORS tests
6 in 1998 in which ISPN is suggesting some further
7 research. This was not new information in October
8 2003.

9 CHAIR YOUNG: I assume you're going to
10 talk to us about the differences that Ms. Curran
11 mentioned.

12 MR. REPKA: Yes. I think Judge Elleman
13 created an interesting construct to look at this, the
14 technical issue resolving, he suggested, into two
15 issues: The behavior of the cladding and, number two,
16 the behavior of the MOX or the so-called relocation,
17 the MOX fuel itself. I would suggest that it could be
18 looked at as three issues: The behavior of the
19 cladding, the behavior of the MOX or the relocation of
20 the fuel itself during severe accident conditions and
21 a third being the behavior of the MOX or the fuel
22 relocation during design basis LOCA conditions.

23 On those issues, the first addressing the
24 cladding, there is nothing in the VERCORS tests or in
25 the subsequent IPSN or IRSN presentations directly

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1 addressing that point. There are some speculations,
2 some areas identified for potential research; however,
3 there's no new data, no new information on cladding.
4 In fact, on the M5 cladding itself, there is
5 significant information that was available prior to
6 October 2003 and in fact prior to many of these
7 meetings. Most significantly is the cladding topical
8 report and the NRC's safety evaluation report, which
9 have been referenced in the various filings before.
10 But the safety evaluation report with the final
11 version of the topical report was issued in February
12 2000, so there's substantial cladding information
13 available.

14 With respect to some of the references in
15 the October 2003 IRSN presentation, that's Page 36,
16 again there are a number of references in there
17 related to cladding, M5 alloys, particularly
18 References 8, References 9. Those have dates of
19 December 2002, April 2003, both of which would have
20 supported a filing of a contention on the original
21 schedule. Again, if there's substantial expertise to
22 support this contention other than the slide
23 presentation, that information would have been
24 available to such an expert. That's the issue of
25 cladding.

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1 With respect to the behavior of MOX fuel
2 during severe accident conditions, again, that's what
3 the VERCORS tests were all about, both the RT2 and the
4 RT7 tests. Those are specifically described in the
5 February 2002 meeting, which we, Duke Energy, refer to
6 in our response to the proposed contention, and that's
7 the slide presentation that Ms. Curran just handed out
8 this morning.

9 There is no information in the October
10 2003 presentation on severe accidents that's any
11 different than what was presented in February 2002.
12 In fact, the February 2002 presentation is a far more
13 fulsome discussion of the range of tests conducted by
14 VERCORS. It shows very dramatically, and we'll get
15 into this more when we talk about the basis for the
16 contention, but on Page -- they don't have page
17 numbers. It's Page 7 if you count back, a slide
18 titled, "VERCORS Tests With MOX Fuel," and it's
19 looking at the fuel degradation, which is, to use
20 Judge Elleman's characterization, the effect on the
21 MOX itself. You see there are two tests, the RT7 and
22 the RT2. They were conducted at 2950 degrees Kelvin
23 and 2450 degrees Kelvin, respectively. Without doing
24 the conversion but those are temperatures
25 approximately in the 4000 degrees fahrenheit range.

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1 That's far in excess of the design basis LOCA
2 temperatures of 2200 degrees. So this shows that
3 those tests related to severe accidents, not to LOCA
4 analysis, and it gives the details. It also discusses
5 in that paper the fact that there were other tests on
6 LEU fuel.

7 But, again, with respect to the good cause
8 issue, there's nothing in October 2003 that wasn't
9 already presented in more detail in February 2002.
10 And, again, this is the slide package that was handed
11 out this morning. As we referenced in our filing,
12 there are transcripts of the February 2002 meeting,
13 and the pages that we referenced in our response Dr.
14 Lyman was at those meetings so was certainly -- and
15 participated at those meetings, so certainly had
16 reason to be aware of these severe accident tests.

17 Now, with respect to the third issue,
18 which at least some of the contentions seem to be
19 directed at, which are not severe accident
20 contentions, they're LOCA contentions, again, there is
21 nothing new in October 2003 on the issue of MOX fuel
22 performance at LOCA temperatures. The basic tests
23 discussed in October 2003, just as in February 2002,
24 just as in the earlier 2001 meeting, are the VERCORS
25 tests, the severe accidents tests. Anything else

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1 related to MOX fuel at LOCA temperatures is simply
2 extrapolation or speculation based upon those tests,
3 and that extrapolation, that so-called uncertainty
4 could easily have been made in February 2002 or even
5 earlier. There's nothing new in 2003 that suggests
6 new data related to fuel performance at LOCA
7 temperatures. In fact, in discussing that issue this
8 morning, Ms. Curran, trying to show something new,
9 goes back to Slide 6 of the October 2003 presentation,
10 but that slide, again, references the VERCORS tests
11 and specifically relates to severe accident
12 conditions, not design basis LOCA conditions.

13 CHAIR YOUNG: Let me just see if I can
14 clarify something, and you can help me out on this.
15 As I understand it, you're saying that all of the data
16 was available prior to the October 2003 presentation
17 and that anything new in the October 2000 presentation
18 was extrapolation of the data. What I'd like to get
19 a better understanding of is whether the analysis that
20 was done could be characterized as producing any
21 insights or theories that had not been put forth prior
22 to that time. And I may not be phrasing this
23 completely accurately but I'm trying to get across a
24 general idea, because what I understand the Petitioner
25 to be saying is that there were new analyses that

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1 produced some new hypotheses, at least, and I'm trying
2 to get a sense of the significance of those.

3 MR. REPKA: Okay. In the October 2003
4 presentation, there was no new test results reported,
5 no new analytical results reported. There was nothing
6 new other than the fact that IRSN was continuing to
7 raise the same issue it had been raising for several
8 years and has been raising for several years and is
9 suggesting uncertainties and is suggesting further
10 tests. However, there's no new information, no new
11 data in October 2003.

12 CHAIR YOUNG: Maybe you can help me out by
13 looking at the six checked -- on Slide 6, the six
14 items that are checked that the Petitioner was saying
15 were new or were different from earlier presentations.

16 MR. REPKA: On Page 6, again, they're
17 looking at the results of the severe accidents tests
18 at VERCORS. The first item, fuel structure is
19 different. The differences in the fuel structure
20 between MOX and LEU fuel that's not a new issue, that
21 predates this slide. That's a given. And, certainly,
22 in the various materials on MOX fuel those differences
23 are explained.

24 High burnup impacts on fuel stoichiometry,
25 I think the point on this is similar to many of the

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1 rest of these items. Mr. Nesbit has read the
2 transcripts of those meetings and believes that most,
3 if not all, of these items were discussed at the
4 February 2002 meetings. However, the basic point
5 being these relate to fuel stoichiometry. The
6 plutonium cluster impacts, the chemistries, those are
7 issues related to the structure of the fuel, which,
8 again, IRSN was not presenting anything that's new,
9 anything that -- the fact of a difference is not new
10 information nor are they stating that there is any new
11 insight about those characteristics. They're simply
12 stating that these are factors that might possibly
13 combine with the fact that there's this one severe
14 accident tests that showed a lower relocation
15 temperature, a temperature still far in excess of
16 design basis LOCA temperatures, but they were not
17 making any new finding about these characteristics.
18 And, certainly, if they did not do that in 2002 or
19 2001, and we believe that they did, certainly an
20 expert could have extrapolated the same things and
21 come to the same conclusion.

22 CHAIR YOUNG: Were they raising questions
23 that had not been discussed before?

24 MR. REPKA: No. I think, fundamentally,
25 the issue was exactly the same in 2003 as it was in

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1 2001. I think, not to put too fine a point on it, but
2 this is a research agency that's looking for somebody
3 to support their research, and I think they've been
4 looking for several years.

5 I think the bottom line on good cause is
6 these are issues that have been out for some time and
7 certainly an expert in the field could have, and in
8 this case, did attend many of the very meetings at
9 which they were discussed, and there's no good cause
10 for any delay with respect to filing contentions on
11 these issues.

12 Now, with respect to the good cause
13 factor, this morning Ms. Curran seemed to argue a
14 little into good cause the concept of, well, we
15 weren't that late. That's not the good cause
16 standard. The amount of the delay is not good cause.
17 Delay is a factor, a separate factor, one of the less
18 important factors, but with respect to good cause it's
19 absolute. You either had cause to file late or you
20 didn't, and in this case there really was no good
21 cause.

22 With respect to the other factors -- I'll
23 turn to the other factors unless there's more
24 questions about good cause. I agree fully with Ms.
25 Curran that the other four factors are less important.

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1 However, I think that even those factors, on balance,
2 don't weigh in favor of considering this contention
3 and in fact, in any event, are far outweighed by the
4 lack of good cause. Again, a significant factor of
5 the four, I won't address them all, but a significant
6 one is the development of a sound record, and here the
7 argument is that Dr. Lyman will add to development of
8 sound record. However, he has not provided anything
9 in this contention that's independent of what IRSN has
10 produced, and IRSN hasn't produced anything related to
11 cladding, related to fuel relocation at design basis
12 LOCA temperatures, and with respect to even fuel
13 relocation at severe accident conditions has produced
14 conflicting results. He has not shown any particular
15 knowledge of those tests, the test conditions, the
16 results. In fact, that information, we understand, is
17 proprietary. So it's not clear to us at all how that
18 would aid to the development of a sound record in this
19 case. There's no particular expertise on the points
20 at issue. What we're being offered is simply the fact
21 of an IRSN research proposal. That fact alone doesn't
22 develop a sound record.

23 And I think, finally, I'd say that again,
24 as I said earlier this morning, time is critical in
25 this case. Time is critical to DOE meeting its

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1 schedule to make a shipment of the plutonium material
2 to France and for those fabricated rods to be produced
3 before Cadarache closes and to meet the Oconee
4 operating cycle for 2005. In that context, any delay
5 in this proceeding, given where we are today, is
6 significant. And based upon that, even an argument
7 that a couple of days or a couple of months or a
8 couple of weeks is not important simply doesn't hold
9 water. I'm sorry, I said the operating cycle for
10 Oconee, I meant Catawba. Oconee, of course, is not a
11 viable alternative.

12 MS. UTTAL: Good morning. I don't have
13 that much to add, just a few points. Some mention has
14 been made of whether Dr. Lyman had attended all these
15 meetings. I don't think that whether he attended
16 these meetings is that important. There is the iron
17 clad obligation to review the application and to
18 review publicly available documents. The minutes of
19 these meetings or the papers that were presented are
20 all publicly available documents, they're available on
21 ADAMS, they're available probably on the Web, various
22 web sites. I obtained them in those ways. Whether or
23 not he attended these meetings or anyone from BREDL
24 attended these meetings, they did have the obligation
25 to review the record and to review the publicly

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1 available documents to make sure there was nothing in
2 topic. I think that it's important to note what the
3 Commission said, and this is in my brief but I think
4 it's important to repeat it, in the Duke Energy case
5 having to do with license renewal regarding late filed
6 contentions. "There will be no end to NRC licensing
7 proceedings if the petitioners could disregard our
8 timeliness requirements every time he or she realized
9 that maybe there was something after all to a
10 challenge if either originally opted not to make it or
11 simply did not occur to it at the time or at the
12 outset." And I think that's what happened here.

13 CHAIR YOUNG: Is that the same thing that
14 you quoted in your --

15 MS. UTTAL: That's in my brief at Page 3.
16 I think that's what happened here. They opted not to
17 raise this issue or simply forgot to raise the issue.
18 I think there's numerous instances where these issues
19 have been raised, and I think another important
20 document that was touched upon by Mr. Repka is the
21 staff's February 4, 2000 SER regarding the M5 fuel
22 cladding where they discuss ballooning, ductility,
23 cladding swell and all the issues that were discussed
24 or at least raised by IRSN at the later date.
25 Therefore, this information was out there back in

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1 2000.

2 And I also think it's important to
3 remember that IRSN is in fact coming back to the NRC
4 periodically or repeatedly because they are looking
5 for funding to fund this research that they are
6 proposing. I don't think that there was -- and I
7 agree with Mr. Repka that there was nothing new raised
8 in October of 2003 by IRSN that would rise to the
9 level of good cause. These issues were out there,
10 they were out there for several years before the
11 contentions were filed, and it was the obligation of
12 the Petitioners to raise them in a timely fashion.

13 As to the other factors, I think that
14 without having shown good cause they have to make a
15 compelling showing on the other factors and they have
16 not done that. There will be a certain amount of
17 delay to the proceeding as a result of late filed
18 contentions. As the staff stated in its brief, there
19 is no indication that Dr. Lyman would add to a sound
20 record, because there's no indication of what he would
21 say. As Mr. Repka pointed out, the only information
22 provided in the contentions is the information raised
23 by IRSN. There's nothing as to what Dr. Lyman would
24 add to the record. I basically have nothing else.

25 JUDGE BARATTA: Several times I've heard

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1 reference to the availability of these documents, and
2 I had a couple questions in regards to that. Are
3 these documents in archival databases that are
4 recognized, such as Compendex and Inspec? In other
5 words, if I go to those -- Compendex is the compendium
6 of engineering and scientific articles, such as ANS
7 Nuclear Technology and such. In other words, it's the
8 recognized -- one of the two recognized databases that
9 are usually searched when one starts out a literature
10 search?

11 MS. UTTAL: I don't know, Your Honor.

12 JUDGE BARATTA: Okay. Relating to the
13 availability through ADAMS and also through the Web,
14 are the proceedings of the meetings searchable; that
15 is, can you go and type in a keyword and it will bring
16 you to or do you have to go by author or organization,
17 do you know?

18 MS. UTTAL: Well, the proceeding of the
19 Nuclear Safety Research Conference that I cited in the
20 staff's brief is a NUREG, and it would be found
21 through a search. In fact, I don't recall how I found
22 this particular document but it would be on the web
23 site and be in ADAMS also. The staff's SER is in
24 ADAMS.

25 JUDGE BARATTA: On the M5 cladding.

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1 MS. UTTAL: Beg your pardon?

2 JUDGE BARATTA: Is the staff SER in the M5
3 cladding?

4 MS. UTTAL: In the M5 cladding. In fact,
5 I provided the Board with copies as a result of the
6 Board's request, and that's a publicly available
7 document that's found in ADAMS. In fact, it's found
8 in ADAMS in a couple of places, it's got several
9 different ML numbers, and that you could get by word
10 search, by MOX, by M5. I mean all those words are in
11 there. I'm sure that the proceedings of the other
12 meetings are available on the web sites. The ACRS
13 transcripts are available at the ACRS portion of the
14 web site, and I believe if you do a word search on the
15 web site for various -- whatever topic you're
16 interested in, MOX or ballooning or fuel, you would
17 find these documents. They can be searched by words.

18 MR. REPKA: Judge Baratta, I would just
19 add to that. We cited one document in our brief which
20 was the very first paper that we know of in which the
21 France presented the results of the VERCORS tests,
22 that was the 1999 NURETH9 meeting paper, and that
23 document, as we said in our papers, was available and
24 would be available at the American Nuclear Society web
25 site, ANS, and certainly would be available to any

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1 expert in the field.

2 JUDGE BARATTA: Thank you.

3 MS. CURRAN: I guess I'll address that in
4 my reply.

5 CHAIR YOUNG: Pardon?

6 MS. CURRAN: I have a comment on that, but
7 I guess I'll wait until my reply.

8 MS. UTTAL: Judge Baratta, just one more
9 thing. The ACRS -- various ACRS transcripts and some
10 other documents can be found on ADAMS by searching the
11 term MOX, and you will come up with all the publicly
12 available documents.

13 JUDGE ELLEMAN: I hope I'm correctly
14 paraphrasing Ms. Curran's earlier comment but I
15 thought I heard her say that sometimes older technical
16 data can combine with new technical data to provide
17 insights that you maybe didn't have earlier or people
18 can present things in different ways that allow you to
19 perceive the significance of them in a different light
20 than what you might have earlier. And I guess what
21 I'm hearing from both NRC and from Mr. Repka at Duke
22 is that all of those insights and thoughts should have
23 been there at a much earlier time than what they were
24 perceived by BREDL. But on the point, though, that
25 insights can often come well after the basic data have

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1 been made available, would either of you want to offer
2 any further comments or perspectives on that
3 particular point?

4 MR. REPKA: I guess the question becomes
5 is whose insight is it? And, number one, my response
6 is that in October 2003 IRSN really wasn't offering
7 anything that they hadn't offered before in terms of
8 insights. The data was available, and maybe it had
9 not been presented in exactly the same checklist
10 format, but certainly the data and the issues had been
11 presented at the earlier meetings. Beyond that I
12 think really the obligation is at some point is on the
13 Petitioner to say that if there is some new insight to
14 be had, could they have had that insight themselves
15 and put two and two together on the original filing
16 deadline versus the later, and I think that's the
17 burden of the Petitioner, and that's really not what
18 -- that's what's not been met here.

19 Again, IRSN is not presenting anything new
20 in terms of data, information, issue that says, "Ah,
21 that's a new issue." It's just a continuation of the
22 same issue, and we think, certainly, if there was
23 these contentions, given what they are, could have
24 been raised in a timely fashion.

25 CHAIR YOUNG: Just one question on the

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1 factor relating to the sound record. I understand you
2 to be saying that Dr. Lyman has not provided anything
3 new himself and that this information was available
4 earlier in any event. Looking at the sound record
5 issue purely from the standpoint of the information
6 that whenever it was available is presented in most
7 recently October 2003, could you speak to, and all of
8 you can, and you may be doing this more in your
9 arguments this afternoon, to the question of whether
10 that information is the kind of information that
11 should be included to make a sound record on decisions
12 relating to the use of MOX fuel?

13 MR. REPKA: And the answer to that is, no,
14 it does not need to be included, and we'll get to the
15 specifics of that when we talk about the bases for
16 these various contentions. Beyond that I would say
17 the mere fact that IRSN has a research proposal that's
18 what's being presented here.

19 CHAIR YOUNG: Well, what I wanted you to
20 speak to is all the information that you have been
21 referring to that went into that, that came from
22 earlier studies and tests and so forth.

23 MR. REPKA: Right, and we'll get into why
24 that doesn't create a real issue for what's being
25 proposed here. That's the basis.

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1 CHAIR YOUNG: And so you can save that for
2 this afternoon.

3 MR. REPKA: Right, I will save that. And
4 then beyond that I'm just saying that the additional
5 point is to try to make an argument out of that issue
6 one would need to have some expertise in, a, the
7 particular tests, the results of those tests, the test
8 conditions, something about the fuel design, the
9 microstructure, the LOCA analyses themselves which are
10 an issue, and we don't see anything in these proposed
11 late file contentions that would suggest any
12 particular expertise with respect to any of those. We
13 have a broad statement only that Dr. Lyman is an
14 expert.

15 CHAIR YOUNG: Anything to add on the
16 record?

17 MS. UTTAL: I have nothing.

18 CHAIR YOUNG: Okay. Do you want to give
19 a brief reply and then we'll break for lunch.

20 MS. CURRAN: I know I read the quote in
21 many cases that there is an iron clad obligation to
22 review the license application and publicly available
23 documents. It's my understanding, and I don't have
24 these cases in front of me, that the most important
25 part of that iron clad obligation is the application

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1 itself and the correspondence and documents that
2 relate to the application, and we certainly have done
3 that.

4 The question is when you get into the
5 great body of information that's available publicly
6 regarding an issue is an intervenor like BREDL -- is
7 a person whose job is to monitor nuclear safety issues
8 responsible for the entire universe of papers that
9 might have been delivered over the last five years
10 regarding a particular topic? I think you have to
11 apply a certain amount of judgment to this.

12 Certainly, we have to read everything that
13 is in a docket of this application and make sure that
14 we have applied that here in the drafting of
15 contentions, but we're talking about meetings on
16 general topics that took place before this case began,
17 before Dr. Lyman began to work on this case, and
18 there's just a certain limit to what one person can
19 find in the great body of NRC literature.

20 But setting that aside, setting that
21 aside, we have made the case that even -- and Dr.
22 Lyman doesn't remember whether he was at a meeting on
23 a particular day that addressed a particular topic two
24 years ago and shouldn't be required to remember that,
25 and the fact that he might have been at some part of

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1 a meeting doesn't establish that he was there and
2 heard it at all. But in any event, I don't think that
3 that requirement is meant to require somebody in his
4 position to remember everything they read, every
5 meeting they went to that might be relevant to this.

6 In this case, there was a very timely,
7 very focused meeting between the NRC staff and the
8 IRSN that had to do with the exact subject matter of
9 this proceeding, and we raised that as quickly as
10 possible after the meeting was held and we could get
11 our hands on official copies of these handouts that
12 were given out. So I think you have to look at that
13 responsibility to review documents in a light of
14 reasonableness.

15 In listening to Mr. Repka's argument, he
16 said several times that the seminal event in the --
17 that's related to the IRSN presentation in October
18 2003 is the testing that was done in 1998 at VERCORS.
19 That's only true with respect to part of that report,
20 and it's only partially true. So the report that was
21 presented in October 2003, the report that is attached
22 to our contention is a report that puts together two
23 pieces of information. One piece of information is
24 about LOCAs and the other information is about severe
25 accidents. The RT2 test and the RT7 test did not

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1 relate to LOCAs, they're totally unrelated. So if you
2 look at the handouts, there's some pages that are
3 devoted only to severe accidents. Now, that aspect of
4 the presentation does relate back to the VERCORS
5 tests, but, as we submit, there is additional
6 information, additional understanding that the
7 presenters brought to bear on that data. It wasn't
8 just the presentation of the data, it was additional
9 understanding of phenomenology of severe accidents as
10 it relates to plutonium fuel that's presented on Page
11 6 of the viewgraphs. That's the severe accident
12 summary on the viewgraphs.

13 Now, the pages that relate to the LOCAs
14 come after that, and they are completely unrelated to
15 the VERCORS tests. The VERCORS tests didn't show
16 anything about LOCAs and Mr. Repka said that himself.
17 It's a completely different set of information. That
18 just needs to be clarified.

19 I think -- I can't remember which attorney
20 argued but someone argued that there was significant
21 information available on M5 cladding in an NRC topical
22 report from the year 2000 that, I guess, they're
23 arguing we should have been able to use that
24 information and prepare a timely contention. But it's
25 important to recognize here that whereas there may

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1 have been work done on the M5 cladding, there are two
2 factors that have to be borne in mind. First of all,
3 there was additional work done on the M5 cladding in
4 2002 and maybe 2003, which is listed in the list of
5 reference documents to the IRSN viewgraphs.

6 But also very important any work that may
7 have been done on M5 cladding in 2000 would not have
8 addressed the issue of fuel relocation in a LOCA
9 because that issue had been dropped by the NRC staff.
10 That was Generic Safety Issue-92, which was looked at
11 and then -- it was looked at and I think it was in
12 1998 it was dropped. So whether or not there's been
13 some research on M5 cladding with respect to -- strike
14 what I just said, that sentence I just started. So
15 the NRC safety approval would not have addressed
16 ballooning as a result of fuel relocation -- no, I'm
17 sorry, that's wrong too.

18 CHAIR YOUNG: Would it be simpler to just
19 have Dr. Lyman say what it did not address?

20 DR. LYMAN: Simply, one of the issues that
21 we raised, which was the relationship between the
22 ballooning properties of advanced cladding and the
23 impact on fuel relocation during LOCA, was not
24 addressed in the NRC staff safety evaluation of M5
25 cladding, because there is no requirement right now in

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1 regulations to evaluate fuel relocation, partly
2 because the issue was dropped, which turns out to be
3 erroneously in 1999. So some of the issues that we
4 are raising would not have been evaluated in the
5 context of that approval.

6 MR. REPKA: Judge Young, may we respond to
7 that point?

8 CHAIR YOUNG: Yes, but let her finish and
9 let's try to wrap up both the reply, and then we'll
10 give you a minute to respond just to that point. I
11 know we're going to get into some of these things
12 again this afternoon, so to the degree that we can
13 avoid duplication, let's do that too.

14 MS. CURRAN: Okay. I'd just like to make
15 one or two more points. First of all, some arguments
16 have been made that BREDL doesn't have the ability to
17 contribute to the development of a sound record or
18 hasn't made a strong enough showing on that because we
19 haven't submitted the summary or details of Dr.
20 Lyman's testimony, but I think it was interesting that
21 at a couple instances in the argument made by Duke and
22 the NRC staff it was stated that some of this
23 information that the staff and Duke think we should
24 have been able to raise a timely contention on is
25 proprietary or not available to us. For instance, the

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1 reference documents in the IRSN viewgraphs from
2 October 23 appear to be, at least some of them,
3 private papers to which we may have no access. Some
4 of the information that Duke referred to is
5 proprietary information. That is information that we
6 would have to get access to in the course of
7 discovery. There's a certain amount of development of
8 a case here that's required, and I don't think Dr.
9 Lyman should be basically asked to go off half-cocked
10 without seeing what the record actually is on what he
11 should base his testimony.

12 CHAIR YOUNG: Do you want to address the
13 expertise issue that I think Mr. Repka raised?

14 MS. CURRAN: Well, plutonium fuel and its
15 characteristics and behavior under accident conditions
16 is something that Dr. Lyman has been studying for
17 years, and we believe that he is eminently qualified
18 by training, by experience to address these issues in
19 testimony. This is part of the work that he does,
20 that he has spent quite a bit of time on and has a
21 great deal of general knowledge and experience with.
22 So he seems to us to be a particularly well qualified
23 person to testify on these issues.

24 I guess Mr. Repka made an argument that if
25 Dr. Lyman was so qualified, why wasn't he aware of all

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1 the various papers that have been presented and their
2 details. But I think you have to bear in mind that
3 Dr. Lyman is one of a handful of public interest
4 scientist whose job is to monitor nuclear safety
5 issues as they relate to the whole spectrum of what
6 goes on in the United States, and to say that he
7 should be familiar with every single paper that's been
8 written on a continuing basis is just, I think, asking
9 a very unreasonable -- putting into a very
10 unreasonable standard. And, certainly, some of these
11 papers that are referenced in the IRSN viewgraphs are
12 papers that were delivered at closed meetings, they're
13 not public papers, they're not things to which Dr.
14 Lyman would have easy access. ANS papers fall under
15 the same category. One has to pay for them. Dr.
16 Lyman works for a public interest organization. He
17 doesn't have enormous resources at his disposal to buy
18 every paper that's been written about a subject that's
19 of interest to him.

20 I just want to make one more comment about
21 the development of a sound record. It seems to me
22 that there isn't any criterion in this late filing
23 standard that specifically addresses the significance
24 of the safety issues involved, which is different
25 from, say, the standard for reopening the record. But

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1 perhaps the standard development of a sound record
2 comes close to that because really what the Licensing
3 Board needs to do is provide an assurance that
4 legitimately contested issues will be resolved before
5 a licensing action goes ahead. And we think we've
6 made a strong case that there are significant
7 questions that have not been addressed about the
8 safety of using plutonium fuel in this reactor and
9 that deserve to be addressed. We have come forward
10 with the expertise needed to investigate the issue
11 further and provide testimony and provide further
12 insight into this, and I think that should also be
13 weighed in the Board's consideration, the gravity of
14 the issues that are raised. That's all I have. Thank
15 you.

16 CHAIR YOUNG: One minute.

17 MR. REPKA: We just wanted to respond to
18 the one technical point about what was or was not in
19 the Framatome topical report and the NRC's safety
20 evaluation report, and we just wanted to say that
21 ballooning is something that is addressed in there
22 with respect to the M5 cladding, and then ballooning
23 is also addressed in a LOCA analysis which would be
24 referenced in Duke's application.

25 DR. LYMAN: I'm sorry, but the point I was

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1 making was ballooning and fuel relocation is not an
2 issue that is currently considered in Appendix K.
3 That is the issue.

4 CHAIR YOUNG: All right. We can go one of
5 two ways, at least, and I want to ask all of you a
6 question now. We could take a shorter lunchtime and
7 come back and go through the contentions, the
8 arguments on the four contentions, or if the counsel
9 think that taking a more normal lunch hour would
10 enable you to make your arguments more concise, we
11 could go that way. I don't know whether that's
12 possible. It may be that it's better to just take the
13 short lunch hour, come back here at one and try to
14 make sure we have as much time as possible. Are there
15 any preferences or do any of you want to speak to
16 that, any of the three counsel?

17 MR. REPKA: We vote for the shorter lunch
18 break.

19 CHAIR YOUNG: Ms. Uttal, Mr. Fernandez?

20 MR. FERNANDEZ: That's fine with us.

21 MS. UTTAL: Just give me one moment.

22 CHAIR YOUNG: Because we are going to keep
23 you to time. We're going to be cutting you off this
24 afternoon, because we are going to finish at five
25 o'clock. They are going to kick us out if we don't.

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1 And then I guess I have a third question and that is
2 unless all of you are agreed that any one or more of
3 these four contentions are going to take significantly
4 longer, we would be probably inclined to just divide
5 up the time equally.

6 MS. CURRAN: Judge Young, BREDL would like
7 to take the full hour lunch break, partly because we
8 have logistical reasons for needing an hour, but I
9 also want to suggest that in our view the contentions
10 that require the most discussion and explanation are
11 the contentions that relate to the IRSN presentation,
12 Contentions 10, 11 and 12. I can't remember if that's
13 it or maybe there's one more. But the NEPA contention
14 relating to transport of plutonium fuel, if time for
15 that had to be reduced significantly, my feeling is
16 that we've made our case adequately on the papers and
17 that there's not much more that needs to be said
18 there. I would like to focus the time on these more
19 complicated contentions that have to do with plutonium
20 fuel characteristics.

21 CHAIR YOUNG: All right. We'll
22 compromise. Come back at 1:15 and we will have a
23 schedule for you at that time so that you'll be able
24 -- everybody will be able to synchronize your watches
25 and follow the time.

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1 (Whereupon, the foregoing matter went off
2 the record at 12:21 p.m. and went back on
3 the record at 1:24 p.m.)

4 CHAIR YOUNG: I guess we can go back on
5 the record. Yes, let's do.

6 If we started at 1:30, let each party have
7 15 minutes -- BREDL 15 minutes, Duke 15 minutes, Staff
8 15 minutes -- and then BREDL rebuttal 15 more minutes,
9 we could do the first three in three hours, and the
10 last, if we let each person -- each party have seven
11 minutes, with seven-minute rebuttal, so there would be
12 equal times on each side -- let me just make sure this
13 is not the office. Yes, it is. Let's go off the
14 record for a minute.

15 (Whereupon, the proceedings in the
16 foregoing matter went off the record at
17 1:25 p.m. and went back on the record at
18 1:27 p.m.)

19 JUDGE BARATTA: Do you want to go on the
20 record or not?

21 CHAIR YOUNG: Yes, let's go on the record.

22 JUDGE BARATTA: Okay. I have a question
23 that -- it was a call concerning storage and such.
24 The two plans for -- yes, I want to say NSF, but it's
25 not -- NFS and BWX Technology -- those are classified

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1 at a level that would be consistent with an
2 L clearance, is that not correct?

3 MR. FERNANDEZ: That's correct.

4 JUDGE BARATTA: Okay. Thank you. That
5 was -- actually, that was the two questions --

6 CHAIR YOUNG: Okay.

7 JUDGE BARATTA: -- about each one. Thank
8 you.

9 CHAIR YOUNG: Anything else before we go
10 on into the argument on the four remaining -- four
11 contentions under the regular admissibility criteria?

12 All right. Then, we're going to stick to
13 these 15 minutes and maybe a little less, if we're
14 going to take any break at all today. We will try to
15 -- I think it might be a good idea for us, if we know
16 we have questions, ask them at the beginning, and we
17 have to feel free to interrupt. Otherwise, they're
18 not going to make their -- they're not going to be
19 able to fit into their 15 minutes.

20 So if you're talking about something that
21 -- something occurs to us that we want to ask, just
22 pardon us in advance. We may be interrupting.

23 MS. CURRAN: We're here to answer your
24 questions.

25 CHAIR YOUNG: We'll give you -- try to

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1 give you a five-minute warning. So with no further
2 ado, Ms. Curran, on Contention 10.

3 MS. CURRAN: Okay. Well, I'd like to
4 start with Duke. And there's a couple arguments that
5 Duke makes, starting on page 10 and going on to
6 page 11, that really relate to Contention 11, because
7 they have to do with the VERCOR's tests, which were
8 severe accident tests, and that's what is the subject
9 of Contention 11.

10 And that may have been in part because we
11 made a misleading reference in the wrong contention to
12 the severe accident analysis. So it makes sense to
13 just postpone the discussion of those couple arguments
14 until we get to Contention 11.

15 Okay. The first argument that is relevant
16 to Contention 10 appears on page 11 of Duke's
17 response. The argument is BREDL suggests that IRSN
18 supports a conclusion that fuel relocation would
19 affect a LOCA design basis analysis, and Duke argues
20 that the IRS sides do not make such a finding.

21 I think you just have to look at the IRS
22 and slides and judge for yourselves what they say.
23 They show a problem. They don't suggest that this
24 might be the case. They describe a concrete problem
25 that there are -- there is information about the

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1 characteristics of the cladding and fuel in a LOCA
2 accident that shows that this poses a risk that was
3 previously not considered. So it's just simply not
4 correct to say that IRSN merely speculates.

5 I also want to point out that at pages 2
6 to 3 of the contention, where the contention discusses
7 the increases in peak clad temperature, which were
8 stated at the meeting, the October 23rd meeting, to be
9 100 degrees Centigrade higher, clad oxidation stated
10 at the meeting to be a five to 10 percent increase in
11 the oxide layer, and clad hydrogen uptake -- these
12 were all assertions that were made at the meeting by
13 the presenters of the information.

14 This is concrete information showing
15 different increases in adverse conditions, and this is
16 attested to by Dr. Lyman, who supports the contention.
17 The contention is based on what he heard at this
18 meeting.

19 Okay. Then Duke says that --

20 JUDGE BARATTA: Could I interrupt?

21 MS. CURRAN: Oh, sure.

22 JUDGE BARATTA: I apologize for
23 interrupting. You said what he heard. In other
24 words, it is not -- it is information that was not on
25 the slide that was made -- given during the

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1 presentation. Is that what --

2 MS. CURRAN: Yes. The information about
3 the 100 degrees higher temperature and the five to 10
4 percent increase in the oxide layer and clad hydrogen
5 uptake, I don't believe that's on the slides
6 themselves. That was described in the meeting.

7 JUDGE BARATTA: Thank you.

8 MS. CURRAN: Then, Duke argues at page 11
9 that fuel relocation during a LOCA is not a new issue.
10 It was raised in Generic Safety Issue 92, which was
11 dropped on the basis that there was insufficient risk-
12 based justification for starting a major rereview.

13 Okay. And that is the issue I had
14 mentioned a few times earlier that I wanted to get
15 back to. Yes, it was dropped. It was dropped in
16 1998, but the Staff has since reconsidered that
17 perhaps it should not have been dropped. And I would
18 like to pass out some documents that reflect that.

19 Okay. These are three -- I'd like to
20 identify these three documents for the record. The
21 first is a February 8, 2001, memorandum from Ralph
22 Meyer, M-E-Y-E-R, Senior Technical Advisor, Safety
23 Margins and Systems Analysis Branch, Division of
24 Systems Analysis and Regulatory Effectiveness, Office
25 of Nuclear Regulatory Research. The subject is

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1 "Update on Generic Issue 92: Fuel Crumbling During
2 LOCA."

3 And I included this one because it's the
4 most succinct summary of the issue, where Mr. Meyer
5 says that in his view there has been an error in the
6 dropping of Generic Safety Issue 92.

7 The second document is a June 20, 2002,
8 memorandum from Ashok, A-S-H-O-K, C. Thadani, T-H-A-D-
9 A-N-I, Director of the Office of Nuclear Regulatory
10 Research, to Samuel J. Collins, Director of Office of
11 Nuclear Reactor Regulation, Subject: Research
12 Information Letter 0202, Revision of 10 CFR 50.46 and
13 Appendix K.

14 If you turn to page 3 of this memorandum,
15 it describes a recommendation by -- in a SECY paper
16 for an assessment of recognized non-conservatisms
17 associated with Appendix K. And one of these relates
18 to fuel relocation following cladding swelling during
19 a temperature transient. And it refers to an
20 Attachment 4, which is the third document that's
21 attached here.

22 And Attachment 4 goes into more detail
23 regarding the subject of fuel relocation. And I just
24 refer you to the discussion on page 5.

25 MR. FERNANDEZ: Your Honor?

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1 CHAIR YOUNG: Yes.

2 MR. FERNANDEZ: We don't have a copy of
3 that yet. We got a copy of --

4 MS. CURRAN: Oh, you don't?

5 MR. FERNANDEZ: No.

6 MS. CURRAN: Oh, I'm sorry. Let me --

7 MR. FERNANDEZ: That's okay.

8 MS. CURRAN: -- give you one.

9 CHAIR YOUNG: Also, I'm going to give you
10 your five-minute warning.

11 MS. CURRAN: Okay. Well, at any rate,
12 this is just to say that fuel relocation is an issue
13 with respect to uranium fuel. The Staff is
14 reconsidering having dropped it, and now it seems to
15 be back on the radar screen. And it's an even more
16 significant issue for plutonium fuel, because of the
17 higher energy level.

18 Okay. On page 13, Duke asserts that
19 substantial testing and evaluation of M5 cladding has
20 been previously conducted. But a couple of points
21 about that. First, it was unirradiated cladding, and
22 what's being suggested here is testing of irradiated
23 cladding. I'm not sure of that, so I think I'll ask
24 to strike that.

25 The most important point is when the NRC

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1 approved the M5 cladding they did not do -- they were
2 not looking at the issue of fuel relocation because
3 Generic Safety Issue 92 had been dropped. And these
4 things need to be looked at together. That's the
5 point of the -- one of the points of the IRSN
6 presentation.

7 Okay. There's no indication -- according
8 to Duke there's no indication that the ballooning
9 problem could lead to an unacceptable loss of core
10 coolable geometry. I think you have to look at the
11 document, and you can judge for yourself, from the
12 IRSN presentation, the weight of the information
13 that's presented there. It's actual information. It
14 is not just mere speculation.

15 CHAIR YOUNG: With regard to that -- and
16 I'm going to skip to the end and come back, but just
17 quickly -- the last thing that Duke argues on page 15,
18 to counter your argument that integral LOCA MOX fuel
19 bundle tests -- that the application should be denied
20 until these tests are done would cause delay, and
21 talks about the chicken and egg problem of needing to
22 have actual irradiated fuel to conduct the test, could
23 you respond to that?

24 MS. CURRAN: Well, these tests could be
25 done in other reactors in France that are already

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1 licensed. There's no reason that that couldn't be
2 done --

3 CHAIR YOUNG: Okay.

4 MS. CURRAN: -- because the French are
5 proposing to do it at the Phebus reactor.

6 CHAIR YOUNG: Okay.

7 MS. CURRAN: But just in terms of -- it
8 raises the other issue that Duke has been pressing
9 here, which is there is a big hurry to get this
10 approval, because there are so many things that would
11 go wrong if it weren't issued right away. For one
12 thing, that this international agreement will
13 collapse.

14 Well, the U.S. State Department has not
15 renewed the agreement with the Russians. Right now,
16 the agreement has lapsed, so there is no international
17 agreement that has to be protected at the moment.

18 And, second, the reason for the hurry to
19 get the fuel to the Cadarache plant in France is that
20 that plant is due -- would have been shut down
21 already, and is due to be shut down, because it's not
22 seismically qualified. So there's --

23 CHAIR YOUNG: Actually, there's a question
24 about that, and it may wait 'til Duke. But since
25 there's a separate export license proceeding, that

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1 might be something that parties could address in terms
2 of the relationship between the fuel fabrication and
3 the lead test assembly amendment. Go ahead and
4 just --

5 MS. CURRAN: I think just the bottom line
6 here is that there is other ways to do this, and that
7 some of the reasons that have been given to rush to do
8 it at this place and this timeframe are questionable
9 in our view.

10 CHAIR YOUNG: Mr. Repka?

11 MR. REPKA: Let me start at the beginning
12 on this particular contention, and then I want to come
13 back to that schedule issue.

14 CHAIR YOUNG: Okay.

15 MR. REPKA: First, turning to exactly what
16 this contention is, as modified this morning, I think
17 BREDL has made it very clear that the contention
18 focuses not on severe accidents but on LOCA and LOCA
19 analysis. So the postulate is that there will be
20 relocation at LOCA temperatures leading to blockage,
21 leading to problems with respect to the conservatism
22 of the Appendix K LOCA analysis. So, clearly, that's
23 the issue.

24 Now, the question before us is, is there
25 any basis offered with this contention for that

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1 particular scenario? And the first point we made in
2 our filing, the first couple of points, remain
3 perfectly applicable, which is the contention is based
4 fundamentally on the IRSN presentation and the IRSN
5 data, which is the VERCOR's test, which is a severe
6 accident test, which shows fuel relocation at
7 temperatures at about 3,900 degrees Fahrenheit up to
8 about 4,800 degrees Fahrenheit -- far in excess of
9 LOCA conditions.

10 So the IRSN presentation does not directly
11 address or support a concern that there will be fuel
12 relocation at LOCA temperatures. That's number one.

13 CHAIR YOUNG: But it raises the question,
14 doesn't it?

15 MR. REPKA: It raises the question because
16 they would like to research that issue, but it does
17 not have any specific basis for saying that that
18 effect would occur. So that's the point I'm making.
19 There is no test that says this phenomena will occur
20 at LOCA temperatures. There are tests that only show
21 fuel relocation at temperatures far, far in excess of
22 LOCA temperatures.

23 So, then, the next question becomes is,
24 what is the basis for asserting such effects? It
25 boils down to, on page 4 of the contention, is this

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1 hearsay statement that IRSN said at the meeting that
2 the parameters could increase peak clad temperature
3 stated at the meeting to be 100 degrees Centigrade
4 higher, and so on and so forth.

5 Those statements are not on the slides.
6 That's hearsay. BREDL does not offer any of its own
7 tests or any of its own evidence to support those
8 statements, so it's entirely a hearsay assertion based
9 upon what was purportedly said at the meeting.

10 CHAIR YOUNG: You're not arguing that we
11 should start applying the Rules of Evidence now, are
12 you?

13 MR. REPKA: No. But I think what you need
14 to apply is the rule of, is there a basis for the
15 contention that this is going to happen? And when you
16 look at what's been presented, you have an IRSN slide
17 show, and plus this statement of what IRSN said, and
18 that's it.

19 And what I'm saying is the slide show
20 doesn't make these statements, and we have nothing but
21 hearsay to say that they -- that it would have this
22 effect. That's insufficient basis, in my estimation,
23 particularly given that it's very clear that the IRSN
24 presentation relates -- does not relate to any testing
25 at LOCA temperatures.

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1 So there can be no test data to support
2 these hearsay conclusions, and there are no test data
3 to support those conclusions.

4 In fact -- we'll get to this in the severe
5 accident test -- that the VERCOR's tests themselves
6 included at least two tests, one of which didn't show
7 the fuel location at the lower, albeit almost 4,000
8 degrees, temperature than the RT2 test did. So we
9 really don't have anything there.

10 Now --

11 JUDGE BARATTA: Can I interrupt you and
12 ask a question?

13 MR. REPKA: Sure.

14 JUDGE BARATTA: It seems that fundamental
15 to your argument is the adequacy of the database, and
16 that there's a dispute over what the database may say
17 in one regard, but also a dispute over is the database
18 adequate enough so that there's reasonable certainty
19 that we're able to predict the behavior of this fuel
20 in Catawba or some other reactor. Is that --

21 MR. REPKA: I think that's a fair
22 statement. The assertion of the contention is that
23 there is a gap in the experimental database, and that
24 gap undermines its reasonable assurance. I think
25 that's a fair statement of what the contention says.

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1 JUDGE BARATTA: And it really deals with
2 the MOX properties I guess is the -- what the database
3 does -- is lacking in. Is that also a reasonable
4 statement? In other words, that's the database we're
5 looking at, the MOX properties under operating
6 conditions or accident conditions.

7 MR. REPKA: Presumably, that's what
8 they're referring to.

9 JUDGE BARATTA: And the last question I
10 wanted to ask was that your statement concerned the
11 actual experimental data that was obtained from these
12 tests. And I guess the question -- I don't know where
13 this statement came from, the 100 degrees and such,
14 other than what Dr. Lyman has asserted. And I have no
15 reason to dispute that.

16 But I guess is it possible that it could
17 have been a conclusion -- an extrapolation from the
18 data that was given at the -- by the researchers, not
19 by Dr. Lyman, by the researchers based on their tests?

20 MR. REPKA: Again, it couldn't be an
21 extrapolation based on the tests that they did,
22 because the tests are completely -- the tests were for
23 the purposes of assessing source term releases at
24 severe accident conditions. And there's no way to
25 extrapolate that particular conclusion about peak clad

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1 temperature from those tests.

2 Why they said what they said, or if they
3 said what they said, is something that we can't
4 verify. But there is certainly no testing in the IRSN
5 presentation from which you could extrapolate that as
6 a conclusion.

7 Now, having agreed that the contention is
8 one of -- is an assertion that the database is
9 insufficient to undermine a reasonable assurance
10 finding. We believe that that contention needs to be
11 looked at in context here, and that's why we cited
12 many of the factors that we did, number one which of
13 course would be the substantial database and operating
14 history with MOX fuel, the fact that the regulators
15 themselves in France haven't seen this -- the
16 possibility of these changes in peak clad temperatures
17 or other effects during a LOCA analysis as sufficient
18 to make them take any regulatory action with respect
19 to this issue at LOCA temperatures.

20 I think those are equally significant to
21 this hearsay statement to assessing whether there's
22 any basis for a real concern on this point.

23 CHAIR YOUNG: But isn't there a dispute,
24 and aren't you really sort of getting to the merits
25 there?

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1 MR. REPKA: No. I think it's really a
2 question of assessing the basis. And here again,
3 we're -- the contention takes severe accident testing
4 and is saying there's a concern at LOCA temperatures.
5 And our point is: what's the basis for that concern?
6 What's the basis for concluding that there is a real
7 issue at LOCA temperatures, and we don't see that.
8 And, in fact, what we see is -- is substantial
9 evidence that suggests just the opposite.

10 Now, an additional point on that is, of
11 course, that the Generic Safety Issue which related to
12 the hypothetical possibility of fuel relocation at
13 LOCA temperatures was dropped by the NRC as of
14 insignificant -- of not sufficient significance. That
15 remains the NRC's official position on that issue.

16 Counsel handed out this morning a couple
17 of items that are intended to undercut that
18 conclusion. I wanted to respond to those.

19 With respect to the February 8, 2001,
20 letter, that reflects the opinion of one individual.
21 It doesn't reflect the position of the NRC Staff.

22 With respect to the June 20, 2002,
23 memorandum, this I think raises a very important
24 point. The possibility of fuel relocation at LOCA
25 temperatures is not a new issue, as we said. It's not

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1 -- it was raised in GSI 92. It's been raised in other
2 contexts, so it's not a new issue.

3 This further confirms I think the point we
4 made this morning about good cause, but beyond that
5 the -- the fact of that issue is that in the
6 Appendix K model and the LOCA modeling there are
7 substantial margins and substantial conservatisms,
8 including things related to the heat transferability
9 and what would happen with relocation.

10 And without getting into the merits, but
11 just to explain what's going on here, the assumption
12 has always been, based upon the experimental record
13 and other factors, is that there is sufficient
14 conservatism in the Appendix K model.

15 What Mr. Thadani is saying in this
16 June 20, 2002, memorandum, this relates to the NRC's
17 ongoing look at revising Appendix K as part of its
18 risk-informing improvement of the regulatory process.
19 And in that context he explains that if -- if the NRC
20 were to undertake a reanalysis/revision of Appendix K,
21 one of the things that they would --

22 CHAIR YOUNG: Can you point us where?

23 MR. REPKA: On page 2 of the cover memo,
24 the last full paragraph on the page begins, "As known
25 conservatism is removed from Appendix K, there is the

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1 possibility that overall results produced by the
2 revised Appendix K evaluation models might become non-
3 conservative."

4 And what he's referring to and goes on to
5 refer to here is that fuel relocation at LOCA
6 temperatures is one of those things that would need to
7 be looked at. As you remove margin, you need to look
8 at this issue. But under the current Appendix K,
9 which is what this particular application is being
10 subjected to, there is sufficient margin. There is no
11 margin in Appendix K that's being removed.

12 So the fact that Mr. Thadani said this is
13 not to say that there is an issue now. It's to say
14 that if we were to apply something other than
15 Appendix K this is a factor we would need to look at.

16 So this particular memorandum is
17 completely inapposite in establishing a current issue
18 with respect to licensing under the current
19 Appendix K.

20 CHAIR YOUNG: You've got five minutes.

21 MR. REPKA: The next thing I wanted to
22 respond to was the statement related to -- there is
23 some discussion again of the effects of M5 cladding,
24 whether this could exacerbate fuel relocation at LOCA
25 temperatures.

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1 Again, we've talked about the fact earlier
2 that substantial information is available on M5
3 cladding. It has been reviewed and approved by the
4 NRC. It has been used in reactors, both in Europe and
5 domestically.

6 The important point that -- the
7 speculation in this contention is that M5 cladding
8 might result in bigger balloons because of increased
9 ductility. However, if one really looks at the
10 documents on M5 cladding, you would find that the
11 bounding state of the M5 cladding is the unirradiated
12 state, maximum ductility.

13 And as it's irradiated, the ductility
14 actually decreases. And although its ductility may be
15 greater than other zircalloy claddings once it has
16 been irradiated, its ductility, and, therefore, the
17 potential for ballooning, is less than in the
18 unirradiated state.

19 And I say that all as background because
20 the point is in the LOCA analyses and in the approvals
21 of M5 cladding it's the unirradiated state that's
22 used. So there's -- the effect of M5 cladding
23 relative to other clad designs is already bounded in
24 the LOCA analysis and in the approved M5 cladding
25 design.

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1 So this is -- to say that there's some
2 further effect related to the cladding and some
3 increased ballooning is -- number one, it's just
4 wrong. And, number two, it's blatantly speculative,
5 because, again, there is no data that supports that
6 conclusion.

7 Then, the next point to make about that is
8 in a LOCA analysis -- again, even if there is some
9 ballooning effect, that is modeled in a LOCA analysis.
10 And there has been no showing in this contention, no
11 basis for any assertion that the LOCA analysis results
12 would be any different, that this speculative concern
13 about LOCA heating leading to an uncontrolled core
14 melt is entirely speculation. It's entirely an
15 assertion and a contention.

16 There is nothing in the IRSN report that
17 says that. They didn't look at that issue. So if
18 that's the basis for the contention, there is none.
19 And if it's because Dr. Lyman says that's going to
20 happen, he hasn't provided any basis for that, where
21 I think the particular expertise in LOCA analysis he
22 would need to support such an assertion in order to
23 say there's a legitimate dispute on that point.

24 CHAIR YOUNG: You're just about to 15
25 minutes. Now sometimes the Staff doesn't take as much

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1 time, so if you want to --

2 MR. REPKA: I don't think I really have a
3 whole lot more to say. I think the bottom line is on
4 this -- this particular contention, like the others,
5 based on the IRSN presentation, is that that
6 presentation is, quite frankly, being oversold. It's
7 being presented as something that it's not.

8 It is -- as we discussed before, it's a
9 research proposal. It's something that the French
10 regulators haven't seen fit to take any particular
11 with respect to MOX fuel. And, again, it relates to
12 a fundamentally different issue, which is the severe
13 accident releases, than what this particular
14 Contention 10 relates to, which is LOCA effects.

15 If you'll give me 15 seconds, I just want
16 to consult and see if there's anything more to say.

17 CHAIR YOUNG: Well, I think the Staff said
18 they'd cede you some time, so you're welcome to use
19 it.

20 MR. REPKA: Yes. Mr. Nesbit reminds me I
21 should say something about the point about schedule
22 and --

23 CHAIR YOUNG: Thank you. Yes. I was --

24 MR. REPKA: Again, the international
25 agreement on plutonium disposition does remain in

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1 effect. It's a 2001 agreement. The schedule for this
2 particular amendment is tied very much to the export
3 license application, and it's tied to the closure of
4 Cadarache.

5 Now, obviously, the seismic design of
6 Cadarache isn't an issue before us here today. That's
7 something for the French regulators, and they have
8 undertaken to manufacture this fuel as, in effect, the
9 last fabrication at Cadarache, and --

10 CHAIR YOUNG: But what my question is
11 really directed toward is if the export license is
12 proceeding as it is along a separate path, and that
13 can go into effect without -- separately and apart
14 from anything that happens in this proceeding, so I'm
15 not following how --

16 MR. REPKA: Okay.

17 CHAIR YOUNG: -- we are tied in our timing
18 to the -- what happens in the export license
19 proceeding.

20 MR. REPKA: I understand. That's a good
21 question. And there is a tie, and let me try to
22 explain it. And it's particularly -- this is
23 something that's particularly important to the
24 Department of Energy.

25 The tie is this -- the fuel needs to be

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1 manufactured by a particular date and shipped back in
2 order to support: a) the closure of Cadarache, and
3 b) the use at Catawba in the spring. The shipping --

4 CHAIR YOUNG: Is it just that they don't
5 want --

6 MR. REPKA: -- the export --

7 CHAIR YOUNG: -- to do it unless they're
8 sure we're going to --

9 MR. REPKA: That's the issue. The export
10 is due in August. To meet that schedule they need --
11 the Department of Energy needs to export the feed
12 material by August of '03. If they do not want to do
13 that, if they don't have assurance that we -- Duke --
14 will have the lead assembly application, because they
15 do not want to arbitrarily ship the material.

16 CHAIR YOUNG: And what date in August are
17 you talking about?

18 MR. REPKA: I think the date is just
19 August, and the actual -- yes, Mr. Nesbit points out
20 the actual shipment date is classified.

21 CHAIR YOUNG: Anything further?

22 Okay. Now, the Staff has five minutes.

23 (Laughter.)

24 MS. UTTAL: Well, I don't even think I'll
25 fill the five minutes.

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1 Regarding this June 20th memo from
2 Thadani, I think that Mr. Repka was essentially right.
3 The Staff was talking about possible amendment to
4 50.46 and Appendix K, in order to remove some known
5 conservatisms. And if they remove the conservatisms,
6 then they would have to watch for the non-
7 conservatisms. But the rule was not changed, and the
8 Appendix was not changed, and the conservatisms still
9 exist. And so that the rule was the same, and nothing
10 has changed.

11 Regarding the database on relocation,
12 there is a large database on relocation as it relates
13 to LEU fuel. It is not a new topic. It has been
14 discussed with the Staff and with the industry. So
15 there is a large database out there regarding
16 relocation.

17 That's all I have.

18 JUDGE BARATTA: Yes. I just wanted to
19 clarify who Ralph Meyer is.

20 MS. UTTAL: Ralph Meyer is in Research.
21 Yes, he's in RES. He's the Senior Advisory.

22 JUDGE BARATTA: Do you know what his
23 specialty is?

24 MS. UTTAL: I believe it's fuel, but I'm
25 not -- do you --

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1 MR. AKSTULEWICZ: Yes. He's the Agency's
2 senior-level advisor on fuels.

3 JUDGE BARATTA: Okay. So while it's true
4 that the memo expresses his opinion, then his
5 expertise, though, is in that area, so --

6 MS. UTTAL: Yes, it is. And I believe --
7 I don't know what's going to happen with GI-92. But
8 as indicated by the memo, they're waiting for the
9 results from the Halden experiment.

10 JUDGE BARATTA: Thank you for clarifying
11 that.

12 CHAIR YOUNG: I was mistaken before. I
13 was reading the clock backwards. You have a few more
14 minutes, if you want to take them.

15 Do you have any questions?

16 MS. UTTAL: I know a few songs.

17 (Laughter.)

18 CHAIR YOUNG: If you're finished, then
19 we'll go back to you. And we're going to start your
20 15 minutes now, so we can maybe take a break at some
21 point, after the next contention maybe.

22 Do you want to ask your question first?
23 Maybe she can --

24 JUDGE ELLEMAN: Well, yes. Why don't I
25 get my question in now. At our request, NRC Staff and

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1 Duke supplied us with a list of references pertaining
2 to MOX fuel performance. And at least one of those
3 references strongly reinforces that the radiation
4 behavior of MOX is very dependent on the
5 microstructure of that fuel.

6 If the plutonium oxide is not well
7 dispersed, the fission products build up, are easily
8 released. If it is well dispersed, it behaves a lot
9 differently. Have you looked at all at how well the
10 MOX planned for the Catawba burn corresponds with the
11 microstructure of the MOX that was used in the French
12 test?

13 MS. CURRAN: Okay. Duke says that the
14 specs for the Catawba fuel will be identical to the
15 European fuel, except for the amount of plutonium in
16 the clusters, which is smaller because the amount of
17 plutonium 239 is greater. Is that --

18 JUDGE ELLEMAN: The clusters are smaller
19 because the U-239 --

20 MS. CURRAN: Well, the amount of plutonium
21 -- the total amount of plutonium in the clusters is
22 smaller, because the amount of plutonium 239 is
23 greater.

24 JUDGE ELLEMAN: Okay. Right off hand,
25 those seem in opposition to -- maybe I'm not

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1 following, then.

2 MS. CURRAN: The amount of fissile
3 plutonium is held constant.

4 JUDGE BARATTA: You're saying because this
5 is weapons-grade material the other -- the even
6 isotopes predominantly are greatly reduced --

7 MS. CURRAN: Yes.

8 JUDGE BARATTA: -- in the -- this material
9 vice the reactor material, which would have a higher
10 percentage, if you like, of the even isotopes. So as
11 a result, the amount of plutonium goes down, but the
12 amount of plutonium 239 is constant in both cases.
13 It's because you've got the other isotopes, etcetera.

14 JUDGE ELLEMAN: But you are saying that
15 the fuel characteristics planned for Catawba are quite
16 similar to the fuel characteristics or the
17 experimental studies carried out by the French.

18 MS. CURRAN: Yes, because it's the same
19 process.

20 Okay. I think it's really important to
21 disperse the clouds of confusion that Mr. Repka keeps
22 casting over this Contention 10, and also the IRSN
23 viewgraphs. And I don't know how I can cut through
24 this. But anyway, it's very clear to me when you look
25 at the viewgraphs there are two sections. One section

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1 relates to severe accidents. That section in turn
2 relates back to the RT2 test and the RT7 test.

3 The other section relates to LOCAs, which
4 has absolutely nothing to do with those severe
5 accident tests. Nothing. And there is a great deal
6 of information that is available regarding the
7 characteristics of the cladding and the fuel in a
8 LOCA, and that is what the LOCA section of this IRSN
9 presentation refers to.

10 If you turn to page 24, for instance,
11 right at the top there's a statement, "Corrosion and
12 hydrogen uptakes are lowered for modern clad alloys:
13 ductility is better kept. Lower the corrosion, lower
14 the associated hydrogen uptake, better the ductility,
15 bigger the balloons."

16 This is an observation about LOCAs. It
17 has nothing to do with the RT2 test. It has to do
18 with observations that have been made of how this
19 material behaves under LOCA conditions.

20 Same thing on page 25. There's a phrase
21 right at the top of the page, "Same tendency is
22 observed with low tin zirconium alloy: lower the tin
23 content, bigger the balloons." The word "observed" is
24 used. It has nothing to do with the tests that were
25 done at VERCOR in 1998.

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1 This entire contention -- this entire
2 section of the IRSN presentation has to do with what
3 IRSN had to say about the current state of knowledge
4 regarding the behavior of this cladding material and
5 plutonium fuel under LOCA conditions.

6 So that just needs to be understood very
7 clearly. The rest is -- it's a red herring.

8 CHAIR YOUNG: Just on clarifying, these
9 two pages -- 24 and 25 -- and the observations -- the
10 observation in one, is this something that was new
11 with the October presentation, this --

12 MS. CURRAN: Yes. In fact, if you look on
13 page 20 -- on page 24, in the middle of the page,
14 there is a small -- small type on the left where it
15 says, "See references 7 to 9." And then, on page 25,
16 right at the top of the graph -- of the chart it says,
17 "See references 8 and 10."

18 Well, if you go back to the list of
19 references, references 8 and 9 are references that
20 weren't even created until after the 2001 meeting,
21 which was the last place where LOCA conditions were
22 discussed, last relevant discussion.

23 The 2002 meeting has no relevance, but
24 these issues were -- these papers were written after
25 that 2001 meeting. Reference number 10 is an undated

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1 reference to unpublished IRSN results. Who knows when
2 they were created? But that may have also been after
3 the -- after 2002.

4 And, obviously, those results are not
5 referring to the severe accident test, because they
6 have nothing to do with this. They're referring to
7 some other studies that IRSN did of LOCA conditions,
8 completely different.

9 Now, you know, we were confused at the
10 beginning because IRSN used the word "relocation" for
11 both severe accident and LOCA conditions. But if you
12 read this carefully, you will see at the top of each
13 page there is either a reference to severe accidents
14 or LOCA pending issues.

15 These issues raised in Contention 10
16 relate to LOCA issues. They are based on known
17 information about characteristics of cladding and fuel
18 under LOCA conditions.

19 JUDGE ELLEMAN: And just to make sure I
20 heard your earlier comment, it is the text associated
21 with these viewgraphs that you have been unable to
22 secure and find in your efforts.

23 MS. CURRAN: The text?

24 JUDGE ELLEMAN: The text. These graphs go
25 with a text presentation. Was that not the text that

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1 you were unable to locate?

2 MS. CURRAN: No. I did say I think that
3 these references listed in the back of the viewgraphs
4 are likely to be privately-held documents that would
5 not be available to us. But we are only -- when the
6 meeting was held on October 23rd, it wasn't
7 transcribed.

8 JUDGE ELLEMAN: I see. Okay.

9 MS. CURRAN: This is the only paper that
10 was distributed. There was no --

11 JUDGE ELLEMAN: There is no text, then.

12 MS. CURRAN: There's no other text, other
13 than these viewgraphs, that was presented at that
14 meeting.

15 JUDGE ELLEMAN: Okay.

16 CHAIR YOUNG: And it wasn't videotaped or
17 anything like that?

18 MS. CURRAN: No, not to my knowledge. I
19 believe --

20 CHAIR YOUNG: You've got about five
21 minutes.

22 MS. CURRAN: -- at one point Mr. Repka
23 says that the contention and the IRSN presentation
24 speculates that the use of M5 cladding might result in
25 bigger balloons when, in fact, this is an observation

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1 that was made that's reported in the IRSN papers.
2 This is not speculation. This is simply observation.
3 These people were putting together what is known about
4 this material.

5 Okay. And then I'd just like to get to
6 the Generic Safety Issue for a minute. And I'd like
7 to direct your attention to Attachment 4. Now this is
8 the attachment to the June 2002 memo.

9 If you turn to Attachment 4, page 5, I'd
10 really like to ask you to focus on the third full
11 paragraph, which says, "The original resolution to
12 GI-92 included that fuel relocation was a non-
13 conservatism not appropriately accounted for by
14 Appendix K, but that the estimated effect on large
15 break LOCA peak cladding temperature of plus 46
16 degrees Fahrenheit was bounded by other analysis
17 conservatisms. In other words, the problem was
18 bounded.

19 Then, if you drop down lower in that
20 paragraph, it says, "More recent information suggests
21 that the fuel relocation effect on PCT," which is peak
22 cladding temperature, "may be significantly larger
23 than assumed in GI-92."

24 Fuel relocation during LOCA, therefore,
25 should be considered an Appendix K non-conservatism

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1 with at least a plus 46 Fahrenheit impact on PCT until
2 new data is available to help quantify the effect."
3 Now that's only relating to uranium fuel. That
4 doesn't even get to the question of, what is the
5 significance of this with respect to the higher energy
6 plutonium fuel.

7 This is the NRC saying -- the research arm
8 of the NRC saying, "This is not bounded by the
9 conservatisms that we thought bounded it, or we have
10 no basis for judging that it is." This seems to be
11 very -- to us this is extremely significant.

12 CHAIR YOUNG: Can you wrap up in about a
13 minute and a half?

14 MS. CURRAN: Okay. Mr. Repka said that
15 it's -- LOCA analyses have been done and ballooning
16 has been modeled. Again, want to point out that
17 whether or not ballooning is modeled, the important
18 issue for purposes of this contention is, has it been
19 modeled in connection with fuel relocation? Which it
20 has not, and that is what the IRSN presentation was
21 calling for -- an analysis of those phenomenon looked
22 at together.

23 JUDGE BARATTA: So you're saying it's the
24 synergistic effects of the ballooning and fuel
25 relocation -- LOCA fuel relocation that you're

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1 concerned about.

2 MS. CURRAN: Yes. I'm not sure I would
3 use the word "synergistic." But they're definitely
4 related. That might be the right word. I'm just not
5 sure.

6 JUDGE BARATTA: Okay. No, that's fine.
7 Okay. Thank you.

8 MS. CURRAN: So in other words, these
9 alleged -- this is a statement that the alleged
10 conservatisms that are used in Appendix K aren't
11 sufficient to cope with this problem.

12 CHAIR YOUNG: Just for informational
13 purposes, there have been references in here to the
14 resolution of the time, resolution of the issue,
15 through participation in an experimental program to be
16 conducted in the 2003/2004 timeframe. Does anyone
17 have any more information on that?

18 MS. UTTAL: No.

19 MS. CURRAN: We don't. I don't think I
20 have anything to add on this.

21 JUDGE BARATTA: Would you agree with -- I
22 think I made a statement a little earlier about what
23 the real issue is on the -- it deals with the
24 uncertainty and inadequacies of the database, so that
25 we would have a reasonable level of confidence in our

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1 ability to predict and evaluate the behavior of this
2 fuel. Is that the critical issue?

3 MS. CURRAN: You know, it's interesting
4 because -- well, I think we used the word
5 "uncertainty." Uncertainty is kind of a technical
6 term with respect to severe accident analysis, but
7 here it's maybe more of a layman's term.

8 JUDGE BARATTA: I'm using it in this case
9 as more of --

10 MS. CURRAN: The unknowns -- in other
11 words, for example, that the NRC is no longer able to
12 say that there -- any analysis of fuel relocation
13 would be conservative, even for uranium fuel. So it's
14 an even more extreme situation for plutonium fuel.

15 The inability to be assured that one's
16 analysis which is required, a LOCA analysis is
17 required, to be assured that analysis is conservative,
18 that's a form of uncertainty, yes.

19 CHAIR YOUNG: It sounds like you're saying
20 the same thing.

21 JUDGE BARATTA: Yes.

22 CHAIR YOUNG: All right. Can we move on
23 to Contention 11?

24 MS. CURRAN: Okay. I'm going to go back
25 to page 10 of Duke's response, which is -- was

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1 submitted in response to Contention 10, but it's
2 really relevant to Contention 11.

3 One of his arguments is that the test --
4 there were two tests that were done in 1998. One was
5 RT2 and one was RT7. And, apparently, RT2 went one
6 way, and RT7 went another way. In RT2, the fuel
7 melted or slumped at a lower temperature, and in RT7
8 it didn't. And so according to Duke, we overstate the
9 importance of one comment -- in other words, of one
10 data point -- the RT2 data point.

11 But there's a couple of problems with this
12 argument. First of all, if you look at the
13 viewgraphs, I think it's the viewgraphs that I passed
14 out earlier that were used in the February 2002
15 meeting, those viewgraphs described the different
16 conditions that were imposed on these two different
17 tests. They weren't identical tests.

18 In one test the conditions were oxidizing,
19 and in the other tests the conditions were reducing.
20 And so we don't know what the effects of those
21 different conditions might be, but suffice it to say
22 these were not identical tests that went the opposite
23 direction.

24 The second point is two data points are
25 not sufficient from a statistical standpoint to draw

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1 a conclusion that this is no problem, even if -- even
2 if the tests were considered to be identical. That
3 the observation in the RT2 test is significant enough
4 to warrant further investigation, because what it
5 shows is that fuel will melt, potentially melt, at a
6 lower temperature -- the plutonium fuel will melt at
7 a lower temperature than what uranium fuel would melt
8 at.

9 And once the fuel melts, then, of course,
10 you're much closer to a runaway situation where it's
11 impossible to cool the core. It's a very serious,
12 severe accident condition.

13 I think the second argument that goes from
14 pages 10 to 11 is just an argument that the severe
15 accident data from the R2 test isn't applicable to a
16 LOCA test. And we're not asserting that it is, so I
17 don't think there's anything to be added there.

18 Let me just see if there's anything else.

19 Well, part of Duke's response has to do
20 with whether severe accidents have to be evaluated in
21 the context of a safety analysis. And for that I just
22 prefer to rest on the arguments that we made in the
23 last oral argument, which I think all sides
24 exhaustively debated, and I just refer the Board back
25 to that discussion.

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1 CHAIR YOUNG: Is this contention intended
2 to be limited to a safety context?

3 MS. CURRAN: Yes. The NEPA contention is
4 the next contention, Contention 12. So this went on
5 a -- we tried to separate them out legally.

6 CHAIR YOUNG: And is your purpose in
7 separating them out just simply to make sure you've
8 covered your bases, or is there some other particular
9 reason for separating them out?

10 MS. CURRAN: So that it's clear that there
11 are different legal requirements.

12 CHAIR YOUNG: But the substance --

13 MS. CURRAN: Yes.

14 CHAIR YOUNG: -- of them --

15 MS. CURRAN: The substance is the same.

16 CHAIR YOUNG: The substance is the same.

17 MS. CURRAN: Okay. On page 18, Duke takes
18 issue with our assertion that there will be higher
19 release rates and higher release fractions for both
20 fission products and actinides. But this is
21 confirmed, if you look at page 6 of the viewgraphs
22 that were submitted on October 23rd, there is a graph
23 of the test results from VERCOR.

24 And if you read the -- that graph shows
25 exactly what we're saying. At least with respect to

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1 fission products, there's higher release rates and
2 higher release fractions.

3 And Duke also disputes the significance of
4 this, because the portion of plutonium fuel during the
5 LTA testing is going to be so small in comparison to
6 the higher -- to the volume of the core. But what's
7 important to BREDL, and we think should be important
8 to the NRC, is because the release fraction would
9 increase, and because the releases would be earlier,
10 this would have effects on the numbers of deaths and
11 illnesses that would occur if there were a severe
12 accident at the plant.

13 And any number of additional deaths or
14 illnesses as a result of this -- of using plutonium
15 fuel in this plant in whatever quantity should be
16 taken into consideration as a significant safety
17 issue.

18 I don't have anything else.

19 CHAIR YOUNG: All right. Mr. Repka?

20 MR. REPKA: Contention 11 is a safety
21 contention challenging Section 3.8 of the license
22 amendment application. That's Duke's general risk
23 assessment that was included and that we discussed
24 last month.

25 Ms. Curran stated correctly that the

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1 initial issue right here is the fact that that risk
2 assessment is not required to meet current NRC
3 regulations related to safety analysis, and that
4 continues to be our position -- that the risk
5 assessment wasn't required, isn't required, and,
6 therefore, a challenge to that is not a material issue
7 in this proceeding. We could remove Section 3.8 of
8 the application, and this particular Contention 11
9 would be mooted. And that continues to be our
10 position.

11 Now, parsing through the rest of the
12 contention as written and putting that aside for the
13 moment, the assertion in the contention is that based
14 upon the IRSN proposal for additional testing at
15 Phebus, there is an assertion that the probability of
16 a severe accident will be increased and/or that the
17 consequences of a severe accident will be increased.

18 And let me look -- take a look at the
19 first question, the probability of a severe accident.
20 What that contention means and addresses is the LOCA
21 analysis again. Will the Catawba emergency core
22 cooling system be able to prevent a severe accident
23 with these four lead assemblies?

24 The bottom line is that's precisely the
25 same issue that's addressed in Contention 10 -- the

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1 adequacy of the design basis LOCA analysis. Stated
2 another way is, is that LOCA analysis insufficient to
3 assure that there will be no severe accident?

4 So with respect to that piece of the
5 Contention 11, it's no different from Contention 10.
6 And the basis is the same as Contention 10; it's the
7 IRSN presentation.

8 And our point on that remains that, number
9 one, IRSN did not present any particular data on LOCA
10 temperature. Number two, the contention doesn't
11 provide any particular information upon how these
12 concerns regarding potential fuel relocation at LOCA
13 temperature would not be -- would be impacted -- would
14 impact the LOCA analysis, how four lead assemblies
15 would make a difference in the LOCA analysis, and how
16 the conservatisms and margins already built into those
17 analyses would be insufficient.

18 There's no data, no basis for any
19 assertion that says that the LOCA analysis is
20 insufficient. But that's -- as I said before, that's
21 essentially the issue of Contention 10.

22 So then the next question raised by this
23 particular contention is with the -- let's just assume
24 that we have an inadequate emergency core cooling
25 system, and we're into -- beyond-design-basis severe

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1 accident. Would the consequences of that accident be
2 any different based upon what IRSN has put on a piece
3 of paper for the slide presentation in October?

4 Now, this contention then devolves quickly
5 into the same discussion that we had last month on the
6 similar beyond-design-basis issues. Ms. Curran argues
7 that the IRSN presentation supports the argument --
8 Dr. Lyman's argument that there will be higher release
9 rates and higher release fractions, and that this
10 would have an effect on offsite consequences.

11 In fact, his 2000 paper in which he did a
12 calculation of the consequences of severe accidents
13 for 40 percent MOX cores, which we discussed last
14 month, did reference the VERCOR's tests and already
15 conducted an analysis of the changes of consequences
16 of severe accidents using bounding considerations,
17 using conservative assumptions related to the release
18 fractions and the release rates.

19 So he has already done that. This isn't
20 saying anything more than what's said in the other
21 contentions. And as we discussed last month, his own
22 results scaled to four assemblies showed a 1.6 percent
23 result. We're back to the question of, is there
24 something significant here?

25 And statistically, from a risk assessment

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1 perspective, it's exactly the same as we discussed
2 with respect to those other contentions is, there is
3 nothing risk significant here. 1.6 percent doesn't
4 add up to anything that's risk significant or that
5 would inform the decisionmaking in any real way.

6 So the point is, IRSN doesn't add any new
7 basis, it doesn't add any new issue, and it's the same
8 as what we've already addressed, and it doesn't change
9 the result.

10 CHAIR YOUNG: Which contention was that
11 earlier one? Just if you have it on the tip of your
12 tongue.

13 MR. REPKA: I want to say that it was
14 within Contentions 1 to 3, which were the challenge to
15 Section 3.8, but I'd have to confirm that.

16 CHAIR YOUNG: Okay. Well --

17 MR. REPKA: It's a concern that undercuts
18 several of the contentions. But I think Contention 2
19 is the one where perhaps it's most directly raised.

20 CHAIR YOUNG: Thank you.

21 MR. REPKA: I think Ms. Curran has again
22 characterized the information in this IRSN
23 presentation on October of 2003 as new. I continue to
24 dispute that. I think that the 2001 presentation, as
25 pointed out this morning, has many of the same figures

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1 as what's actually used in the October 2003 related to
2 LOCA issues as well as severe accident issues.

3 If we look at page 5 of the contentions,
4 this is the basis for the contention. It states about
5 midway down, "Another part of the IRSN Phebus proposal
6 presented at the October meeting was a plan to address
7 uncertainties, phenomenon that could affect the
8 probabilities of severe accidents including the poor
9 performance of MOX fuel during a LOCA."

10 Again, there's no basis provided for that;
11 it's just a speculative remark. "Which could increase
12 the chance that the accident cannot be mitigated."
13 Again, there's no basis for that particular assertion,
14 that it could or would increase the chance,
15 particularly given the fact that we're talking about
16 only four assemblies.

17 And then, it lists some phenomenon that
18 could affect the consequences of severe accidents.
19 But, again, that's simply the higher release rates and
20 the higher release fractions that were already assumed
21 in the 2000 study, and that showed a risk-
22 insignificant increase in offsite consequences.

23 So, again, we have a contention that's
24 basically overselling a concern, a question, into an
25 assertion of fact. And there's no real dispute of

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1 fact that would lead to a different result in the
2 case.

3 I don't have anything further, unless
4 there's questions.

5 CHAIR YOUNG: Staff?

6 MS. UTTAL: Thank you.

7 CHAIR YOUNG: That was almost exactly 15
8 minutes. Very good. Nice work.

9 MR. REPKA: I knew that.

10 (Laughter.)

11 MS. UTTAL: I really don't have much to
12 add. The Petitioners are asking that the licensee
13 perform an analysis of severe accidents and safety
14 space. It's not required. Staff doesn't require it.
15 Therefore, there was no basis for this contention, and
16 it should be rejected.

17 I rely on previous arguments regarding
18 this issue, and both the Staff's briefs.

19 CHAIR YOUNG: Ms. Curran?

20 MS. CURRAN: I wonder if I could ask for
21 a five-minute break. I think it would help my answers
22 be more efficient with regard to the questions -- the
23 arguments of Dr. Lyman.

24 CHAIR YOUNG: Yes, let's do that. Let's
25 take about 10 minutes. And then, if you could -- I

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1 wrote down a number of questions, and I assume that
2 you did, too. So you'll be -- you'll go down and
3 respond to those questions, and then we'll just go
4 straight into 12 after that.

5 MS. CURRAN: I hope I wrote down the same
6 ones you did.

7 CHAIR YOUNG: Well, if you didn't, I'll
8 ask them.

9 JUDGE BARATTA: Now, in other words, this
10 is our break now, right?

11 CHAIR YOUNG: Yes.

12 JUDGE BARATTA: Okay.

13 CHAIR YOUNG: Is that all right with
14 everyone?

15 SEVERAL PARTICIPANTS: Sure.

16 CHAIR YOUNG: This will be our break.
17 Okay.

18 (Whereupon, the proceedings in the
19 foregoing matter went off the record at
20 2:37 p.m. and went back on the record at
21 3:02 p.m.)

22 CHAIR YOUNG: I just spoke with Judge
23 Bollwerk, the Chief Judge, and we talked about various
24 ways of approaching this.

25 Because of a situation that I'd heard

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1 earlier -- and I can't give you a cite -- but Judge
2 Bollwerk is not inclined to appoint someone just to
3 look at documents. The two alternatives would be to
4 reconstitute the Board either completely or separate
5 out the security issues and reconstitute the Board for
6 the rest of the proceeding, either for security issues
7 or for non-security issues or not, not to do it sort
8 of halfway by appointing someone to help us get over
9 this period of having to look at the documents and
10 rule on this motion, and then go back to the same
11 Board.

12 So another option that we're considering,
13 and we think might resolve this in the most efficient
14 way -- and it may not please everyone completely, but
15 we think it might move things forward overall more
16 efficiently than trying to get a new person up to
17 speed on this case who is not at all familiar with it.

18 And that is that Judge Baratta and I,
19 after talking with Judge Elleman tomorrow and today on
20 whatever we can look at today and tomorrow, which is
21 -- does not include the classified information, Judge
22 Baratta and I would then go ahead with the session
23 with you next week and rule on the Motion for
24 Extension with regard to all of the documents, except
25 the two classified documents.

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1 There are only two, correct?

2 MR. FERNANDEZ: That's correct.

3 CHAIR YOUNG: Then, we realize that you've
4 made an argument that they are connected, that there
5 is some relationship between them. However, if we
6 make a ruling with regard to all of the safeguards
7 documents, all of the documents except the two
8 classified, then we would proceed with regard to
9 those, and then when Judge Elleman gets back we
10 already have the February 12th session set.

11 At that point, we could hear any
12 additional argument that needs to be made with regard
13 to the classified documents, which Judge Elleman and
14 I both have clearance to see. And then, we think that
15 overall that would probably keep us on a more
16 efficient and speedy course than trying to start fresh
17 with a whole new Board.

18 MR. FERNANDEZ: That seems fine to us.
19 The one thing I was going to say is I -- after just
20 speaking on the phone to headquarters, I don't know
21 how feasible it will be to get you documents tomorrow.

22 CHAIR YOUNG: Well, and that actually
23 would -- we're going to have the submission and the
24 exemption request. Judge Elleman can look at that
25 with us, and then Judge Baratta and I can see all of

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1 the safeguards documents and hear your argument next
2 week. And the two of us can make a decision in the
3 absence of Judge Elleman. And then, once Judge
4 Elleman gets back, if Judge Baratta's clearance is not
5 -- has not yet come through, then Judge Elleman and I
6 will consider the classified information.

7 Ms. Curran, you're the one who may have
8 more of an objection to anyone else. But considering
9 all of the options, do you want to give us your
10 thoughts on that?

11 MS. CURRAN: Well, first of all, I think
12 there's three classified documents, because there is
13 the two orders that went out after April 29th -- or on
14 April 29th to NFS and --

15 CHAIR YOUNG: You've got the documents.
16 I don't have the list in front of me, so --

17 MS. CURRAN: -- BWXT, but --

18 CHAIR YOUNG: I'm sorry.

19 MS. CURRAN: There is also the --

20 CHAIR YOUNG: Repeat what you just said.
21 I interrupted.

22 MS. CURRAN: Oh, yes, sure.

23 CHAIR YOUNG: I was trying to look for the
24 document, and then I remembered I didn't have it.

25 MS. CURRAN: Well, there's -- I think

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1 there's three classified documents. The first two
2 would be the orders that went out April 29th to NFS
3 and BWXT. But then, a third document would be
4 whatever requirements apply -- applied to Category 1
5 facilities --

6 CHAIR YOUNG: Has anyone got the document?

7 MS. CURRAN: -- before September 11th,
8 because there's got to be something that applies.

9 MR. FERNANDEZ: Your Honor?

10 CHAIR YOUNG: Yes. And when you answer,
11 have you got the document in front of you? Maybe
12 somebody could just look down it, because I remember
13 seeing the references to classified. That should be
14 a relatively simple thing to --

15 MR. FERNANDEZ: What are we talking about?

16 CHAIR YOUNG: -- clarify. The motion.

17 MR. FERNANDEZ: Oh.

18 CHAIR YOUNG: There was a list of
19 documents.

20 MR. FERNANDEZ: Yes. The legal standards
21 that would apply to a Category 1 facility to whom no
22 orders have been issued are contained in Part 73 of
23 the regulations.

24 CHAIR YOUNG: The question is: are there
25 any other documents besides the two April 29th to --

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1 what are the names of the --

2 MR. FERNANDEZ: BWXT and NFS.

3 CHAIR YOUNG: Right. Are there any other
4 classified documents?

5 MR. FERNANDEZ: No, not that I'm aware of,
6 Your Honor.

7 CHAIR YOUNG: Okay. So on the list there,
8 were there -- can you just open it up to the list?

9 MR. FERNANDEZ: Yes.

10 CHAIR YOUNG: Are there any others that
11 are referred to as being classified that are not, in
12 fact, classified?

13 MR. FERNANDEZ: Yes, this generic DBT
14 that's not specific to any particular facility. It's
15 a DBT that is contained in Part 73 of the regulations.

16 CHAIR YOUNG: Can we see a copy of that
17 again? And I can maybe ask you more direct questions.

18 MR. REPKA: The list?

19 CHAIR YOUNG: The list of documents. The
20 list of documents. I think there was a list in the
21 motion. Thank you. I feel like I'm talking in a
22 vacuum otherwise.

23 Okay. The list -- okay. It says, "The
24 classified design" -- can I read this? This is all
25 right to read, right?

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1 MR. FERNANDEZ: Your Honor, I really would
2 hope that we would talk about this when we got back to
3 Rockville, because we're getting really into the --

4 CHAIR YOUNG: It's a simple question. All
5 I want to know is, is the fourth document listed,
6 which is the third on page 4 --

7 MR. FERNANDEZ: I can't follow because I
8 don't have it in front of me, but you can tell me what
9 it is.

10 CHAIR YOUNG: "The classified design basis
11 threat for Category 1 facilities, which is applicable
12 to Catawba by virtue of the presence" -- can I
13 continue reading? -- "of formula qualities of --
14 quantities of plutonium during LTA testing."

15 MR. FERNANDEZ: No such document that I
16 know of exists, other than what's in the regulations.

17 MS. CURRAN: Well, but that's not our
18 understanding at all. For instance --

19 CHAIR YOUNG: Well, again, let's -- I wish
20 we had a security person here, but --

21 JUDGE BARATTA: Let me make a suggestion.

22 CHAIR YOUNG: Go ahead.

23 JUDGE BARATTA: We won't rule out this
24 possibility of this third document. Okay? Just
25 hypothetically at this point. In other words, that

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1 you got -- there's two definite documents that are
2 classified. There may be a third or even a fourth.
3 The concept -- the question is, there are a bunch of
4 -- a group of documents that are unclassified,
5 safeguards.

6 MS. CURRAN: Yes.

7 JUDGE BARATTA: And if we were to proceed
8 with just hearing the rationale for the delay, and the
9 rationale for the need for those specific documents,
10 realizing there is an interrelationship on next
11 Wednesday, and then on the 12th, by then we could do
12 -- the Staff and everybody could do a little more
13 research to see if there are other documents. Okay?

14 CHAIR YOUNG: In other words, let's assume
15 -- let's assume, for argument's sake, that we granted
16 your motion with regard to the safeguards documents,
17 with regard to all except the classified documents,
18 any documents that were classified.

19 We would expect you then to go ahead and
20 get started and submit something within whatever
21 deadline we set that was based on those documents.
22 Then, later, on February 12th, we would hear the
23 argument about the classified documents. And if we
24 were persuaded, we would set separate deadlines for
25 any contentions based on those.

1 We realize there might be some overlap,
2 but it seems to us that it would be most efficient to
3 proceed in that manner. And it might -- it might
4 involve some duplication of effort on the parties'
5 parts, but overall it seems to be more efficient.

6 So if anyone has any strong objection to
7 that, we want you to state it now.

8 MS. CURRAN: I don't -- we don't have an
9 objection to that way of going ahead. I am concerned,
10 however, that -- it seems actually pretty odd to me
11 that the Staff is saying that there is no classified
12 portion of the Category 1 security standard, other
13 than these orders that have been issued to the two
14 operating Category 1 facilities. And that's --

15 CHAIR YOUNG: But wait. Is there -- and
16 we need to talk about that.

17 MS. CURRAN: Well, can I give an example?
18 I would just kind of like to put a bee in the Staff's
19 bonnet, because I don't want to spend another month
20 arguing on such a basically rudimentary level about
21 things that, hey, I don't know that much about
22 security, but I read the newspaper, and I -- and I
23 read kind of general NRC Staff documents.

24 And I know that, for instance, in 10 CFR
25 73.1, subsection (a)(2), there is a definition of

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1 theft or diversion of formula quantities of strategic
2 special nuclear material -- in other words, Category 1
3 material. And it's defined as a determined, violent,
4 external assault, attack by stealth, or deceptive
5 actions by a small group with the following
6 attributes, and then there's a list of attributes.

7 Well, it's my understanding that the
8 definition of what a small group is is classified
9 information, has been for a long time, and that one of
10 the things that was changed after September 11th was
11 that the NRC revisited, you know, what's the size of
12 a credible small group? Having had the experience of
13 September 11th that the group was pretty big in
14 comparison with what they had been assuming.

15 And so there is some preexisting standard
16 for what a small group is that's classified, and then
17 there's whatever went on on April 29, 2003, which may
18 have increased that number. But it's been my
19 understanding for a long time that the definition of
20 how many people are in this small group exists, and
21 it's classified information.

22 So for the Staff to say there's nothing
23 there other than what's on the books --

24 CHAIR YOUNG: Okay. We understand what
25 you're saying. Let me just say this. I want the

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1 Staff next week to have a security expert there. And
2 I know Bern Stapleton is expert in these
3 classification issues, who may be able to answer the
4 question without getting into the classified
5 information, may be able to answer the question of
6 what's out there, so that we can have a good predictor
7 of what we're going to need to be dealing with later.
8 Okay?

9 Apart -- and so we understand your
10 argument, and we agree it needs to be resolved. Apart
11 from that, are there any objections or any other
12 things that you want to say today with regard to our
13 plan of action? Because we do need to get --

14 MS. CURRAN: Yes.

15 CHAIR YOUNG: -- back on the contention --
16 yes, go ahead.

17 MS. CURRAN: We think your plan of action
18 is fine.

19 CHAIR YOUNG: Okay. All right. Then,
20 that's what we will do. We'll meet next Wednesday,
21 the 21st, at 2:00, in our hearing room. And bring Mr.
22 Stapleton if possible, someone who is familiar with
23 classification.

24 MR. FERNANDEZ: It probably won't be Bern
25 Stapleton, Your Honor. It will probably be somebody

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1 that's actually familiar with the classified DBT.

2 CHAIR YOUNG: Right. Someone who can
3 answer this question for us.

4 MR. FERNANDEZ: One last point that I want
5 to make after talking to my client. All of this
6 discussion that we've had I hope does not imply in any
7 way that the Staff has waived any objection as to
8 whether the Board has the authority to make the need-
9 to-know determination or what type of deference the
10 Board would owe to the Staff in regards to that
11 determination.

12 CHAIR YOUNG: You can make whatever
13 arguments -- I mean, we -- we appreciate any arguments
14 that anyone makes to us. I mean, we want to be fully
15 informed by all parties on what -- your views of our
16 authority, along with all of the -- any other relevant
17 law. So no, I mean, we --

18 MS. CURRAN: I would just ask that if
19 we're going to hear that argument on January 21st, the
20 Staff take into consideration that it agreed to
21 paragraph (c)(2) of the protective order, which has
22 the Board making the need-to-know determination if
23 there's a dispute.

24 MR. FERNANDEZ: Whatever argument we make
25 will take into account any positions we've taken in

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1 the past.

2 CHAIR YOUNG: Okay. Well, I hope you'll
3 abide by your agreements that you've made -- in fact,
4 made agreements. But actually, that does remind me of
5 one thing, though. And it might be a good idea to get
6 responses, if we could get them. Would it be possible
7 to get those responses before -- I mean, Mr. Repka,
8 you wanted us to rule on this today, and I assume you
9 wanted to just make your arguments.

10 But it might be helpful to file written
11 responses that we would get on Tuesday morning if
12 possible, but noon maybe, so that we would have some
13 idea of what to expect, and things would go more
14 smoothly on Wednesday. Does that make sense to you?

15 It might help you to sort of formulate
16 your arguments, too. Especially if you're going to
17 get into issues like our authority, it would be very
18 helpful to us to have your arguments in advance, so
19 that if we need to do any preliminary research and
20 come up with questions that we may have for you that
21 we'll have a chance to do that, and that way all of us
22 will make more efficient use of our time next
23 Wednesday.

24 So I'd say, what time on Tuesday do you
25 think you could get those to us? The earlier the

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1 better for us, obviously. But we want to be
2 reasonable.

3 MR. REPKA: Well, we have not contemplated
4 making a written filing and would certainly discuss
5 that. I would say to the extent that there would be
6 a filing, I wouldn't make it too early in the day on
7 Tuesday, but --

8 CHAIR YOUNG: 3:00?

9 MR. REPKA: 3:00 is fine.

10 CHAIR YOUNG: Okay. And, really, what
11 triggered me to think about that was if there are
12 issues having to do with jurisdiction or authority, I
13 mean, if it's in the agreement, it's in the agreement.
14 But if there are issues having to do with those types
15 of legal issues, I'd like to be prepared on those in
16 advance. I don't want to just be hit with something
17 like that, and then not be prepared myself to ask
18 appropriate questions.

19 So that's what I'm really asking you to
20 bring to our attention. Don't come in on Wednesday
21 making legal arguments that we haven't gotten some
22 prior notice of. And if you're going to -- and if
23 there are going to be safeguards documents, so
24 designate them and deal with all of the -- you know,
25 you might want to hand-deliver something like that.

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1 Anyway, anything else on this?

2 MS. CURRAN: There's just one more point
3 that I'd like to make that I think might be helpful as
4 we go into this. In our letter on December 19th we
5 listed the standards that we wanted.

6 Now, the way we identified those was we
7 deduced what they were from the materials that we
8 reviewed and from our general knowledge. But we've
9 never seen them. We've never seen the whole array of
10 regulations and regulatory guidance that's applicable.
11 And I mean both before September 11th and after,
12 whatever regulations were changed or guidance was
13 changed after September 11th, and whether it was
14 changed for a specific facility or generally.

15 And I hope that we're not going to get
16 into game-playing that because we didn't use the
17 proper terminology that the Staff says, "Well, we
18 don't have the thing you're asking for," because we
19 are asking in general terms for what guidance the
20 Staff has that would be applicable here.

21 CHAIR YOUNG: Okay. Point --

22 MS. CURRAN: But we can't identify it with
23 specificity.

24 CHAIR YOUNG: I think your point is well
25 taken. And I think that given the timeliness

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1 questions that we have about this whole proceeding, I
2 would encourage all parties to be direct, be
3 straightforward. I'm just reading, Mr. Fernandez,
4 your letter. And there's no reference in here to the
5 document not existing. There's reference made to the
6 document as a matter of fact.

7 So I'm going to give you these back, but
8 I think that point is well taken, and --

9 MR. FERNANDEZ: I'm sorry, Your Honor. I
10 didn't get what you were trying to say by your -- the
11 statement you just made.

12 CHAIR YOUNG: To the extent that this
13 January 13th letter that you sent, do you consider
14 that to be safeguards?

15 MR. FERNANDEZ: No.

16 CHAIR YOUNG: Okay. In that letter, one
17 of the documents that's listed is the classified DBT
18 for Category 1 facilities. You then state at the end
19 of the list, "As you were informed by Ms. Uttal on
20 January 9, 2004, the Staff has reviewed your request
21 for the aforementioned documents and has determined
22 that you do not possess the requisite need to know for
23 the information that you have requested. The
24 documents are not being relied upon by the Staff."

25 In other words, you don't say at that

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1 point there is no such document. So one reading this
2 letter would assume that there is a document like
3 that. That's the only point I was trying to make.

4 So let's try to all be clear, and no game-
5 playing on anybody's part. Anybody's part. So that
6 we can all move forward as quickly as possible.

7 So responses by 3:00 on Tuesday, and we'll
8 see you Wednesday at 2:00. And before we leave --
9 maybe now, just so we won't forget -- someone come up
10 and get these. Thank you.

11 And we'll -- and I'm going to be in the
12 office on Monday, so -- and you're going to be -- I'm
13 sorry, on Tuesday you're going to be there. So if I'm
14 not there, you can contact Judge Baratta and get us
15 those -- all of the documents as soon as possible.
16 And I suppose I can go ahead and look at the
17 classified ones, at least look at them on Tuesday.

18 JUDGE BARATTA: Just one point of
19 clarification. You said it was unlikely that we would
20 get anything additional tomorrow, or is there likely
21 to be something at that address in Raleigh or not?

22 MR. FERNANDEZ: No.

23 JUDGE BARATTA: Okay. Thank you. I just
24 -- thank you. I appreciate your effort in trying, by
25 the way. Thank you.

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1 CHAIR YOUNG: Yes, we do. Thanks.

2 Thanks, everybody.

3 And before we leave, we'll get the
4 documents from you, Mr. Repka, right?

5 MR. REPKA: We hope so. We put a contact
6 in. We haven't been able to confirm the individual
7 who has access to the safe has the message, but we've
8 sent out somebody else and we're doing everything we
9 can. One way or the other we should be able to do it.

10 CHAIR YOUNG: Okay. Thank you.

11 Well, amazingly enough, I had down on my
12 list that we were going to start at 3:30 with
13 Contention 12. And Ms. Curran was going to just give
14 your rebuttal on Contention 11, and we had a list of
15 questions, so we're not too far off. Let's go ahead
16 and be as quick as we can on that, and then we'll move
17 into 12.

18 MS. CURRAN: I will. But I'll say, again,
19 that I think from our perspective it's more important
20 to make sure that the Board's questions about this
21 contention are resolved, because they can be technical
22 in nature. And the next contention is more legal, and
23 I think can be more easily decided on the papers.

24 CHAIR YOUNG: Would you like me to read my
25 questions?

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1 MS. CURRAN: Sure.

2 CHAIR YOUNG: Okay. And they are sort of
3 sketchy, but I think Mr. Repka raised what he called
4 the real question, and I'm -- I probably didn't get
5 down every word, but something to the effect of
6 whether there's enough to show with a LOCA, whether
7 there's sufficient information to show that there is
8 no severe accident.

9 I wrote down a bunch of question marks
10 there, because I wasn't real clear on exactly the
11 point you were making, but I knew that I wanted Ms.
12 Curran to respond to that.

13 And then, the issue of the consequences --
14 if the cooling fails and you go into severe accident,
15 would the consequences be different? The relationship
16 between LOCA and severe accidents -- basically, that
17 thing that we got into a little bit at the last
18 argument -- and, Mr. Repka, if you want to just
19 briefly restate what you said on that that would be
20 fine.

21 And then, just the only other thing I had
22 was the reference to the 1.6 percent and the
23 significance of the difference. And my question was:
24 can you address how the information from the IRSN
25 presentation relates to that significance question?

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1 And then just generally, if you have anything to add
2 on the analysis of severe accidents in safety space,
3 just to sort of refresh my recollection of the
4 arguments on that.

5 Did you want to restate that? Do you
6 recall what I'm referring to?

7 MR. REPKA: I know exactly -- maybe I
8 shouldn't if Ms. Curran is going to respond to it.
9 But the point I was trying to make is this is a severe
10 accident contention, so we're beyond design basis
11 LOCA. So the first question raised by the contention
12 is there has to be something to show that the LOCA
13 analysis is inadequate, so that you would get to a
14 beyond-design-basis LOCA.

15 And the second issue is assuming you are
16 now there in a beyond-design-basis event, is there
17 something to suggest that the consequences of that
18 design -- that severe accident would be different?

19 CHAIR YOUNG: You're absolutely right. I
20 couldn't read my own handwriting. Thank you.

21 MS. CURRAN: I think that was very well
22 put, and I would like to also refer the Board to the
23 key sentence in the contention that I think Mr. Repka
24 is talking about. And that is -- it's on page 5 in
25 the bottom paragraph. "Phenomena that could affect

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1 the probabilities of severe accidents include the
2 poorer performance of MOX fuel during a LOCA compared
3 to LEU fuel, which could increase the chance that the
4 accident cannot be mitigated as discussed at page 6 of
5 the Phebus proposal."

6 CHAIR YOUNG: Ah, okay. Let me just
7 interrupt you there and just focus you, since you
8 asked for our questions. Mr. Repka made references to
9 both of those statements as being speculative, and I
10 wanted you to respond to that.

11 MS. CURRAN: Exactly. And, you know, when
12 I first said at the beginning this morning I had
13 proposed deleting footnote 2, and as I come to this
14 argument it occurs to me that was a mistake, because
15 footnote 2 refers back to Contention 10, which is
16 indeed relevant here. So I'd like to put that back in
17 to the contention.

18 The first part of this assertion I'd like
19 to talk about is the -- one of the phenomena that
20 could affect the probability of severe accidents is
21 the poorer -- the relatively poor performance of MOX
22 fuel during a LOCA compared to LEU fuel. Now for that
23 you go back to the IRSN presentation, which talks
24 about the phenomena -- a couple of phenomena related
25 to plutonium MOX fuel.

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1 One is the increased ballooning of the
2 cladding during a LOCA.

3 CHAIR YOUNG: That was on page 24 and 5,
4 is that what --

5 MS. CURRAN: Well, no, it would be later.
6 Let's see. When you -- hold on a minute. Okay. It
7 starts really around 23, where you see -- you see a
8 diagram of what fuel -- what might happen to the fuel,
9 if it crumbled. Do you see the fuel is kind of
10 stacked up, and then it moves as the space increases?

11 And then, on page 24, it talks about how
12 the balloons get bigger when you have -- with modern
13 clad alloys. And then, the bigger -- the balloon can
14 also get bigger with a lower tin content.

15 CHAIR YOUNG: Can you point me to the --
16 to the association of poor performance of MOX fuel?

17 MS. CURRAN: Well, okay. There's two
18 issues. One is the power generation of plutonium MOX
19 fuel, which you can see by looking at page 21. Okay?
20 Okay. That's one issue.

21 And then, if you look at page --

22 CHAIR YOUNG: Does the reference "increase
23 of power" -- is that -- are you saying we should take
24 that as suggesting --

25 MS. CURRAN: In comparison to uranium

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1 fuel.

2 CHAIR YOUNG: That that's what that was --
3 that was referring to?

4 MS. CURRAN: Yes.

5 CHAIR YOUNG: Not just an increase in
6 power, period. Well, there's the note down at the
7 bottom, "Note that this question is particularly
8 important for end-of-life MOX fuel."

9 MS. CURRAN: Right. The power density of
10 plutonium MOX fuel is greater than for uranium fuel at
11 the same burnup. That's what this shows, or it's what
12 it's referring to.

13 CHAIR YOUNG: On the significance issue?

14 MS. CURRAN: Now, if you look on page 22,
15 there are questions that are raised about fuel
16 relocation under these conditions. This relates to
17 the microstructure of the fuel.

18 These are unknowns. This is a list of
19 unknowns, but it -- the unknowns are generated by the
20 fact that we know the microstructure of plutonium fuel
21 is different than the microstructure of uranium fuel.
22 And then this may affect what happens to the fuel
23 during relocation, how it is distributed on
24 relocation. And that -- those are the questions that
25 IRSN is trying to get at, to investigate.

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1 And then we had talked about -- page 23 --
2 where there is a visual diagram of how the -- what the
3 fuel stack looks like, and what happens to it when it
4 crumbles. And then, when you get to pages 24 and 25,
5 they bring in the issue of the relationship with the
6 cladding, that the cladding balloons.

7 So you have to look at the relationship of
8 the microstructure of plutonium fuel as it differs
9 from uranium fuel, taken together with the
10 characteristics of the cladding, put those things
11 together. And there are unknowns about that. What's
12 known is the difference in these characteristics from
13 uranium fuel that ought to be looked at.

14 CHAIR YOUNG: I guess just to -- if I can
15 sort of summarize my questions, Judge Baratta talked
16 about the basic issue being the adequacy of the data.
17 Mr. Repka raised the issue of the significance of any
18 difference --

19 MS. CURRAN: With respect to consequences,
20 is that what you mean? By having -- well --

21 CHAIR YOUNG: Whatever the 1.6 percent
22 referred to, if that was consequences.

23 MS. CURRAN: Well, let me -- maybe I
24 can --

25 CHAIR YOUNG: And then, just the other

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1 one. Was the analysis in safety space of severe
2 accidents being dependent on somehow showing that the
3 LOCA analysis would not be sufficient?

4 MS. CURRAN: Okay. All right. I'm
5 getting there.

6 Now, it's important to bear in mind the
7 requirements of Appendix K. Where you get a severe
8 accident is a situation where the design basis
9 requirements can't be met. So if you look at
10 Appendix K, paragraph B, which is entitled "Swelling
11 and Rupture of the Cladding and Fuel Rod Thermal
12 Parameters," the NRC lays out requirements for an
13 evaluation of this parameter.

14 It says, "Each evaluation model shall
15 include a provision for predicting cladding, swelling,
16 and rupture from consideration of the axial
17 temperature distribution of the cladding, and from the
18 difference in pressure between the inside and outside
19 of the cladding, both as a function of time.

20 "To be acceptable, the swelling and
21 rupture calculations shall be based on applicable data
22 in such a way that the degree of swelling and
23 incidence of rupture are not underestimated. The
24 degree of swelling and rupture shall be taken into
25 account in calculation of gap conductance, cladding

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1 oxidation, and embrittlement, and hydrogen
2 generation."

3 So here they're -- the NRC is requiring an
4 analysis of the behavior of the cladding under LOCA
5 conditions. And what this IRSN presentation shows is
6 that the analysis that Duke has done is not sufficient
7 to take into account these peculiar characteristics,
8 both of the fuel and of the cladding that are going to
9 be used in this case.

10 Now, if they haven't taken that into
11 account, if they haven't done an analysis that shows
12 that they are within the bounds of conservatism, then
13 what you have is a situation that could lead to a core
14 melt accident, because if the cladding fails then the
15 fuel is going to overheat. Or if the fuel collapses,
16 it could block the cooling function.

17 Now, you know, that -- it's -- and I'm
18 just suggesting why this is important. It isn't our
19 burden to show that if Duke can't satisfy Appendix K
20 that an accident will happen. The requirements are
21 that the applicant must satisfy the regulations. But
22 I'm explaining to you why it's important. Okay?

23 And if those requirements aren't met, then
24 that -- there's an implication there that the accident
25 can't be controlled, and that -- or if the database is

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1 so incomplete, and there are effects that are not
2 being taken into account, then there is another aspect
3 in which an accident may get out of control, and that
4 you -- the accident is on its way to a severe
5 accident.

6 So that is how the severe accident
7 contention -- one way that the severe accident
8 contention relates to the adequacy of the design to
9 satisfy the safety requirements, the design basis
10 requirements for this facility. Because Duke has not
11 shown taking into account the characteristics of this
12 fuel miscladding, that the requirements are satisfied,
13 there is a necessary inference that a severe accident
14 could occur. It's simply -- it follows from the
15 failure to meet the design basis requirements. That's
16 what they are intended to avoid.

17 CHAIR YOUNG: Are we ready to move into
18 the next one? Because I really have a fairly, I hope,
19 straightforward question, and that is, I would like a
20 little bit of clarification on the relationship in
21 your view of the analysis of severe accidents under --
22 as a safety issue and as a NEPA issue, and what
23 difference it makes.

24 MS. CURRAN: Okay. I would like to --
25 there's another question that you had that I would

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1 like to address first, and that is the issue with
2 respect to consequences, because that's a major
3 question that you had.

4 And Mr. Repka characterized a report that
5 was prepared by Dr. Lyman -- and this gets back to the
6 argument that we had in the last session, but it's
7 important to look at the data on page 6 of the IRSN
8 presentation.

9 Here we go. Okay. Dr. Lyman's study
10 assumed that the release fractions for uranium and
11 plutonium were the same -- fuel. The release
12 fractions for uranium and plutonium fuel were the
13 same, even though the composition of the fuel was
14 different.

15 But if one were to put into the analysis
16 more realistic assumptions about the differences in
17 the release fraction, and the timing of the release,
18 that would alter the consequences of the accident and
19 make it more severe.

20 Now, Dr. Lyman hasn't done that
21 calculation, but it would make the consequences more
22 severe. And all you have to do is look at this table
23 that is included on page 6 of the IRSN submittal from
24 October 23rd, which shows that the release fraction
25 for the plutonium fuel is higher, and it shows that

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1 the release is earlier.

2 So, for instance, of course the size of
3 the release affects how many health impacts -- how
4 many people are going to be impacted or what is the
5 severity of the health effects. The timing of the
6 release affects the effectiveness of emergency
7 planning, because if you don't have as much time to
8 evacuate people, then you're going to get more
9 fatalities and illnesses.

10 So it's really grossly oversimplifying to
11 say that Dr. Lyman's earlier analysis that should
12 govern here, there are other factors that should be
13 considered and that would be considered, if this
14 contention were admitted and we were allowed to show
15 what the potential consequences of such an accident
16 would be.

17 CHAIR YOUNG: Is that why you want us to
18 consider both under safety, rather than only under
19 NEPA? Is that -- why do you want us to consider it?
20 If that's not why, why?

21 MS. CURRAN: Well, there are a lot of
22 reasons why this should be considered under the safety
23 rubric, which we discussed at length in the last oral
24 argument. And one of them is that the NRC has
25 guidance in Reg. Guide 1.174 which indicates that

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1 where there is a new area of regulation that has come
2 up, it's especially important and valuable to have a
3 risk analysis in order to inform the decisionmaking
4 process in a more helpful way.

5 CHAIR YOUNG: And you're saying that would
6 be relevant only in the safety context?

7 MS. CURRAN: No. I'm just explaining why
8 we think it is required under the safety requirements.
9 From an intervenor's perspective, Judge Young, we are
10 going to tell you every legal requirement to do a
11 safety analysis that we are aware of.

12 We're not going to pick and choose our
13 favorite one. We're going to present to you every
14 single legal requirement to do a safety analysis which
15 we believe is reasonable and necessary to protect
16 public health, whether it's under the Atomic Energy
17 Act or whether it's under NEPA.

18 CHAIR YOUNG: All I'm trying to understand
19 is -- maybe we're talking past each other.

20 MS. CURRAN: Yes.

21 CHAIR YOUNG: But all I'm trying to
22 understand is, is there any particular reason why this
23 issue should be admitted and/or considered as a safety
24 issue, if, for example, it were admitted and
25 considered as a NEPA issue?

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1 MS. CURRAN: Yes. And it's really simple,
2 and that is from our perspective we would like -- we
3 need a finding from the Board that it's required under
4 whatever statute is applicable, because if this case
5 goes all the way to the Court of Appeals, and there is
6 still dispute between the parties as to what law
7 governs here, we want the broadest possible coverage
8 to -- the Board to have found the broadest possible
9 coverage by the law, because we could lose on one
10 statute and win on another.

11 And what we're trying to get is the
12 practical effect of this safety analysis. It's not an
13 academic exercise from our point of view. We're
14 looking for every legal tool that we can find.

15 CHAIR YOUNG: But apart from that, there
16 is not a practical difference.

17 MS. CURRAN: There is no practical
18 difference.

19 CHAIR YOUNG: Okay.

20 MS. CURRAN: It's the same safety analysis
21 that we're looking for.

22 CHAIR YOUNG: Okay.

23 MS. CURRAN: Yes.

24 MR. FERNANDEZ: Your Honor, can I just say
25 something briefly in that regard, to the question that

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1 you just asked?

2 CHAIR YOUNG: Do you want to ask your
3 question? Is that okay?

4 JUDGE ELLEMAN: Well, let's listen to
5 what --

6 MR. FERNANDEZ: There is one practical
7 difference, in that the statutes authorize the Staff
8 to take different types of actions. So if we were to
9 admit that contention under the NEPA obligations of
10 the Staff, the Staff would discuss X, Y, or Z in their
11 EIS, and disclose the environmental impacts.

12 But it's not necessarily clear that if an
13 environmental impact was found, that unless it
14 affected public health and safety, that there would
15 actually be an obligation on the part of the Agency to
16 remedy that environmental impact.

17 So under the Atomic Energy Act, you would
18 actually have an obligation, if it does impact on the
19 public health and safety, to take an affirmative
20 action to prevent them. So that is the practical
21 implication of the two statutes.

22 CHAIR YOUNG: Thank you. That's what I
23 was trying to get at. And can you tell me, in two --
24 10 words or less, what the actual difference would be?
25 You're referring to it generally. The Staff would be

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1 required to take an action.

2 MR. FERNANDEZ: Well, if the Staff were to
3 find that the -- I'm so confused now I don't know
4 exactly what we're talking about. But if what Ms.
5 Curran and her client are complaining about -- if the
6 Staff were actually to find that it does have an
7 unacceptable impact on public health and safety, then
8 the Staff would make the applicant modify their
9 application accordingly to remedy that impact and
10 address it in safety space; whereas, in environmental
11 space, it's not clear that the Agency would take the
12 affirmative action of forcing the licensee to do
13 something.

14 CHAIR YOUNG: Okay.

15 MS. CURRAN: I think that Mr. Fernandez
16 has made a very good point, and I also think there's
17 different -- well, first of all, I just want to
18 emphasize, I don't think that would change the nature
19 of the analysis that the Staff did. It changes what's
20 done with the information at the end, and each statute
21 has a -- has a value to it in terms of what the
22 ultimate action is.

23 Under the Atomic Energy Act, the value is
24 that the Staff requires the applicant to take some
25 action to make the plant safer. Under the National

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1 Environmental Policy Act, the value is that the Staff
2 discloses to the general public, "This is the nature
3 of the risk, and this is how we're addressing it."

4 And that's also very important because
5 that's the action-forcing part of NEPA. The idea is
6 that if there is public disclosure, then it gives the
7 public and the state and local government officials a
8 political tool for pressing on the Agency to make
9 reforms.

10 So they both have slight -- they're
11 different tools, but much to the same end.

12 CHAIR YOUNG: Thank you very much, both of
13 you.

14 JUDGE ELLEMAN: Now, Ms. Curran, you may
15 have answered the question that I was wanting to ask.
16 Mr. Repka earlier took Dr. Lyman's safety analysis for
17 batch loading of MOX fuel and used a linear
18 extrapolation to come up with a change of several
19 percent in a number of consequences.

20 Did I understand you to say a few minutes
21 ago that you no longer defend that study, that you
22 think things are worse than what Dr. Lyman was using
23 as his assumption?

24 MS. CURRAN: Well, maybe what it is is a
25 question of apples and oranges. Dr. Lyman's study

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1 took the 30 percent assumption and used other
2 assumptions about the characteristics of the fuel and
3 came up --

4 JUDGE ELLEMAN: Yes.

5 MS. CURRAN: -- with an estimate. Of
6 course, when you look at the LTA testing, it's a
7 smaller quantity of plutonium that's being used.

8 JUDGE ELLEMAN: Yes.

9 MS. CURRAN: But there is other factors
10 that are higher -- the release fraction and the timing
11 of the release. And we don't know what the
12 interaction of those factors is. That's an analysis
13 that needs to be done. I don't think we can leap to
14 any conclusions about what the end result would be.

15 Would it be possible for me to let Mr. --
16 Dr. Lyman answer the question, because --

17 JUDGE ELLEMAN: Well, let me rephrase what
18 I was trying to get at, and maybe it'll save you the
19 trouble of trying to do it. I was trying to
20 understand whether Mr. Repka's extrapolation is a fair
21 expression of Dr. Lyman's work. Does it appropriately
22 represent what he believes the risk might be for the
23 four fuel element loading in Catawba?

24 MR. REPKA: Now, let me -- we talked about
25 it at the last hearing -- is the issue of whether you

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1 can extrapolate or whether it's proper just to do a
2 linear extrapolation from the batch loading to four
3 elements, and it's linear. I haven't done that
4 calculation. It may not be appropriate, because it
5 depends on things like the position of the LTAs and
6 the core, their burnup, and other issues.

7 So a linear extrapolation may not be
8 proper. I simply haven't done it. But the issue at
9 hand today is whether that study took into account
10 information from VERCOR and other tests that show that
11 release fractions for fission products may be higher
12 for MOX fuel, and it didn't.

13 That study explicitly assumed the release
14 fractions would be the same for every fission product
15 category for both uranium and MOX. The point is that
16 if you did take into account the enhanced release
17 fractions for cesium and other fission product groups
18 that the VERCOR test and other tests seem to indicate,
19 that that would mean the differential consequences of
20 MOX accident versus uranium accident would be worse
21 than what that study predicted.

22 So the linear extrapolation of 1.6
23 percent, or whatever, would actually be somewhat
24 greater if you took into account that. So that was an
25 underestimate by not taking into account the enhanced

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1 release fractions.

2 JUDGE ELLEMAN: Okay. It might be
3 somewhat greater. But do you have any intuitive feel
4 for what the overall impact might be on release if you
5 tried to include all of the factors you're
6 representing to us here today in terms of changed fuel
7 behavior and -- I realize --

8 MR. REPKA: No. I simply haven't done the
9 calculation. And as Ms. Curran said, it would have an
10 impact on the assumptions for evacuation and emergency
11 planning, because the peak releases may occur an hour
12 or more before in the case of MOX fuel, but then that
13 depends on the containment response as well. So it's
14 not that simple. I didn't have an answer at that
15 time.

16 JUDGE ELLEMAN: All right.

17 MR. REPKA: I can't say that it would be
18 greater.

19 JUDGE ELLEMAN: Thank you.

20 MS. CURRAN: I don't have anything to add.

21 CHAIR YOUNG: I'm going to take one stab
22 at something, and then I think we need to move into
23 the next one, and I'll talk about that in a second.

24 Taking Judge Baratta's question earlier
25 about the issue being the adequacy of the database, am

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1 I understanding you correctly to be saying that that's
2 the -- that the questions about whether the LOCA
3 analysis is sufficient to show that there would be no
4 severe accident, or what the consequences would be,
5 what you're saying is -- what you're questioning is
6 the adequacy of the database with regard to those
7 issues. Am I right in understanding that in the same
8 way that Judge Baratta posed that issue earlier?

9 MS. CURRAN: Essentially, yes. It's the
10 lack of information on certain factors that may have
11 an impact on the LOCA analysis, and that, in turn,
12 creates uncertainty about a severe accident.

13 CHAIR YOUNG: Okay. Any more on this one?

14 I suggest that we take 10-minute time
15 periods instead of the 15. We've got one hour left,
16 and the reason I'm saying that is I do have two or
17 three questions for Duke on 13, even though you don't
18 have any desire to say much on it yourself. But I did
19 have a few questions on that that you might then want
20 to respond to. So I want to save some time for that.

21 MS. CURRAN: Do you have questions for
22 BREDL on that? Because with such a limited amount of
23 time, I'd rather just --

24 CHAIR YOUNG: I don't have any questions
25 for BREDL on it. I mean, other than anything you

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1 might say after I get an answer from Duke. And that
2 was on 13, so I just wanted to save enough time to do
3 that.

4 MS. CURRAN: Okay.

5 CHAIR YOUNG: Why don't you go ahead into
6 12, and we'll try to limit you to 10-minute periods on
7 this one. And I hope that maybe the discussion in the
8 last one will move -- make the necessity for this one
9 not be -- not require so much time, make it
10 unnecessary to require so much time.

11 MS. CURRAN: Well, I think the essence of
12 Duke's argument here is that Duke characterizes our
13 contention as a claim that an environmental report
14 must somehow acknowledge and address every uncertainty
15 or research proposal that could relate to an
16 application under review. And that is far from our
17 position.

18 What we've presented to the Licensing
19 Board here is a body of evidence that was put together
20 by the French Safety Agency, which, by the way, is not
21 just a commercial entity; it is the research arm of
22 the French Regulatory Agency that was split off a
23 couple of years ago. The French decided to divide the
24 controlling function from the research function to
25 give the research function more independence.

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1 But it's not -- this IRSN agency is part
2 of the French Regulatory Agency. It's the arm of the
3 Agency that does the research. So they have come to
4 the NRC with a coherent analysis of significant gaps
5 in the understanding about the behavior of plutonium
6 fuel in nuclear powerplants, including under design
7 basis accident conditions and severe accident
8 conditions.

9 The standard that the Licensing Board has
10 to apply here is one of reasonableness. Is this an
11 environmental impact that warrants consideration? And
12 the question is whether we've raised a material
13 dispute with Duke about this, whether we've put enough
14 evidence before the Board to show that there is a
15 dispute between the parties that have legal -- has
16 legal relevance, not the ultimate merits determination
17 of whether or not an environmental impact statement
18 should have to address this, but whether this question
19 warrants further inquiry.

20 And we submit that we have -- we have
21 raised a strong inference. Reasonable minds would
22 inquire further as to whether this particular safety
23 issue is -- this issue of environmental risk should be
24 addressed in an environmental impact statement.

25 I don't think I have anything more to add

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1 on that.

2 CHAIR YOUNG: Mr. Repka?

3 MR. REPKA: On Contention 12, the issue,
4 again, is a NEPA issue, severe accident consequence
5 assessment, and what's required. As we explained the
6 last time around, Duke has provided that severe
7 accident assessment in its application, the
8 environmental section. It's based upon the work that
9 DOE did in their SPD EIS, the programmatic work.

10 And it came to a conclusion about the
11 change -- the relative change in consequences that
12 would be the result of the four MOX fuel lead
13 assemblies that would be approved here for a severe
14 accident scenario.

15 So that work has been done. We think that
16 that work is adequate to meet NEPA. NEPA is governed
17 by a rule of reason. It's not a precise quantitative
18 assessment, but, nonetheless, an assessment has been
19 provided that we think provides a realistic assessment
20 -- estimate of changes in severe accident consequences
21 related to this amendment.

22 Now, with respect to the specifics of this
23 contention, it really boils down to the same as the
24 earlier contentions. The first half of it would be
25 that the LOCA analysis is inadequate, and, therefore,

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1 there is somehow -- somehow -- an increased
2 probability of a severe accident.

3 Ms. Curran keeps saying that Duke has not
4 shown that it meets Appendix K. That Duke has not
5 done an adequate Appendix K evaluation. That's simply
6 not true. Duke has done an Appendix K evaluation and
7 has considered the factors, including potential
8 ballooning of the M5 clad. Duke's analysis shows that
9 -- LOCA analysis shows that it meets the criteria that
10 -- the NRC criteria.

11 As I said earlier, for M5 cladding, it
12 includes the conservatism of using the unirradiated
13 properties of the cladding, meaning maximum
14 ballooning, maximum swelling, because at that point
15 there is no -- it hasn't been irradiated, it's maximum
16 ductility because it hasn't been oxidized.

17 Nowhere in this contention is there any
18 basis -- in fact, there's not even a recognition, a
19 citation, a reference to the Appendix K analysis that
20 has been done. There is no showing of a particular
21 problem with it. There simply is this reference to
22 the fact that IRSN has raised some hypothetical
23 questions.

24 That's not an adequate basis without
25 specific reference to the analysis that's been done.

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1 I think what we have is not so much a basis. I think
2 what we have is a question, where BREDL doesn't
3 understand what's been done, hasn't really looked at
4 what's been done, and, therefore, says, "Hmm, there's
5 a question here." Therefore, there's a dispute. It's
6 inadequate, and I don't think that meets the criteria.

7 However, that's the first half of the
8 equation again here, which is the probability of a
9 LOCA that would exceed the design basis. It's the
10 same issue we saw in Contention 10.

11 The second half of the severe accident
12 assessment is, again, same issue as in Contention 11.
13 What would happen in the severe accident scenario?
14 What is the change in consequences? Again, we have
15 taken a stab at estimating that, based upon the DOE
16 work.

17 Dr. Lyman himself has done an estimate in
18 his earlier paper in 2000. He says that he hasn't
19 taken into account all of these different things. The
20 fact of the matter is in that paper he did include a
21 sensitivity study using higher release fractions for
22 actinides, and that came to the conclusion of a change
23 in consequences of, at most, 1.6 percent related to
24 four MOX fuel lead assemblies.

25 So he has done some work. His results

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1 show that there is no real risk-significant deviation
2 from Duke's own work. And, therefore, simply as with
3 the earlier contentions, not really meaningful of
4 relief that can be granted.

5 He says today that he hasn't done all of
6 these additional calculations of release fractions,
7 and this, that, and the other thing. Well, frankly,
8 if he was going to propose a contention, I would think
9 he would have something a little more concrete than
10 simply to say, "I haven't done the work."

11 But it might lead to greater consequences
12 than I suggested in my earlier sensitivity study. I
13 don't even know how large the difference might be.
14 That's simply not adequate for a contention,
15 particularly in NEPA space where there is no
16 requirement for much more than a reasonable
17 assessment.

18 CHAIR YOUNG: Can you just point me to
19 something quickly? The section of the LAR that --
20 where the Appendix K analysis is.

21 MR. REPKA: The Appendix K analysis is in
22 Section 3.7 of the LAR. And then there is additional
23 discussion of the assumptions and the modeling in the
24 MOX fuel design report, as well as in the M5 cladding
25 topical report that we discussed earlier. I can give

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1 you citations in those documents as well if -- but
2 Section 3.7 of the LAR is the LOCA analysis.

3 CHAIR YOUNG: The Framatone and the --
4 which was the third one, the other one?

5 MR. REPKA: The MOX fuel design report
6 would be the second one, and the third one would be
7 the -- I referenced earlier the February 2000 topical
8 report on M5 cladding and the NRC safety evaluation
9 report on M5 cladding. That particular document, it's
10 my recollection -- and I'm sure they'll jump up and
11 correct me if I'm wrong -- has particular curves in it
12 related to M5 and the issue of ballooning.

13 CHAIR YOUNG: Okay. And that last
14 document we have?

15 MR. REPKA: I do not know if you have it.
16 It has certainly been referenced in the prior
17 pleadings.

18 CHAIR YOUNG: Well, it's just a -- for my
19 point of information. You can provide that later if
20 it's -- if you don't have --

21 MR. REPKA: It's in ADAMS. The reference
22 has been given. I know the Staff referred to it in
23 the very first filing.

24 CHAIR YOUNG: Okay. Okay. Then we do.

25 MR. REPKA: Yes. Mr. Nesbit is referring

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1 me now -- we had referred to Section 3 of the license
2 amendment request. It's reference 13 there in
3 Section 3.9 on page 3-38 is the various Framatone and
4 related topical reports and LOCA analyses. So that's
5 where it does appear. The reference appears in the
6 application.

7 CHAIR YOUNG: Thank you.

8 MR. REPKA: Now, the other thing I was
9 going to say about consequence is we've talked about
10 Dr. Lyman's own earlier work, which really concluded
11 that there's insignificant changes in the results.
12 Another important document to recognize here is that
13 we referred earlier this morning to the fact that IPSN
14 made this presentation of data in 2001, I believe, to
15 -- in the context of the Expert Panel on Source Term
16 -- or 2002.

17 That panel issued a report, ERI/NRC 02-
18 202, in October of 2002 that Dr. Lyman referred to in
19 his original Contention 2, I believe, on severe
20 accident consequences.

21 CHAIR YOUNG: Say the numbers again. I
22 know they're there, but --

23 MR. REPKA: All right. It's capital ERI,
24 slash NRC, 02 dash 202, October 2002. That's the
25 report of the Expert Panel on Source Term on high

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1 burnup and MOX fuel.

2 CHAIR YOUNG: Thank you.

3 MR. REPKA: So that was a report issued
4 with full knowledge of the French test results and the
5 issue of severe accident effects of fuel relocation.
6 And that group did not make any substantive changes in
7 estimated total fission products as a result of the
8 information that had been presented based on the
9 VERCOR tests to that group.

10 And Dr. Lyman referenced that in his own
11 filing back last month. So that's another document
12 that's relevant, and I don't think supports the
13 conclusion that there will be significant changes in
14 release fractions, and, therefore, significant changes
15 in the consequences of using four MOX fuel lead
16 assemblies.

17 And I think that's -- the last thing I
18 would say is we have to keep in mind is that we are
19 talking about at this point four lead assemblies, not
20 the full 40 percent core.

21 The bottom line conclusion is, again,
22 there is simply not a sufficient basis for a genuine
23 issue that would lead to some meaningful relief in
24 this case.

25 CHAIR YOUNG: You're saying that support

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1 hasn't been provided. Are you saying that not enough
2 has been provided to warrant further inquiry?

3 MR. REPKA: Certainly in the context of
4 this proceeding, that's true. Not enough has been
5 offered to connect the dots and show that there is an
6 effect on LOCA analysis that would actually affect
7 ECCS performance, that would actually lead to a severe
8 accident because of four lead assemblies, that would
9 actually lead to some meaningful change in dose
10 consequences from that which has already been
11 estimated.

12 Certainly, not enough has been offered.
13 I think it's a bit akin to reading this material and
14 saying, "Hmm, there's an issue that ought to be
15 addressed," without any knowledge of whether it has
16 been addressed or how it's been addressed or any
17 support for the proposition to say if it were
18 addressed, it would actually change some results in
19 some meaningful way.

20 There are many, many things addressed in
21 both the license application and in the environmental
22 report. And I'm sure if you found presentations by
23 IRSN or ACRS or anybody about particular issues, you
24 could always say, "Oh, gee, that should be addressed."
25 And the fact of the matter is if you probe, at least

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1 at some level it may have been addressed.

2 But you -- I think it's certainly
3 incumbent upon the Petitioner at this point to show
4 how that -- how -- some knowledge of what's been done
5 and why that's inadequate.

6 CHAIR YOUNG: Staff?

7 MR. FERNANDEZ: The Staff doesn't have
8 anything to add, other than what was already in our
9 pleading, Your Honor.

10 CHAIR YOUNG: Okay. We're moving right
11 along.

12 Ms. Curran?

13 MS. CURRAN: Okay. I feel like I had to
14 put a stick into a wheel that was going around and
15 around with respect to this Appendix K analysis. Mr.
16 Repka was saying earlier that Duke did an Appendix K
17 analysis, and it was perfectly adequate. And it
18 looked at the issue of the cladding, and there was an
19 analysis of the cladding.

20 But getting back to what -- the clad
21 ballooning. But getting back to what this contention
22 is about, it's about the relationship between clad
23 ballooning with respect to the particular
24 characteristics of the cladding that's going to be
25 used here, in conjunction with the peculiar

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1 characteristics of plutonium MOX fuel, the
2 microstructure of this fuel, and how, in what way it's
3 going to crumble.

4 And the important thing to remember is
5 that the issue of fuel relocation has been
6 intentionally left out of Appendix K, because it was
7 considered to be bounded by the other conservatisms
8 that are included in Appendix K. So there's been no
9 Appendix K analysis of these two factors -- the fuel
10 characteristics and the cladding characteristics and
11 how they interact.

12 There has been an analysis of the cladding
13 characteristics, period. That's what's missing here.
14 That's part of what's missing. That's why Duke can't
15 say, "We did an Appendix K analysis, and it's fine."

16 Another point that I'd like to address is
17 the -- is Mr. Repka's characterization of the report
18 of the Expert Panel on Source Terms, ERI/NRC-02-202,
19 the October 2002 study. Mr. Repka says that report
20 was issued with full knowledge of the results of the
21 VERCOR test.

22 Well, apparently there was a dispute in
23 the panel over the significance of the results of the
24 VERCOR test. So I think this is -- if you look back
25 through the history of what's happened since the

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1 VERCOR test, which was in 1998, it's an iterative
2 process. There is discussion of the results and the
3 significance of the results.

4 And one of -- in our view, one of the very
5 significant discussions that took place was the
6 discussion in October 2003 of what -- not only what is
7 the significance of those test results, but whether --
8 what other information about the characteristics of
9 plutonium fuel and its cladding could be brought to
10 bear to understand better what are the phenomenon here
11 -- phenomena that need to be understood before this
12 license can be issued.

13 Mr. Repka has tried to characterize this
14 whole debate as kind of an academic or speculative
15 inquiry. But we submit that it is not at all, that
16 what IRSN has presented here is evidence that there
17 are actual characteristics of this fuel and this
18 cladding and their interaction that have been
19 observed.

20 They've been observed. It's not
21 speculation. And they're different from the
22 characteristics of uranium fuel and how it relates to
23 cladding.

24 So that, you know, to characterize this as
25 some kind of speculative exercise where we want the

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1 NRC to count how many angels can dance on the head of
2 a pin is a real mischaracterization of the nature of
3 the information that's been supplied here.

4 This is information about a design basis
5 accident analysis and why, when it's applied to MOX
6 plutonium fuel, the kind of analysis that is typically
7 done to comply with Appendix K is not going to be
8 sufficient to satisfy the NRC's overall requirement
9 that the safety systems in this plant have to be
10 adequate to cool this core if there's an accident,
11 because not enough is known about what is going to be
12 the behavior of the cladding and the fuel taken
13 together in an accident, in a LOCA.

14 And that, of course, leads to severe
15 accident issues as well as just plain old issues of,
16 can the design basis requirements be complied with?

17 Certainly, we have submitted enough
18 information to warrant further inquiry by this Board
19 in the form of a hearing where we would be allowed to
20 present evidence that -- to make our case that Duke is
21 unable to satisfy the basic safety requirements to get
22 an operating license for this LTA application.

23 JUDGE BARATTA: Let me ask you -- the
24 paragraph to which you refer in Appendix K refers to
25 the impact of those parameters primarily on the gap

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1 conductance, and the gap conductance is obviously a
2 critical issue with respect to the PCT that occurs,
3 because it basically provides the mechanism for the
4 heat eventually to get out of the fuel rod and such.

5 Is there any place else in Appendix K that
6 -- where this ballooning issue would come up that
7 you're required to perform an analysis?

8 MS. CURRAN: If you could bear with us for
9 a moment. Well, that -- that would be the relevant
10 section, the section I referred to. But it's
11 important to also bear in mind that fuel relocation
12 would have an impact on the gap conductance.

13 JUDGE BARATTA: And could it be in a
14 positive sense?

15 MS. CURRAN: We couldn't say.

16 JUDGE BARATTA: Okay. Okay. Thank you.

17 CHAIR YOUNG: Anything more on 12?

18 MS. CURRAN: Just one moment.

19 CHAIR YOUNG: Okay.

20 MS. CURRAN: Again, I would just -- on the
21 issue of fuel relocation and its relation to
22 Appendix K, I think it's helpful to read the document
23 entitled Attachment 4, especially the discussion on
24 page 5, which says that -- it concludes the fuel
25 relocation during a LOCA should be considered an

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1 Appendix K non-conservatism.

2 Certainly, it is sufficient. Now, whether
3 this is a conclusive statement or a dispositive
4 statement by a member of Staff who has authority to
5 make that determination as a regulatory basis, it's
6 certainly enough to put into dispute the question of
7 whether Duke's Appendix K analysis is sufficient in
8 light of the fact that it has not taken into account
9 the issue of fuel relocation.

10 JUDGE BARATTA: Is there a regulatory
11 requirement to do that?

12 MS. CURRAN: To take into account fuel
13 relocation?

14 JUDGE BARATTA: Yes.

15 MS. CURRAN: Well, no, because GSI-92 was
16 dropped. It was decided not to put that into
17 Appendix K in the belief that existing conservatisms
18 in Appendix K would essentially cover it. And now the
19 Staff is concerned that that was not the correct
20 judgment.

21 CHAIR YOUNG: Anything more?

22 MS. CURRAN: No.

23 CHAIR YOUNG: Okay.

24 MR. FERNANDEZ: Your Honor, just one thing
25 on the question that was just asked. I mean, if there

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1 is no current regulatory requirement to do so, then
2 the application does meet the current regulatory
3 requirements. The Staff is working on maybe changing
4 the regulations. That doesn't impact the status of
5 applications that are currently before the Staff.
6 They need to be assessed against the regulatory
7 requirements as they exist today, not as they may
8 exist in the future.

9 CHAIR YOUNG: Anything else?

10 MS. CURRAN: I'd just like to respond to
11 that very briefly. Except Appendix K is I think
12 referred to in 50.46, 10 CFR 50.6, which provides the
13 acceptance criteria for emergency core cooling systems
14 for light water nuclear power reactors.

15 CHAIR YOUNG: 50?

16 MS. CURRAN: 10 CFR 50.46.

17 CHAIR YOUNG: 46.

18 MS. CURRAN: Which was referred to in I
19 think Contention 10.

20 So the question is whether if the -- if
21 the analysis that's required by Appendix K, which is
22 -- if you look at those Appendix K requirements, it
23 says certain factors should be put into an analysis.
24 It doesn't -- it gives some discretion. There is
25 variables that go into that analysis.

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1 If that analysis is inadequate to satisfy
2 10 CFR 50.46, then one of the basic regulatory
3 requirements of the Commission for safety of the
4 nuclear reactor isn't met.

5 CHAIR YOUNG: We understand that you have
6 a dispute, and I think I went over some of the issues
7 before, so I'm not going to repeat those.

8 Anything more on 12?

9 Okay. Let me -- as I said before, I had
10 a few questions that I wanted to mainly ask Duke. Do
11 you want to say anything before I do that? You -- 13
12 you said you didn't have that much to say. Okay.

13 My questions are these -- first, what
14 control, if any, does Duke -- what role does Duke have
15 in the transportation itself? And I know there are
16 contractual agreements, and so forth, and I'd like you
17 to address that issue -- the control or relationship
18 of Duke to the actual transportation.

19 Next --

20 MR. REPKA: Could I answer them one at a
21 time? That way -- would that be easier?

22 CHAIR YOUNG: You can. But I'd -- you
23 might want to get an overview of what I'm sort of
24 looking at. Well, they are somewhat severable. Go
25 ahead and answer.

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1 MR. REPKA: I think it's easier if I just
2 answer your --

3 CHAIR YOUNG: Sure, go ahead.

4 MR. REPKA: -- question. So the first
5 question is: what role does Duke have in the
6 transportation? The answer is: none. Our only role
7 is to receive the lead assemblies when they arrive at
8 the Catawba station.

9 CHAIR YOUNG: Okay. So that undertaking
10 is solely DOE's.

11 MR. REPKA: Correct.

12 CHAIR YOUNG: Okay. In the basis, the
13 beginning of the basis for the contention, though,
14 there is a reference to your conceding that the
15 shipment and return shipment are related actions whose
16 environmental impacts must be considered. And I don't
17 think you disagreed with that, if I'm remembering
18 correctly.

19 What I understand your main argument to be
20 is that it's the DOE EIS that's relevant, and that's
21 in the hands of DOE. That may be oversimplifying it,
22 but --

23 MR. REPKA: They're related in the sense
24 that obviously the lead assembly application is part
25 of the broader program. But with respect to the

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1 shipment itself, it's DOE that would consider that to
2 the extent that it's required to consider that.

3 CHAIR YOUNG: I guess here's my question,
4 and that is if -- if you are conceding that the
5 transportation is a related issue that you need to
6 address in --

7 MR. REPKA: We're not conceding that.
8 We're not conceding that it's a related issue that we
9 need to address. We're conceding that -- we're not
10 conceding anything. But what I would say is -- and
11 what I said is it's part of the program. But there's
12 no requirement that we address it. We -- Duke.

13 CHAIR YOUNG: Just looking back to 5.32,
14 shipment of the polished POU -- plutonium oxide powder
15 is a related activity involving intermodal transport,
16 and so on. If you -- if DOE had not issued its EIS,
17 since you're saying it's a related activity, would you
18 be doing your own on this?

19 MR. REPKA: I don't know, because they did
20 do their EIS, and they have done their supplement
21 analysis. So I don't know, in that scenario, what
22 would be done.

23 CHAIR YOUNG: Are you -- by saying that
24 it's a related activity, are you more or less adopting
25 DOE's as yours here?

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1 MR. REPKA: No, I don't believe so. I
2 think we're referencing it simply for information and
3 to assist the reader to know where to find other
4 information where it has been addressed. But it's
5 certainly not our attempt to adopt it, and it's --
6 intent to adopt it, and it's certainly not our view
7 that, as we responded in our filing, BREDL suggested
8 that somehow because we referenced it, therefore, it
9 brings it into the scope of our application and into
10 the scope of this proceeding. And we certainly do not
11 agree with that.

12 And, in fact, a similar argument was made
13 in the DCS case on the fuel fab facility, and that
14 Board did address that. We cited that in our written
15 response and said, "Certainly, a reference by an
16 applicant to another environmental review doesn't
17 bring it within the scope of the first application."

18 CHAIR YOUNG: The reason I was asking the
19 questions is most of your response seems to focus on
20 your argument that BREDL did not -- let's see. BREDL
21 fails to explain, with basis and specificity, what is
22 deficient in the DOE document. And I don't think I
23 found any reference to the particular relationship
24 there that you're making now in response to my
25 questions.

1 And so I guess where I'm headed with this,
2 and what I'm trying to understand here, is you
3 referred to this as a related activity. So normally
4 if you answered you don't know whether you would do
5 your own if DOE's were not done.

6 And I guess this sort of gets to a
7 partially legal/partially factual issue of what you
8 would do in that circumstance, because that in a sense
9 -- if you have a responsibility to do it yourself, if
10 it's not being done by some other entity, then I start
11 thinking in terms of, well, are you adopting DOE's as
12 your own?

13 If you are adopting DOE's as your own,
14 then you sort of are opening yourself up to challenge
15 of that in the same way that your own would be
16 challengeable had -- were you to do your own.

17 Do you understand what I'm saying?

18 MR. REPKA: Yes, I do.

19 CHAIR YOUNG: And that's sort of what I'm
20 getting at here, because obviously if -- the only
21 thing that raises a question is if this were totally
22 separate and there were no question about the
23 relationship, then I think, you know, a good argument
24 could be made at least that we don't have jurisdiction
25 over DOE here.

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1 But the relatedness is the real thing on
2 which these questions sort of seem to hinge. And the
3 answer I'm hearing is that you're not sure whether you
4 would or not.

5 MR. REPKA: No. The answer is he raised
6 a scenario that's not before us, which is, what if DOE
7 had not addressed it? It's not before it. DOE did
8 address it. So what we have is a situation where
9 we've referenced the fact that they have done an
10 analysis of this aspect of the total program that they
11 are responsible for.

12 We are not adopting it as our own. We are
13 not bringing it into the scope of this proceeding.
14 What we're doing is this whole program, as we talked
15 about last month, involves many, many pieces.

16 CHAIR YOUNG: Right.

17 MR. REPKA: And what we really have here
18 is a case of tiering, where the various environmental
19 reviews are tiered from the DOE overall program. And
20 we are simply referencing the fact that DOE has done
21 work with respect to those aspects of the program that
22 they are responsible for. I don't think in any way we
23 are bringing it into the scope of this approval that
24 has nothing to do with transportation.

25 Beyond that, I'd say our arguments are

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1 very definitely layered. Our first argument is that
2 this is completely -- this issue related to
3 transportation is completely outside the scope of the
4 license application under review. And that remains
5 our position.

6 Then, we go on to say, but even if somehow
7 it weren't, if you really look at the contention, the
8 contention says it has -- that DOE hasn't -- and Duke
9 haven't addressed anything beyond the 1996 PEIS on
10 transportation. And that's simply not true. The
11 supplement analysis is obviously post-9/11, and so
12 it's very much a layered argument.

13 CHAIR YOUNG: Okay. I guess -- and I'm
14 not sure I'm going to get anything more on this, but
15 I guess that all of the questions that I'm asking sort
16 of hinge on whether you are required to consider this
17 as a related activity in your environmental report.

18 And what I may be hearing you say -- tell
19 me if I am or am not, or whether you mean -- whether
20 you're intending to say that you didn't have to -- in
21 sort of the same way that you said you -- Section 3.8
22 was not required, Section -- whatever sections relate
23 to the transportation are not required.

24 MR. REPKA: Well, in this case it's not a
25 section. It's a statement referencing the DOE work.

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1 So -- and no, we weren't required to make
2 that statement, and certainly the DOE assessment of
3 transportation issues is not within our scope. And we
4 are not required to address it, and I'd say it as
5 directly as that. We are not required to address it,
6 and the simple reason is because it's part of the DOE
7 program and it's addressed elsewhere.

8 It would really be to have us address it
9 in any scenarios -- us, Duke, address it in the
10 context of the lead assembly application is -- it
11 would seem to me to be kind of like the proverbial
12 tail wagging the dog.

13 I mean, it's really up to DOE to produce
14 the lead assemblies. It's up to Duke to use the
15 assemblies. It wouldn't make sense to have Duke, in
16 the context of using, evaluate all of those other
17 activities that DOE is responsible for.

18 CHAIR YOUNG: Right. But you make
19 reference to the transportation and shipment as a
20 related activity, and that's where all of my questions
21 arise from.

22 MR. REPKA: And, yes, it's related. I
23 would not read legal significance into that to say
24 that that brings it within the scope of this
25 environmental review. That's certainly not the flavor

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1 of the statement. That's not the intent, nor could it
2 be in our view. Again, I think we were just really
3 trying to be informative.

4 CHAIR YOUNG: Okay. And my only other
5 question is -- and I'm not sure that I necessarily
6 want to open this up -- but are you aware of any case
7 law on similar relationships between entities where
8 one might be referring to an EIS of another and where
9 the courts have spoken to the relevance of that and
10 how it is to be treated? And --

11 MR. REPKA: Well, certainly, we just --

12 CHAIR YOUNG: -- adoption as opposed to
13 reference? Those types of issues. I think you know
14 what I'm talking about.

15 MR. REPKA: Yes, I do. And we talked
16 about that last month, and we gave you reference to
17 the CEQ regulations on tiering, which talk about
18 different agencies doing --

19 CHAIR YOUNG: Did you give me case law
20 last time? I can't remember.

21 MR. REPKA: I don't recall that we gave
22 you case law where there --

23 CHAIR YOUNG: Okay.

24 MR. REPKA: -- CEQ regulations are
25 applied. But certainly, the concept is well

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1 recognized in different agencies. To avoid redundancy
2 and duplication, we'll do those things that are
3 logically within their sphere.

4 Certainly, in the NRC space -- I don't
5 have case law in front of me -- but you would see
6 similar tiering between work done by TVA and the NRC
7 in the context of reactor licensing, I'm quite
8 certain, because TVA will have certain obligations and
9 the NRC will not necessarily repeat that.

10 CHAIR YOUNG: Okay. Those were the nature
11 of my questions.

12 Ms. Curran, does that cause you to want to
13 say anything? We've got 18 minutes, and we can divide
14 that up. But I would -- let's say five minutes. Do
15 you have anything you want to say on --

16 MS. CURRAN: Yes. Well, first of all, Mr.
17 Repka made an analogy to the tail wagging the dog.
18 And I was thinking my analogy would be to building the
19 fence before you had figured out whether you really
20 wanted a dog, whether -- that's what --

21 (Laughter.)

22 Maybe that's not a great analogy either.
23 But the idea of NEPA is that you don't cut -- if
24 there's a project that has many facets to it, you
25 don't lop off individual facets and look at them in

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1 isolation without looking at the relationship to the
2 whole. And that's why we are raising it -- this issue
3 in this proceeding.

4 This testing application relates to a
5 bigger program -- that's true. But you can't pick one
6 little piece of it without being satisfied that you've
7 looked at the whole, and that you've understood the
8 impacts of the whole. That's a really basic element
9 of NEPA.

10 CHAIR YOUNG: That reminds me -- and I --
11 let me just ask you two questions, but it does remind
12 me I had two questions for you. One of them is I know
13 you're a party -- or you filed a petition on the
14 export license.

15 MS. CURRAN: Right.

16 CHAIR YOUNG: And I'm wondering what you
17 would not be able to raise in that one that would need
18 to be raised here. That's the first question.

19 The other question is -- and this may be
20 a matter of refreshing my memory -- there was some
21 reference in the last argument to an early discussion
22 with the former Secretary of Energy about the EISs
23 that would come along the way here.

24 And I don't know -- what involvement have
25 you had with DOE on any of the EISs that they have

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1 done? And are you saying that -- is any of your
2 argument here based on any asserted -- I guess my
3 question is, well, you say that it's an overall
4 program, but obviously DOE is the one --

5 MS. CURRAN: Right.

6 CHAIR YOUNG: -- primarily in control. So
7 why should we --

8 MS. CURRAN: I think I understand your
9 question.

10 CHAIR YOUNG: -- consider something here
11 if there are other opportunities for it to be
12 considered that would be more appropriate with --
13 involving DOE directly?

14 MS. CURRAN: Let me answer both your
15 questions. The first question is -- BREDL is a party
16 or has -- is one of the co-petitioners in the
17 plutonium export case. It is not clear to me that the
18 petitioners -- Greenpeace, BREDL, and a group called
19 Charleston Peace -- whether they are going to get a
20 hearing. Their standing has been vigorously opposed
21 by the Department of Energy.

22 There is not a lot of Commission
23 precedence involving export licensing cases where
24 petitioners sought standing on -- based on
25 representational standing. And, of course, since a

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1 lot of the activity takes place overseas, it's kind of
2 a new issue, and it's not clear to me whether or not
3 these petitioners are going to get standing.

4 So this, indeed, may be the only forum --
5 this particular hearing -- in which BREDL is able to
6 get a hearing on the environmental impacts of the
7 shipments.

8 CHAIR YOUNG: Of the shipments for the
9 lead test assemblies, or for any -- I mean, there
10 would be another application assuming there were an
11 application to do batch quantities.

12 MS. CURRAN: Oh, yes. I'm just talking
13 about --

14 CHAIR YOUNG: You're just talking about
15 this --

16 MS. CURRAN: -- this particular upcoming
17 event.

18 MR. REPKA: Actually, batch quantities
19 would be fabricated in the United States at the full
20 fab facilities.

21 MS. CURRAN: Right. It's just the test
22 assemblies that are proposed to be made in France. So
23 that's the answer to the first question.

24 CHAIR YOUNG: Okay. The second one was
25 more the -- your participation --

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1 MS. CURRAN: Right.

2 CHAIR YOUNG: -- in the overall --

3 MS. CURRAN: Right. Now, I don't know
4 whether BREDL has filed comments on the previous
5 DOE EISs. There was one in '96 and one in '99. But
6 I think the important thing here is that the NRC is
7 the Agency that has responsibility for licensing this
8 -- or determining whether a license should be issued
9 to Duke for this LTA testing.

10 And that gives the NRC a responsibility
11 for determining whether NEPA has been complied with.
12 We think that it's likely that a court will say the
13 NRC can rely, to some degree, on whatever analysis has
14 been performed by the Department of Energy.

15 But that doesn't absolve the NRC from its
16 responsibility as the licensing agency to make a
17 determination that NEPA has been fully complied with,
18 and that's why we have brought to you our complaint
19 that the supplemental analysis that was submitted by
20 -- prepared by DOE and submitted by Duke in November
21 is not adequate to address the environmental impacts
22 of the shipments of the fuel back and forth to France,
23 including the impacts of a terrorist attack. And --

24 CHAIR YOUNG: And the November 2003 --

25 MS. CURRAN: Yes, 2003. That's the

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1 supplemental analysis.

2 CHAIR YOUNG: And you're --

3 MS. CURRAN: Of course, that has some
4 discussion of -- which is quoted on page 24 of the
5 Duke response, that there is -- it's kind of a vague
6 assertion that these reports are going to be in the --
7 whatever DOE does is going to be protected from
8 sabotage.

9 But that doesn't consist of a discussion
10 of the environmental impacts of sabotage or terrorist
11 attacks and how they could be avoided. DOE just says,
12 "We're going to -- we have some measures to protect
13 against it." And what we are looking for is a
14 discussion of the environmental impacts, which we
15 discuss in the contention how they might be
16 exacerbated beyond the scope of what's been looked at
17 in the 1996 EIS.

18 In the 1996 EIS, the DOE said, "Well,
19 those impacts would be embraced by the scope of
20 ordinary accident impact." But what we say in the
21 contention is they could be worse, because a
22 deliberate act of sabotage could cause worse
23 consequences, for instance, than an accident. That
24 needs to be addressed.

25 And also, measures for avoiding or

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1 mitigating those, and not just general assertions such
2 as DOE would modify its methods and systems as
3 appropriate based on a result of this examination to
4 reduce the potential for sabotage or terrorist attacks
5 to be successful, that kind of vague discussion is not
6 adequate in our view to satisfy the requirements of
7 NEPA to look at actual mitigative measures or
8 alternatives.

9 JUDGE BARATTA: Let me ask you, then, who
10 -- suppose, hypothetically, that it was determined
11 that we admitted this and proceeded. Who would then
12 do that analysis?

13 MS. CURRAN: Well, I'm not sure that BREDL
14 cares who does it. Well, it would have to be --

15 JUDGE BARATTA: But wait --

16 CHAIR YOUNG: -- a federal agency. It
17 couldn't be Duke, because --

18 JUDGE BARATTA: It wouldn't be Duke.

19 CHAIR YOUNG: It couldn't be Duke. Duke
20 is only responsible for the first step of an
21 environmental analysis on which the NRC ultimately --
22 well, in the typical NRC licensing case, the applicant
23 does the first -- takes the first shot essentially at
24 an environmental analysis. And then the NRC relies on
25 that for preparation of the environmental impact

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1 statement, which is the government's responsibility.

2 And that's addressed in the -- I can't
3 remember the LBP number, but in the Claiborne
4 Enrichment Center case, the Licensing Board addressed
5 the relationship between the Staff and the applicant
6 in performing a NEPA analysis.

7 The applicant goes ahead, prepares an
8 environmental report, but the staff has an independent
9 obligation to take that analysis, turn it into a
10 defensible environmental impact statement, and the
11 Staff has the burden of defending that environmental
12 impact statement. And ultimately the Agency bears
13 responsibility for that EIS.

14 Now, whether or not the legwork is done by
15 the NRC staff or the DOE staff, it's our position that
16 the NRC, as the licensing agency, has ultimate
17 responsibility for making sure that this license is
18 supported by an adequate EIS.

19 CHAIR YOUNG: We're running out of time.
20 There are all sorts of sort of legal relationship
21 issues that are -- that I'm not altogether clear
22 about. But would it be safe to say that if you were
23 found to have standing, and got a contention in an
24 export license case, that you would have no further
25 interest in this one? And that you're trying to sort

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1 of cover your bases to make sure that you don't fall
2 through the cracks? I'm --

3 MS. CURRAN: Yes. I think that's fair to
4 say. And what we would hope to see is that they'd be
5 consolidated somehow. We don't -- we wouldn't want to
6 waive our right to a hearing in either case unless we
7 were assured of a hearing in the other. But certainly
8 we don't want to litigate it twice.

9 CHAIR YOUNG: Do you have anything to say
10 about the questions that I was asking Mr. Repka
11 earlier about the relationship between Duke and DOE on
12 the environmental analysis of the transportation?

13 MS. CURRAN: I don't think that the
14 question of what -- Duke's position here about what
15 its responsibility is is kind of a side issue to us,
16 because the DOE has already -- the applicant's role is
17 important in a case where the government hasn't yet
18 done its thing, hasn't --

19 CHAIR YOUNG: Well, my -- let me just
20 interject here, because we are running out of time.

21 MS. CURRAN: Okay.

22 CHAIR YOUNG: Who would you have us direct
23 -- if we were to admit this, who would you have us
24 direct anything we said to? DOE? Because DOE is not
25 before us, and that's -- so if you're saying --

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1 MS. CURRAN: Well, you could say we're not
2 going to issue a license to this facility unless
3 there's an adequate EIS. And then, the NRC and the
4 DOE could work with them to prepare it.

5 They are probably -- I would imagine there
6 is some provision that they behave as cooperating
7 agencies on this, and they would work out some kind of
8 an arrangement. But your decision as to the adequacy
9 of the EIS would govern whether this license is
10 issued.

11 CHAIR YOUNG: Can I just ask you very
12 quickly -- the Staff and Duke -- do you -- can you
13 just say any -- can you say anything about this
14 falling through the cracks issue? The relationship
15 between the export license case and this case?

16 If there's -- if standing, for example, is
17 not found in the export license case, is it -- this
18 maybe needs to go more to the Staff, but I want to
19 hear what you have to say, too, Mr. Repka. Would you
20 go so far as to say that the petitioners simply have
21 no right or means to question the EIS on this?

22 MR. REPKA: It's our position that there's
23 no -- the issue of transportation is immaterial to
24 this case, and they have no ability in this forum, in
25 this context, to address that issue. And that

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1 conclusion, in our view, is totally independent of the
2 outcome of the NRC's case on the export application,
3 whether or not BREDL is granted the right to intervene
4 in that case.

5 Ultimately, that's irrelevant. If they
6 are in, or they're not in, it doesn't matter. It's
7 still not an issue in this case. The responsibility
8 is fundamentally a DOE one.

9 And just to provide a little perspective
10 on these shipments, the Department of Energy to -- in
11 order to make these shipments also needs to do that in
12 concert with the Department of Defense, the Department
13 of Commerce, the State Department --

14 CHAIR YOUNG: Just to cut -- because we're
15 running out of time. I can understand that -- let's
16 say the '96 document was done. The November 2003
17 document -- do you -- and I want to ask the Staff this
18 also. Are you -- a lot of times argument will be
19 made, "Well, this is not the proper forum," or "this
20 is not the proper method." Are you -- what would you
21 say would be the appropriate way for BREDL to
22 challenge the November 2003 document?

23 MR. REPKA: At the Department of Energy,
24 by whatever mechanism is available there, and if not
25 there then in federal court.

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1 CHAIR YOUNG: And is there a separate way
2 to do that than -- with regard to the transportation
3 than the --

4 MR. REPKA: Well, certainly the --

5 CHAIR YOUNG: You're saying the statements
6 to DOE apart -- separate and apart from the export
7 license, you're just saying submit statements on --
8 comments on that portion of the EIS to DOE directly.

9 MR. REPKA: Correct. Although -- but I
10 don't know what the process was or is at the
11 Department of Energy, nor would I provide advice to
12 BREDL. My point, though, is that's a DOE document.
13 And if they have a problem with it, they need to
14 challenge it at DOE or in the federal courts.

15 CHAIR YOUNG: And your references to it
16 are merely informative; they're not required?

17 MR. REPKA: That's correct. I mean, you
18 know -- and, again, part of the focus of our response
19 was even if you did consider it somehow by some reason
20 that we can't conceive of in this forum, there is
21 still nothing there. And it still raises an issue
22 which the Commission has said is beyond the scope of
23 its NEPA responsibilities when it talks about
24 terrorism. So it's in that context that we raise --
25 we discuss it in our response.

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1 CHAIR YOUNG: Okay. We're going to have
2 to wrap up. Staff, something quickly? And then, Ms.
3 Curran, we'll let you reply, and then we're going to
4 have to go. So, Mr. Fernandez? Ms. Uttal?

5 MR. FERNANDEZ: We have nothing to add,
6 Your Honor.

7 CHAIR YOUNG: Okay. Well, where do you
8 think they should -- do you agree with Duke that BREDL
9 should take their comments --

10 MR. FERNANDEZ: If their argument is about
11 the sufficiency and the adequacy of what the
12 Department of Energy has done to date, the Board and
13 the NRC is in no position to tell the Department of
14 Energy how to conduct is NEPA business. And it should
15 be dealt with at the Department or with the Federal
16 Court of Appeals.

17 But this Board is in no position to grant
18 the remedy that would satisfy BREDL in making the DOE
19 redo their environmental impact statement. I mean,
20 the Commission, as a sister agency, can't tell the DOE
21 what to do.

22 CHAIR YOUNG: So, well, in the export
23 license case it can. But so you're saying -- you
24 agree with Duke that this -- this portion of the
25 environmental report that refers to transportation in

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1 the DOE EIS on that, you are saying that that's just
2 -- it wasn't necessary, didn't need to be in there.

3 MR. FERNANDEZ: Correct.

4 CHAIR YOUNG: Okay. Anything further from
5 you?

6 MS. CURRAN: Well, I just refer the Board
7 back to the National Environmental Policy Act, which
8 provides that in taking a major federal action that
9 would have a significant impact on the human
10 environment the Agency that takes this action has to
11 either prepare an environmental impact statement or an
12 environmental assessment. In other words, comply with
13 the requirements of NEPA.

14 So that the statute imposes on the NRC an
15 obligation to comply with NEPA that I don't think can
16 be avoided by saying another agency is going to do
17 this, and we are going to -- we are going to issue a
18 license without expressing any opinion or reaching any
19 judgment on whether there was an adequate NEPA
20 analysis to support our licensing action. That's our
21 position.

22 CHAIR YOUNG: You're saying -- if I
23 understand it, you're saying NRC has an independent
24 responsibility to look into the environmental impacts
25 of the transportation, and that applies -- whoever is

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1 in charge of the transportation, because you're
2 contending that it's related.

3 MS. CURRAN: Exactly.

4 CHAIR YOUNG: Okay.

5 MS. CURRAN: It's a related action that
6 falls within the scope of the NEPA analysis that has
7 to be done by the NRC here.

8 CHAIR YOUNG: Do you have anything
9 further?

10 MR. FERNANDEZ: One last thing. Even if
11 what Ms. Curran said today we took all to be true, the
12 one subject matter that she complains of in her
13 contention, that BREDL complains of, it's terrorism
14 with regards to NEPA. And we all know that the
15 Commission has already decided that issue.

16 So even if we were to decide, yes, these
17 are connected actions required to be analyzed in the
18 same EIS by NEPA, we would have to then go on to
19 address what she is actually complaining about, which
20 is an issue that the Commission has said that under
21 its own regulations and interpretation of the statute
22 is not something that -- it will be addressed in our
23 environmental reviews pursuant to that statutory
24 authority.

25 CHAIR YOUNG: Okay. And actually, he --

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1 I think he sort of made a point here. I'm looking at
2 your footnote. You're distinguishing it by saying
3 that DOE and not NRC is responsible. And having
4 undertaken to evaluate -- I'm reading from your
5 footnote 4, having undertaken to evaluate these
6 impacts, DOE is subject to review for the
7 reasonableness of its analysis, that's sort of
8 different than what you were saying before.

9 So your terrorism distinction I'm not --
10 you know, you have one less thought to impart on that,
11 because that -- that sort of knocks down what you said
12 before. I mean, you -- I'm not sure that you can say
13 both. If you're directing it to NRC, and the only
14 distinction with the terrorism rulings that the
15 Commission has made is that DOE is the one that has
16 done it, and we can't tell DOE what to do in this
17 case, then I think we -- Mr. Fernandez may have a
18 point that your distinction with the terrorism ruling
19 sort of goes away.

20 MS. CURRAN: Well, that could be. I mean,
21 that's certainly a good argument. I also think -- I
22 said this before in the last argument, that in the end
23 the reasonableness of these two positions -- the
24 position taken by DOE and the position taken by the
25 NRC -- may wind up in the courts. And that it would

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1 be better to -- to follow the DOE's lead in this
2 respect and do the broader analysis, especially if
3 Duke is in the hurry that it seems to be in.

4 CHAIR YOUNG: We are going to have to go.
5 I think that just one thing needs to be said, and that
6 is that we're limited, obviously, by the legal
7 authority that we have. And the terrorism rulings
8 have been made by the Commission. DOE is not before
9 us. I don't know what's going to happen down the
10 line, but I can't think of anything else.

11 Do either of you have any more questions?
12 I can't think of anything else we want to know from
13 you, unless there's some last thing. I think we
14 probably need to adjourn for today and just look
15 forward to seeing each other next Wednesday on the
16 security issues.

17 JUDGE BARATTA: Just bring your snowshoes
18 because they keep getting snow.

19 CHAIR YOUNG: All right. It's been a
20 pleasure to spend the day with you. We're adjourned.

21 (Whereupon, at 5:02 p.m., the proceedings
22 in the foregoing matter were adjourned.)
23
24
25

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CERTIFICATE

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission in the matter of:

Name of Proceeding: Duke Energy Corporation

Catawba Nuclear Station

Docket Number: 50-413/414-OLA;

ASLBP No. 03-815-03-OLA

Location: Charlotte, NC

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and, thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.



Rebecca Davis
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