

POOR
ORIGINAL

TERA

NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF:

THE DUKE POWER COMPANY

(Oconee/McGuire)

Docket No. 70-2623

Place - Bethesda, Maryland

Date - 10 September 1979

Pages 3845 - 4061

Telephone:
(202) 347-3700

ACE - FEDERAL REPORTERS, INC.

Official Reporters

444 North Capitol Street
Washington, D.C. 20001

NATIONWIDE COVERAGE - DAILY

1003 072

790926040 B

C 815
WR som/wbl
WELandon
Madelon

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

-----+
:
In the matter of: :
:
THE DUKE POWER COMPANY : Docket No. 70-2623
:
(Oconee/McGuire) :
:
-----+

Commission Hearing Room,
Fifth Floor, East-West Towers,
4350 East-West Highway,
Bethesda, Maryland.

Monday, 10 September 1979

Hearing in the above-entitled matter was resumed,
pursuant to notice, at 8:30 a.m.

BEFORE:

MARSHALL E. MILLER, Esq., Chairman,
Atomic Safety and Licensing Board.

DR. CADET H. HAND, Member.

EMMETH A. LUEBKE, Member.

APPEARANCES:

On behalf of the Applicant:

J. MICHAEL McGARRY, III, Esq.,
Debevoise and Liberman,
806 15th Street, N.W.,
Washington, D.C.

WILLIAM L. PORTER, Esq.,
Legal Department,
Duke Power Company
422 S. Church Street,
Charlotte, North Carolina

1 On behalf of Intervenor Natural Resources Defense Council:

2 ANTHONY Z. ROISMAN, Esq.,
3 917 15th Street, N.W.,
4 Washington, D.C.

5 On behalf of Intervenor Carolina Environmental
6 Study Group:

7 JESSE RILEY,
8 Charlotte, North Carolina

9 On behalf of the Regulatory Staff:

10 EDWARD J. KETCHEN, Esq. and RICHARD K. HOEFLING, Esq.,
11 Office of Executive Legal Director,
12 Nuclear Regulatory Commission
13 Washington, D.C., 20555

14 On behalf of the State of South Carolina:

15 RICHARD P. WILSON, Esq.,
16 Assistant Attorney General,
17 State of South Carolina,
18 Columbia, South Carolina.

19

20

21

22

23

24

25

26

27

28

29

30

1003 074

31

32

33

C O N T E N T S

	<u>WITNESSES:</u>	<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>	<u>RECROSS</u>	<u>BOARD</u>	<u>CX ON BOARD</u>
1							
2							
3	James W. Hufham	3862	3872				
4	James W. Hufham) Brett Spitalny)	3911	3923				
5	James W. Hufham	3953	3958				
6	Brett Spitalny	3997	4007			4038	
7			4041				

	<u>EXHIBITS:</u>	<u>IDENTIFIED</u>	<u>RECEIVED</u>
8			
9	Staff 29 (Certificate of Compliance #6698, Rev. 8.)	3915	3922
10	Appl. 24 (Supp. testimony of Hamilton)	3948	3949
11	Appl. 25 (Supp. testimony of Garrick)	3949	3949
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

P R O C E E D I N G S

1
2 CHAIRMAN MILLER: The resumption of the evidentiary
3 hearing will come to order, please.

4 May we have identification of counsel and parties
5 for the record.

6 MR. MC GARRY: Mr. Chairman, my name is Michael
7 McGarry, along with William Porter, we'll be representing
8 Duke Power Company.

9 CHAIRMAN MILLER: Thank you.

10 MR. WILSON: Mr. Chairman, I'm Richard P. Wilson,
11 I'm Assistant Attorney General for the State of South
12 Carolina and I represent the state in these proceedings.

13 CHAIRMAN MILLER: Thank you.

14 MR. KETCHEN: Mr. Chairman, Ed Ketchen, representing
15 the Nuclear Regulatory Commission Staff, and with me is
16 Mr. Dick Hoefling, representing the Nuclear Regulatory
17 Commission Staff.

18 MR. MC GARRY: Mr. Chairman, perhaps I could
19 make a comment for the record?

20 CHAIRMAN MILLER: Very well.

21 MR. MC GARRY: It will explain, perhaps, the
22 absence of Mr. Roisman.

23 On Thursday last, the parties placed a conference
24 call for the purposes of schedule, and we arrived at a concensus.
25 And I would just like to inform the Board of the results of

1 that conversation.

2 Mr. Roisman has personal problems that prevent
3 him from getting to this hearing until 9:30 this morning.
4 It was agreed among the parties, subject to the Board's
5 approval, of course, that the State of South Carolina would
6 begin its examination of the Staff's witness this morning,
7 inasmuch as South Carolina has conflicts itself, as we all
8 were familiar with at the last session.

9 Then this afternoon --

10 CHAIRMAN MILLER: Pardon me just a moment, I
11 have a telephone call.

12 (Brief recess.)

13 CHAIRMAN MILLER: Pardon me, Mr. McGarry, you
14 may proceed.

15 MR. MC GARRY: Thank you, Mr. Chairman.

16 Then continuing on Monday afternoon and continuing
17 over until Tuesday morning, the Staff will put on witnesses
18 for Mr. Roisman to cross-examine based upon the Freedom of
19 Information Act material that he received from the Staff.

20 Then Tuesday afternoon, Mr. Roisman will be
21 unable to attend for personal reasons. We will then address
22 Mr. Riley's cask drop contention, whether or not he even
23 has a contention, we'll get into that matter. Then in addition
24 there are other matters that the Staff possibly will get into
25 and the Applicant will get into, so we can proceed on Tuesday

wrb/agb3
1 afternoon.

2 Wednesday morning, we would complete the Appli-
3 cant's case and the Staff's case and the cross-examination of
4 Mr. Riley and Mr. Roismai. Wednesday afternoon will sort of
5 be free time, but I'm sure it will extend over that period.

6 Mr. Bateman then would come Thursday morning.
7 And then we were all hopeful that we could conclude by
8 Thursday.

9 I might say that with respect to the Applicant's
10 prefiled testimony, we had discussed the necessity of the
11 appearance of our witnesses with both Mr. Riley and Mr.
12 Roisman. I did not discuss it with Mr. Ketchen and Mr. Wilson,
13 but I will say with respect to Mr. Riley and Mr. Roisman,
14 they don't have any questions for Dr. Garrick or Dr. Hamilton,
15 and Mr. Roisman has no questions for Mr. Lewis. We are going
16 to discuss the matter with Mr. Riley this morning to see if
17 he does.

18 With respect to at least the first two gentlemen,
19 I would request -- since one of the gentlemen lives in
20 California -- unless the Board has questions for these
21 gentlemen, that we could -- it's a procedural thing we will
22 have to work out, but that we could just have their, by
23 stipulation have their testimony bound into the record as if
24 read. They will not physically be here to adopt it, if we
25 need an affidavit we can do that, whatever the Board's pleasure

wr gb4
1 is, but it's an attempt to speed this hearing along,
2 Mr. Chairman.

3 CHAIRMAN MILLER: Which of the two witnesses
4 now did you wish to handle in that fashion?

5 MR. MC GARRY: That would be Dr. Garrick and
6 Dr. Hamilton.

7 CHAIRMAN MILLER: Could you advise the Board
8 a little later whether or not this is a subject of stipulation
9 by all counsel and parties?

10 MR. MC GARRY: I will, Mr. Chairman.

11 CHAIRMAN MILLER: Fine, we'll review it then.
12 Let the record show we have had an Intervenor
13 join us. Would you like to enter your appearance, sir?

14 MR. RILEY: Yes, I'm Jess Riley, I'm appearing
15 for the Carolina Environmental Study Group.

16 CHAIRMAN MILLER: Thank you, Mr. Riley.
17 We've just had an indication of Mr. McGarry
18 and some of the subjects that were discussed between parties
19 and counsel as to scheduling and appearance times of the
20 witness, Mr. Riley. We have done nothing substantive,
21 I assure you.

22 MR. RILEY: Thank you.

23 CHAIRMAN MILLER: I think at this time we had
24 better take up the matters of the Appeal Board and the
25 Commission action with reference to the disclosure of

1 information regarding the transportation route or routes.

2 I've been out of town during the last week so I've
3 just learned of these matters this morning. But I had some
4 indication from the NRC telephone operator last night as to
5 this.

6 I think in order to have our record complete,
7 I think the Staff had better give us a chronology of events,
8 identify the various order and the matter of the Commissions
9 hearing schedule. Will you do that?

10 MR. KETCHEN: Yes, sir, I'll do that.

11 As you know, back in the last hearing the Board
12 on the question of 2.790 information with respect to the
13 specific route question, the Board ruled that it would not at
14 that time go into in camera sessions or protect the information
15 under 2.790 but, however, gave the Staff 30 days in which
16 to pursue any remedies it might have.

17 On September 4, 1979, the Staff filed a motion
18 for directed certification and a request for an interim pro-
19 tective order with the Atomic Safety and Licensing Appeal
20 Board.

21 On Thursday, September 6, by memorandum and order,
22 the Appeal Board denied that motion.

23 On September 7, 1979, the Staff petitioned the
24 Commission to review this matter. And then by order of
25 September 7, 1979, the Commission indicated that it would

1003 080

wrb/agb6
1 review this matter and would have oral argument at 11:30,
2 September 10, 1979, today, at 1717 H Street, Northwest,
3 Washington, D.C.

4 In that order, my understanding of it is, is
5 that the Commission indicated that they would, or did order
6 the interim protection of the information until they completed
7 their consideration of the matter or gave further directions.

8 I might fill in some background information which
9 does not appear in the papers.

10 It's my understanding that after this order was
11 issued on Friday, an attempt was made to contact -- by the
12 General Counsel's Office, to contact all parties that were
13 involved with the order.

14 I checked again -- I think we reached most parties,
15 I'm not sure -- my understanding is we didn't reach Mr. Riley,
16 and I find out this morning that Mr. Roisman was not reached,
17 but that they were trying to do so this morning, still trying,
18 and had messages all over town, if you will, for Mr. Roisman.

19 That about completes the description.

20 CHAIRMAN MILLER: Very well.

21 The Board, of course, wishes -- well, not to
22 interfere in any way with whatever the Commissioners or
23 appellate bodies are doing, have done or may do in this regard.
24 And also we wish to give counsel and parties adequate oppor-
25 tunity to participate in the in camera hearing, I believe,

1 at any rate, a hearing--or an opportunity to be heard on the
2 Staff's petition for review by the Commissioners which is to
3 be held today, Monday, September 10, 1979, at 11:30 a.m. at
4 1717 H Street, Northwest, Washington, D.C., the headquarters
5 of the Commissioners of the Nuclear Regulatory Commission.

6 It appears likely that such hearing will not go
7 past 12:30 or 1:00 at the most. The Board, therefore, is
8 inquiring whether it would be the wishes of counsel and
9 parties to suspend the hearing at this time to resume it this
10 afternoon at 2:00 or 2:30 or some such time in order to
11 accomodate witnesses and parties, some of whom come from both
12 out of town and some at considerable distance.

13 MR. MC GARRY: Mr. Chairman, may I comment on that?

14 I think it would be advisable to reconvene at
15 2:30. However, I would think if we could go at least until
16 -- well, there are two courses of action with respect to
17 this morning. One of the problems I see is the State of
18 South Carolina has this day and this day only to conduct its
19 examination. Perhaps we can start now and see where that
20 takes us.

21 Speaking for the Applicant, the Applicant will be
22 prepared to go forward this morning, perhaps one of us will
23 go down to the Commission. But we are here. I'm just making
24 that statement known so if the Board's desire is to go forward
25 throughout today, we are here, we're ready to go.

1 CHAIRMAN MILLER: Well the Board has no objection
2 to going forward. We have scheduled it, we are aware that
3 there are witnesses and parties and at least one Board member
4 who has come a considerable distance. We also, however,
5 wish to respect the opportunity of all parties and counsel to
6 appear and to be heard by the Commissioners.

7 If I understand you correctly, Mr. McGarry, the
8 Applicant, at least, will be prepared to continue going forward,
9 even while the hearing is underway, is that your position?

10 MR. MC GARRY: That's correct, speaking for the
11 Applicant only, Mr. Chairman.

12 CHAIRMAN MILLER: I understand.

13 I guess we had better find out from the Staff
14 because I think they're the primary party in that regard.

15 MR. KETCHEN: Yes, sir, Mr. Chairman, we're
16 flexible either way also. But I think our preference would
17 be, since one of the counsel here needs to attend that hearing
18 at the Commission and also would be the chief counsel handling
19 the witnesses in the area of transportation, that our prefer-
20 ence would be to break at a reasonable time in order that we
21 could attend that and to come back at a reasonable hour,
22 2:30 is fine.

23 We would suggest, however, that we begin now
24 with the witness and see what we could do for an hour or so,
25 maybe until 10:00, and we would suggest that -- we were planning

rb/cb9
1 to start with Mr. Hufham, and he is here.--

2 CHAIRMAN MILLER: Pardon me, does this get into
3 transportation matters, route matters? If we could avoid
4 that subject, we would prefer, we would rather wait until we
5 see what the Commission is going to direct.

6 Is it possible to proceed with our evidentiary
7 hearing, avoiding wholly the route questions or even any
8 implications involving them?

9 MR. KETCHEN: I think so.

10 CHAIRMAN MILLER: Very well. In that event, the
11 Board would be perfectly willing to go ahead with non-route
12 matters, since counsel are acquainted with the underlying
13 matters that protect us all from getting into those things the
14 Board does not wish to get into pending Commission action.

15 Let's hear, then, from Mr. Wilson and Mr. Riley
16 as to your preferences.

17 MR. WILSON: Mr. Chairman, as to the Commission's
18 proceedings downtown this afternoon, the State has not anti-
19 cipated participating in that. We didn't really have an
20 opportunity to prepare for that.

21 This, today, is what we really came up here for.

22 As Mr. Ketchen noted to the Board, Mr. Hufham's
23 testimony will not involve the routing matter we are concerned
24 with. There is another -- he is primarily up here for the
25 emergency response teams, to tell us about them.

wr agbl0 1 We also have two other areas we would like to
2 present before the Board today, one is the cask inspection
3 situation that we did not quite finish up with in Charlotte
4 at the last meeting, and then the last one would involve route
5 matters tangentially, as it is involving the application of the
6 protective regulations to the particular shipments involved.

7 So that it would seem to be appropriate to hold
8 the last subject until this afternoon, if we could. I believe
9 we can pretty expeditiously move through the first two areas
10 this morning. I'm rather optimistic we can finish them before
11 we break for that meeting.

12 CHAIRMAN MILLER: Very well.

13 Mr. Riley?

14 MR. RILEY: Mr. Chairman, we did not intend to
15 appear before the Commission in this matter, we have not
16 prepared to do so.

17 Is it the Board's pleasure to adjourn this meeting
18 while transportation is being undertaken for the meeting of
19 the Commission and so forth and so on?

20 CHAIRMAN MILLER: Well we almost have to, unless
21 counsel can assure us that it will not prejudice them and
22 they're willing to go forward. As I understand the Staff
23 position, they have counsel who will be actually participating
24 actively both in this proceeding and in the argument before
25 the Commissioners, and they would be the ones would would be

agb11

1 adversely affected by trying to run without recessing during
2 the time of the Commission proceeding.

3 MR. RILEY: That I realize. I wonder if the
4 presence of two counsel are required at the Commission pro-
5 ceeding. Possibly they could divide up and make two or three
6 more hours of hearing time available.

7 CHAIRMAN MILLER: Well we will inquire, Mr. Riley,
8 but we would not want to prejudice any party, any attorney,
9 any cluster of attorneys or pair of attorneys because these
10 are matters which involve subtleties, perhaps, and preparation
11 in handling.

12 So we would wish to have full procedural due
13 process in spirit as well as in letter, for that reason, we
14 will not press any party or counsel when he's involved in what
15 could be a situation where he wishes to attend two hearings
16 at the same time from doing so, so we're going to leave that
17 to the Staff, since they're the ones affected in this case.

18 Let me be sure that I understood you, Mr. Ketchen,
19 the Staff feels that it might be prejudicial to the Staff's
20 interest if we did not adjourn, at least during the period
21 of the, say, from 11:00 until 12:30 or something of that
22 type?

23 MR. KETCHEN: No, it won't be prejudicial. I
24 was just indicating -- I indicated that we were flexible. We
25 can continue today, I wasn't aware that Mr. Wilson and Mr. Riley

1 could continue, I thought that -- we can continue, we will
2 not be prejudiced and we could continue with Mr. Hufham and
3 the cask inspection matter as far as we need to go. I can
4 stay here, no problem.

5 On the third item Mr. Wilson wanted to talk about,
6 security information, that's where we get into problems. And
7 presumably we could finish that up at 2:30 this afternoon,
8 and presumably Staff counsel who needs to be here could be
9 back by that time and maybe the in camera matter will be
10 resolved by that time and we won't have any problems about
11 limiting the inquiry.

12 So we can proceed. We are ready to go.

13 CHAIRMAN MILLER: Very well.

14 Let me be sure the record clearly reflects now
15 affirmatively by every party and every counsel that no one
16 is requesting the Board to recess during the period of,
17 or for the purpose of appearing before the Commissioners at
18 their 11:30 hearing and opportunity for oral argument on the
19 transportation route question, and that unanimously it is the
20 wish or at least the consent of all parties and counsel to
21 the Board proceeding with the evidentiary hearing at this time,
22 excluding therefrom, however, any matters which have reference
23 to the subject matter direct or indirect with which the
24 Commission is taking action or hearing argument this morning.

25 Is this correct? Do we have an affirmative

b/agbl3 1 statement from each of you?

2 MR. KETCHEN: Yes, sir.

3 MR. WILSON: Yes, sir.

4 MR. RILEY: Yes, sir.

5 CHAIRMAN MILLER: Mr. McGarry?

6 MR. MC GARRY: YES, Mr. Chairman.

7 CHAIRMAN MILLER: In that event, we will proceed,
8 then. And since the State of South Carolina does have only
9 this limited opportunity to appear here today during the
10 current week's hearings, we wish to accord them as full an
11 opportunity as is possible to cover those matters which they
12 are primarily concerned with.

13 Is this agreeable to all counsel?

14 MR. MC GARRY: Yes, Mr. Chairman.

15 MR. KETCHEN: Yes.

16 CHAIRMAN MILLER: Mr. Wilson, what was the order
17 of, I guess it would be, cross-examination, is that what you
18 were wishing to pursue?

19 MR. WILSON: Yes, Mr. Chairman. Mr. Hufham would
20 come up here first for the emergency response team, and then
21 we would move into the cask inspection system this morning.

22 CHAIRMAN MILLER: I see.

23 Is this agreeable to the Staff?

24 MR. HOEFLING: Yes, Mr. Chairman.

25 CHAIRMAN MILLER: Very well.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

MR. HOEFLING: The Staff would call Mr. Hufham
to the Staff.

vr [redacted] b14
adBloom
Landonflws

[redacted]
All Federal Reporters, Inc.
25

1 Whereupon,

2 JAMES W. HUFHAM

3 was called as a witness on behalf of the NRC Regulatory Staff
4 and, having been first duly sworn, was examined and testified
5 as follows:

6 DIRECT EXAMINATION

7 BY MR. HOEFLING:

8 Q Would you state your full name for the record,
9 please?

10 A James W. Hufham, H-u-f-h-a-m, Chief of the Environ-
11 mental and Special Projects Section, NRC Region 2, Atlanta.

12 Q Could you tell us what your experience and back-
13 ground is in the emergency response area?

14 A As Chief of the Environmental and Special Projects
15 Section I am in charge of assuring that the emergency planning
16 program for both licensees as well as the Region 2 office is
17 implemented.

18 We also have supporting areas in support of
19 emergency planning, and I'm also in charge of those. They
20 are confirmatory measurements, our fixed laboratory, our mobile
21 laboratory, our aerial survey, our epidemiological studies
22 around nuclear facilities, and I am Chairman of the Federal
23 Regional Advisory Committee for Emergency Planning at fixed
24 nuclear facilities.

25 Q Now, Mr. Hufham, are you aware that the Board and

1 the State of South Carolina have an interest in obtaining some
2 information related to the type of a response that there would
3 be should there be an incident related to spent fuel shipments
4 from Oconee to McGuire?

5 A I am.

6 Q Could you provide the Board and the State with a
7 description of the type of a response -- emergency response --
8 that would ensue should there be such an incident?

9 A Okay.

10 I'd like to briefly summarize. With the Energy
11 Reorganization Act of 1974 the AEC was split at that time, and
12 all the analytical response capability that existed within
13 the Atomic Energy Commission was vested with the Department
14 of Energy, both at Oak Ridge and at the Savannah River offices.

15 That analytical support --

16 CHAIRMAN MILLER: Could you go just a little bit
17 slower for the benefit of the Reporter, primarily?

18 THE WITNESS: All right.

19 That analytical support is still available, and I
20 will come back and describe that.

21 But over the past few years, the Nuclear Regulatory
22 Commission has increased its analytical support also, and
23 we'll discuss that in summary. But in my position within the
24 Region 2 office we are totally involved every day with the
25 Department of Energy. And if we're talking about North

1 Carolina I'll have to be specific to the Savannah River office.
2 But the Oak Ridge office has assisted in some of the trans-
3 portation events, or in the transportation event that has
4 occurred in North Carolina.

5 They have an office that has a duty complement on
6 24 hours a day. We have called the office at very late hours,
7 3:00 a.m. in the morning, to report a transportation event,
8 sometimes very insignificant. This system is set up so that
9 the duty officer can get in touch with a response team. The
10 response team will vary. In some cases it may be just a
11 consulting call to the incident will suffice. In another
12 event it can possibly be a health physicist, and possibly a
13 public affairs man.

14 The full complement of response includes a manage-
15 ment -- a member of management, several health physicists,
16 hydrologists, meteorologists, public affairs, photographer.
17 They have all the capabilities there that would be needed to
18 fill any type of complement.

19 Q Excuse me, Mr. Hufham. You're speaking now about
20 Savannah River?

21 A That's right.

22 The same response capability exists at the Oak
23 Ridge facility. What they have available in the forms of
24 resources are numerous portable survey -- portable radiation
25 survey equipment -- numerous radiation survey meters, I should

1 say, a communications van, a whole-body counter, mobile manip-
2 ulators, small and large. They have all the resources of the
3 fixed laboratory at the Savannah River office and at the Oak
4 Ridge office, like samples needing extensive analyses can be
5 transported back to the sites themselves.

6 In addition to that, they have the aerial survey
7 team that is stationed in Las Vegas for response to calls.
8 They are coordinated with the JANCC organization, Joint
9 Accident Nuclear Coordinating Center, in Albuquerque. And
10 then if that is not enough response equipment they have what
11 they call the "hot" teams out of the Lawrence Livermore
12 laboratory.

13 CHAIRMAN MILLER: Where is that located?

14 THE WITNESS: In Livermore, California. I'm not
15 sure of the exact address.

16 CHAIRMAN MILLER: I just want the record to show
17 that.

18 THE WITNESS: But the Department of Energy also is
19 responsible for coordinating the Interagency Radiological
20 Assistance teams that I've already described, and what this
21 does is to continue to coordinate all the resources of other
22 agencies.

23 Signatory to these teams are the Nuclear Regulatory
24 Commission, the Department of Transportation, the Defense Civil
25 Preparedness Agency, which has now become the Federal Energy

1 Management Administration, NASA, the Department of Agriculture,
2 and also the Environmental Protection Agency. So that in the
3 event of a transportation incident involving spent fuel, DOE
4 is the lead coordinator of all of the federal agencies in their
5 analytical support, as well as the support that I have
6 described earlier.

7 Now I'd like to speak briefly about what the NRC
8 has developed in support of a DOE request.

9 In the Atlanta office, which is responsible for
10 regulatory actions in North Carolina, we now have the mobile
11 van with very sensitive analytical equipment. It can be
12 airlifted to any major airport, and can be driven to any
13 remote transportation site. We have a fixed laboratory in
14 our office. We also have a large supply of portable radiation
15 survey meters.

16 We have twelve men on pagers 24 hours a day.

17 We have an emergency center that is manned 8 hours
18 a day in Atlanta, and on off hours and on weekends, or at any
19 off hours during the week, as well as weekends, it's managed
20 through this emergency center in this building.

21 BY MR. HOEFLING:

22 Q Mr. Hufham, could you specify "this building?"
23 Where are we?

24 A Oh, I'm sorry. It is manned through the Incident
25 Response Center in the Office of Inspection and Enforcement in

1 the East-West Towers Building. The exact address I do not
2 know.

3 Q Is that in Bethesda, Maryland?

4 A Right, in Bethesda, Maryland.

5 CHAIRMAN MILLER: Could you provide the address,
6 Counsel, please? Or do you know it?

7 MR. HOEFLING: I don't know what the address of
8 this building is, Mr. Chairman.

9 DR. LUEBKE: 4350 East West Highway. It's the
10 building we're in right now.

11 THE WITNESS: We have had some transportation
12 incidents in the Region before, and we have coordinated well
13 with the Department of Energy.

14 But at the present this is a summary of the
15 capability that exists today.

16 BY MR. HOEFLING:

17 Q Thank you, Mr. Hufham.

18 Now, I want to take you down to the specifics of
19 an incident, and what I'd like to do is hypothesize in your
20 mind an incident and tell us who out on the road would
21 respond, what the chain of communications would be of that
22 response. And you could postulate various degrees of severity
23 to take us down the chain, to get us to the type of a response
24 that there might be, depending on the severity of the
25 incident. Take us from the road down through the chain of

wa 7

1 communications to the actual response, given several degrees
2 of severity.

3 Could you do that for us?

4 A Yes, I can.

5 The first agency usually to respond to a transporta-
6 tion event is the highway patrol. In both North and South
7 Carolina the highway patrol, through a training program, has
8 been informed to -- I'd have to speak for both States, they
9 may vary in small areas, but this is generally the approach.
10 The highway patrol will get in touch with a 24-hour duty
11 officer number, usually in the Department of Disaster Prepared-
12 ness.

13 Q That would be for the State?

14 A That's right, we're describing the State right now.

15 The highway patrol will get in touch with a State
16 office, usually the Office of Disaster Preparedness, because
17 they do provide a 24-hour notification system.

18 The Office of Disaster Preparedness will get in
19 touch with the Division of Radiological Health or the
20 Radiological Health Department, who would respond, be the first
21 to respond, for the State Agency.

22 This agency, in discussion with the Office of
23 Disaster Preparedness, would decide whether or not the
24 Department of Energy was needed.

25 Q Excuse me, Mr. Hufham. When you said the State, are

1 you talking about an actual physical response to the incident?

2 A That is correct. If they feel that they need to
3 respond, both States have mobile laboratories and teams that
4 would respond to an incident.

5 Q Thank you. Go ahead, please.

6 A Perhaps in the beginning stages of the incident,
7 or from their office, or when they have arrived on site, if
8 they feel that the Department of Energy is necessary they
9 provide the notification to that agency requesting assistance.

10 Depending on the location of the incident -- I
11 could use an example: If it's in the westernmost portion of
12 North Carolina, the call probably -- the call should go to
13 the Savannah River office, and it would go. But to eliminate
14 response time, the team from Oak Ridge would probably respond,
15 because it would be closer to the incident.

16 CHAIRMAN MILLER: Pardon me just a minute. When
17 you're using the term "respond" -- I'm basing this upon my
18 knowledge of police procedure from television -- does respond
19 mean physically go there as rapidly as possible with whatever
20 personnel and equipment seems to be indicated?

21 THE WITNESS: Yes, sir. If a response is required.
22 I've already addressed in some cases respond might just be a
23 consulting call. But if a response is requested, where they
24 do need additional metering or surveying equipment, or a lab,
25 response means a physical response with their equipment.

wel 9

1 CHAIRMAN MILLER: So our record will be clear, when
2 you use the term "respond" use it in the sense that it's a
3 physical going to, and if it's anything else, indicate
4 appropriately, would you please, sir?

5 THE WITNESS: All right. Fine.

6 CHAIRMAN MILLER: Go right ahead.

7 THE WITNESS: So the event I was describing is
8 where there was a transportation event in the State of North
9 Carolina, and the Department of Energy in Savannah River was
10 notified but the one from Oak Ridge, the response team from
11 Oak Ridge, did respond to the incident and arrived there
12 first, or earlier.

13 At the same time, we have our own notification
14 system, the NRC Region 2 office. We are in constant communica-
15 tion with the States, both the Disaster Preparedness and
16 Division of Radiological Health. In events that have occurred,
17 when the Department of Energy is called, also the Nuclear
18 Regulatory Commission is called. In many cases this is just
19 for information, but we have responded, meaning an actual
20 response.

21 BY MR. HOEFLING:

22 Q Okay. Let me just go back again to clarify some-
23 thing in my mind.

24 The State radiological office would respond to the
25 incident, actually physically arrive at the site. Would they

1 be the group that would make the determination to contact the
2 Department of Energy, or is that contact automatic?

3 A No, they would be the ones that would make that
4 decision.

5 Q And who would make the determination as to whether
6 a federal response was appropriate in the circumstances?

7 A Now, do you mean if they have requested response
8 from the Department of Energy? That response is automatic.
9 Do you mean below the Department of Energy, or to assist the
10 Department of Energy?

11 Q No. Suppose the question is: Should the Depart-
12 ment of Energy respond? The question is somewhat uncertain
13 as to whether the incident requires a federal response. Who
14 would evaluate and make the determination that there should
15 be a federal response?

16 A It is still the State responsibility.

17 Q Fine.

18 Let me ask you this: Let us take the situation
19 where we have the State response and a federal response. We
20 have extensive State and federal capabilities at the incident.
21 Who would be in charge of the emergency at that time?

22 A The State is in charge of the emergency.

23 Q Thank you.

24 On the point as to whether Oak Ridge or Savannah
25 should respond, you indicated, I believe, that jurisdictionally

1 Savannah might be appropriate, but that Oak Ridge might be
2 directed to respond because of the shorter response time.

3 Who would make that determination?

4 A That would be made within the Department of Energy.

5 MR. HOEFLING: Mr. Chairman, I think that we've
6 completed our questions to Mr. Hufham, and I would offer him
7 to the State of South Carolina for questions.

erd WEL 1 8 CHAIRMAN MILLER: Mr. Wilson?

9 CROSS-EXAMINATION

10 BY MR. WILSON:

11 Q Mr. Hufham, I think that was a very good resume
12 you gave us of the emergency response system. However, I do
13 have a couple of short questions, if I could.

14 You might clarify just a couple of points for me.

15 The mobile van you mentioned, where is that
16 stationed -- the NRC mobile van that you were talking about
17 earlier? Is that Charlotte or Atlanta?

18 A It's stationed in Atlanta, 101 Marietta Street,
19 Northwest, Atlanta, Georgia, 30303.

20 Q And you mentioned also that in the sequence of
21 response at an emergency scene that the State agency in charge
22 would be the ones to call the DOE, and I presume also NRC,
23 is that correct? There would be two phone calls placed at
24 that time? How does NRC receive its notification, is really
25 what I'm asking, at that point?

1/1/agbl
f. welll

1 A Officially the Department of Energy calls the
2 Nuclear Regulatory Commission. We are signatory to the
3 Department of Energy Radiological Assistance Team.

4 But if the transportation event involves a shipment
5 from one of our licensees or is a licensee carrying material --
6 I'm thinking of shipments other than maybe spent fuel --
7 since it is involving one of our licensees, the State will
8 call us for information purposes. And at that time, we almost
9 in all cases have dispatched someone, a representative of the
10 Commission.

11 Q In those instances, then, the Department of Energy
12 might not be notified? Is that what you just said?

13 A No, the Department of Energy would be notified.

14 Q In any event?

15 A In any event. And our own notification system that
16 is established on a day-to-day basis goes into play also
17 where the state calls us for information to let us know of
18 the event, and at that time, even though the Department of
19 Energy might not have called or asked our assistance since it
20 is -- a licensee may be involved in a shipment from our
21 licensee, we feel that it is our responsibility to respond
22 also, even though that official request has not been made of
23 DOE.

24 Q All right.

25 In an accident situation, I believe you told us

Accident Reporters, Inc.

wagb2

1 already that there is considerable equipment available to
2 the Savannah River Plant's emergency response teams to assist
3 in the handling of material, is that correct?

4 A That's correct.

5 Q Were that equipment, however, inadequate to rectify
6 the situation, are there other resources that can be tapped
7 with additional equipment?

8 A Yes. I think what needs to be explained here is
9 the JANCC organization, Joint Accident Nuclear Coordinating
10 Center that I mentioned in Albuquerque. To answer your
11 question exactly, Mr. Wilson, let me go down again.

12 We have the Department of Energy's equipment that
13 exists, that I've described there. Signatory to the Depart-
14 ment of Energy, we have all the equipment, and I'll go down
15 them again: Environmental Protection Agency, Department of
16 Transportation, Defense Civil Preparedness Agency, NASA and
17 the Department of Agriculture.

18 Now if you're aware, the Environmental Protection
19 Agency has large radiological laboratories throughout this
20 nation. And, in addition to those, we have the response capar-
21 bility equipment of the Nuclear Regulatory Commission. And
22 in the event that is not enough, we have the JANCC organiza-
23 tion that has all of the equipment available from the
24 Department of Defense. And then if that is not enough, we
25 have the hot teams from Lawrence Livermore Laboratory.

Ac...ral Reporters, Inc.

1 Q Could you tell me what the hot teams are?

2 A That's just a sophisticated group of response teams
3 primarily developed, I think, for weapons response. But we
4 have tied it into our just normal radiation emergency response
5 organization.

6 Q And I presume by their name that they have special
7 equipment for handling certain situations?

8 A Yes. I may not have answered that exactly. They
9 have communication equipment, survey equipment, counting
10 equipment, laboratories.

11 Q Special shielding, that sort of thing?

12 A I'm not sure of the shielding. It could be
13 procured, I'm sure, immediately from some of these agencies.

14 CHAIRMAN MILLER: Could you develop that a little
15 further? What kind of shielding equipment is contemplated by
16 either counsel or the witness? What is the purpose, where is
17 it obtainable? Counsel should ask that question, I guess.

18 BY MR. WILSON:

19 Q All right. Mr. Hufham, what I'm thinking in terms
20 of is rather severe accidents. If we reach this point,
21 assuming some exposure to high radiation doses that required
22 additional shielding from that which is normally available
23 in the field, how would that be obtained? And what is
24 available, if you know?

25 A I really cannot answer that exactly, where the

wel 2

1 shielding would come from. There have been events recently in
2 the nuclear industry where large amounts of shielding was
3 required. This was in Pennsylvania. And through the federal
4 agency coordinated effort, all of the shielding that was
5 required -- which would be far in excess of anything required
6 for a transportation incident -- was obtained quickly.

7 But exactly from where that was obtained, I do not
8 know.

9 Q Were you involved in the procurement of that
10 shielding in that incident?

11 A Not directly. I was in Atlanta. But I had
12 representatives in Pennsylvania that were.

13 Q Can you give us an estimate of approximately how
14 long it took for the shielding to arrive after it was first
15 ordered?

16 A The shielding arrived -- we're talking about March
17 26, 27, 28, and 1, 2 and 3 April. The shielding began to
18 arrive somewhere on April 3rd, but again, the quantity was far
19 in excess of any quantity of shielding that would be required
20 for this type of shipment.

21 The reference there is that if a smaller amount of
22 shielding is required, it can probably get there in a lot
23 quicker time. But this started arriving in approximately a
24 week after the incident, for the hydrogen recombiners.

25 Q But we would expect a smaller period for a smaller

1003 104

1 amount of shielding, is that right?

2 A That is reasonable to expect.

3 Q Do you have any idea -- I'm not sure whether you've
4 answered this before or not -- but do you have any idea where
5 that might be made available from in the southeast region?

6 A I cannot . . . no, I do not.

7 Just for clarification on this, though, all of our
8 vans and equipment are planned for airlifting all over the
9 nation, from Atlanta to California. If shielding is available
10 in California, I'm sure we could use these same arrangements
11 to get it into Atlanta or North or South Carolina.

12 These arrangements are made through the Department
13 of Defense.

14 MR. WILSON: I believe that's about all we have,
15 Mr. Chairman, unless there's some more questions from the
16 Board. I believe that's all we do have for Mr. Hufham.

17 CHAIRMAN MILLER: Thank you.

18 Let me inquire of other counsel. Mr. McGarry, do
19 you wish to examine?

20 MR. MC GARRY: No questions, Mr. Chairman.

21 CHAIRMAN MILLER: Mr. Riley?

22 MR. RILEY: Yes, sir.

23 CHAIRMAN MILLER: You may proceed.

24 BY MR. RILEY:

25 Q The capability, then, of carrying a van would have

1 to do with large transports available through the Department
2 of Defense, is that correct? You indicated earlier that you
3 have metering vans that could be air-transported, I believe?

4 A That's correct.

5 Q And DOD would provide that transportation?

6 A Oh, yes, sir. That is correct. The Department of
7 Defense would airlift the Nuclear Regulatory Commission's
8 van. I'm not sure about the arrangements with the Department
9 of Energy, who would airlift their van if necessary.

10 Really, any event in North or South Carolina,
11 probably the airlifting involved is not necessary, because
12 you would have vans from both Oak Ridge as well as Savannah
13 over.

14 Q Well, depending upon the location of the site of
15 the accident to an airport, there would be an additional
16 factor in response time, even if the van were airlifted to
17 the nearest airport?

18 A That is correct, Mr. Riley. That's the reason I
19 said airlifting to respond to an event in those states is
20 probably not feasible. Airlifting to us means airlifting from
21 Atlanta to Virginia, or from Atlanta to Miami.

22 Q Now, depending upon the time it takes for the
23 metering equipment to get there, there will be a period in
24 which there is no information with respect to the releases?

25 A I'm not sure of the response time of either States

1 nor am I of the training of the State highway patrols, the
2 depth of the training that these States have been active in
3 the training of State highway patrolmen who would be first to
4 the event. So we would have to be specific as to which
5 district office of the highway patrol would respond, and
6 what training that office has received.

7 Q All right.

8 You indicated that first on the scene would
9 probably be the State highway patrol, is that correct?

10 A That's correct.

11 Q And what's the usual complement of a patrol car,
12 how many people?

13 A I'm not sure. One or two, probably, at first.
14 And then several, to support it. I could not be exactly sure.

15 Q Well, let's go with one or two on a hypothetical,
16 then. If there's an accident that involves physical injury
17 and the removal of the injured, and so forth, is it reasonable
18 to expect the metering activities of the first responder, the
19 state patrol, would be light, if at all?

20 A I think that is true. Certainly, in any transporta-
21 tion event that's true. But then you have to realize the close
22 proximity of the Oconee site and the McGuire site to your
23 response teams -- not only the highway patrols, but your
24 response teams, from both States. That's from Columbia and
25 Raleigh.

1 Q Sometime back, if I recall correctly, the Depart-
2 ment of Transportation was also involved in response to
3 accidents. I don't recall that you mentioned them today.
4 Are they no longer a part of the emergency response picture?

5 A No, sir, Mr. Riley. They do respond. The Depart-
6 ment of Energy is the overall federal guiding agency in a
7 transportation event, but it is awfully hard to -- the
8 Department of Transportation is always informed, and they
9 usually respond, similar to the NRC.

10 Q Do you know whether or not they have a 24-hour,
11 shall we say, communicating ability, to receive messages in
12 regard to emergencies?

13 A The best I can speak to is our involvement with
14 the Department of Transportation in Atlanta. Every event
15 that we've been involved in has been in off hours, and their
16 man has responded as quickly as the Nuclear Regulatory
17 Commission has.

18 Q What is the nature of the DOT response?

19 A They deal more or less with the driver. They have
20 remained through cleanup. Overall assistance, if necessary.

21 Q But they do not have an active role in measuring
22 radiation or in physically cleaning up?

23 A They have not been that involved in the radiation
24 measuring aspect.

25 Q They have a representative. Do they have a

1 response team such as you described for the other agencies?

2 A I'm not sure of that.

3 Q Could you give us a working definition of what
4 analytical support -- a term you used several times -- means?

5 A Yes. To us analytical support means anything that
6 you would need to handle an accident. Analytical support
7 means, first of all, a van with the right amount of signs,
8 ropes, placarding, enough to cordon off the affected area.

9 Second of all, analytical support means operable
10 survey meters, operable and calibrated survey meters. Not
11 survey meters that have been sitting on the shelf for three
12 years.

13 To support that you need trained individuals,
14 extensively trained individuals.

15 Supporting that, you mean laboratories that are
16 capable of taking environmental samples and then, thirdly,
17 backup support to that mobile laboratory.

18 That, to us, means analytical support.

19 Q In Region 2, to your knowledge, how many events
20 requiring this response occurred in, say, the last year?

21 A In our Region, no events, no transportation events
22 in Region 2 have required our response of that type. We have
23 provided it, but it was not necessary.

24 Q How many people are involved, for example, in
25 Region 2 -- how many people are assigned to the duties such as

1 you have described?

2 A The first initiating call to Region 2 has 12 men
3 available immediately. There are 12 men on pagers. Not all
4 12 would respond. These are what we call 12 management
5 positions.

6 It would be the decision of those managers to
7 send a complement, that has ranged everywhere from one to
8 perhaps four.

9 Q Would I be correct in inferring from what you've
10 said that the people who will actually deal with the
11 emergency response are not just sitting around 350 working
12 days a year waiting for something to happen, but are regularly
13 assigned other jobs?

14 A Yes, sir, Mr. Riley. The men that would respond
15 to a transportation event from Oconee to McGuire would, as I
16 see it, and as I would -- the Emergency Office, sir, is
17 under our management. My input would be to send the men who
18 have been doing the cask inspections, and the health physics
19 inspections at that site.

20 He would also be aided by an emergency officer, an
21 investigator, and maybe other HP's.

22 Q In other words, there's a certain ad hoc nature
23 to the assembling of an emergency response team?

24 A Ad hoc, meaning. . . yes, ad hoc, but organized.
25 We just have a pool to pull from. and we would send the most

1 responsible individual.

2 Q You mentioned that emergencies occur at off hours,
3 like say at 3:00 a.m. Under these circumstances, how many
4 people are actively on standby at that time? When I say
5 actively on standby, I mean part of their working day, part
6 of their shift?

7 A Okay. Mr. Riley, I am one of 12, and I have 12
8 that work for me. Another gentleman that is lateral to me
9 has approximately the same number. Both of us are on call
10 24 hours a day.

11 So just the two of us, we have 24 people that are
12 available, and we know where those men are at all times. They
13 may not even be in Atlanta. They may be at Oconee.

14 Q But you do take holidays and vacations and so
15 forth?

16 A That's right, but we still have our emergency
17 organization on any off hour.

18 Q Is it part of your planning procedure, then, to
19 assure that someone of the operational management 12 will be
20 available for call at any time?

21 A Oh, yes, sir. Those 12 are made up -- just one
22 minute. Let me clarify this.

23 The 12 are not the same day in and day out. The
24 12 are made up of those management positions that are
25 available today in the office. If they are out of town, they

1 are not on that list.

2 Q Now, you indicated that the State would be first
3 contacted by the highway patrol, and you indicated that there
4 is an Office of Disaster Response which would get in touch
5 with the Office of Radiation Protection. Is that correct?

6 A That's correct.

7 Q Now, in North Carolina, does the Office of
8 Radiation Protection have on call 24 hours a day an emergency
9 responder?

10 A I'm not too sure of his paging system, but the
11 answer to that question is yes. There is a 24 hour Office of
12 Disaster Preparedness. I just cannot remember the exact
13 agency that it's in, but the office that we deal with on a
14 24 hour basis is the Division of Radiological Health, and we
15 do work with them during off hours, and we have always been
16 able to notify them or discuss issues with them.

17 Q Do you know Mr. Dane Brown?

18 A That is the office I am talking about.

19 Q Yes. Are there some number of people corresponding
20 to the 12 you've just described in your office in the State
21 Department of Radiological Protection, who are assuredly on
22 call at any time? And if so, could you describe it please?

23 A Yes, Mr. Riley.

24 I cannot be as assured of the numbers as I am of
25 my own organization, just like I cannot be exactly sure of the

wel 11,

1 number with the Department of Energy. But he does have men
2 that he is assigned. I could even call their names. . . no,
3 I'm not sure of the names. He has men who are available.

4 Now, if I could, you have not asked this question,
5 but I would like to inform you about our State notification
6 system of shipments. I think it would help clarify things
7 for you.

8 The Office of the Nuclear Regulatory Commission in
9 Atlanta notifies the State through which any shipment is
10 going to move in advance of any movement of that shipment.
11 This is only spent fuel shipments. Presently it is only
12 spent fuel shipments, or import-export shipments. We are
13 not notifying the State of low-level waste shipments.

14 So the reason I think it's appropriate is any
15 shipment that moves, spent fuel shipment, through the State
16 of North Carolina, Mr. Brown would be informed approximately
17 48 hours before that shipment is to leave, and he would be
18 informed of radiation surveys, surface surveys, of that cask,
19 the contents of that cask, the route that's in question at
20 the present time.

21 But we will provide him with all of the information
22 that we have. This has been going on for approximately -- this
23 notification system began in January of 1978, and we have
24 records to back it up.

A ● ELON
1ws ● EL
2 mppl

1 Q Under the present application by Duke Power Company
2 there will be shipments, more or less one a day, for a period
3 of approximately two years. Given that as a factor, how many
4 shipments would you estimate the North Carolina Office of
5 Radiation Protection would receive notification about?

6 A Mr. Riley, now I have two men who spend a large
7 portion of their day making state notifications. If there's
8 only one shipment a day there's absolutely no reason that
9 this could not be handled.

10 Q That wasn't my question. My question was how
11 many shipments do you estimate would be going through North
12 Carolina which would cause Mr. Brown's office to be notified
13 in the coming year?

14 A He would be notified of every shipment we have
15 knowledge of going through his state.

16 Q I'm asking for an estimate of the actual number.

17 A I have no idea. At this time I have no idea.

18 Q If we assume that the Duke shipments would be 150,
19 have you any idea how many shipments were made last year that
20 we might possibly add on to that 150?

21 A You're speaking of spent fuel shipments?

22 Q Not spent fuel shipments; shipments that would
23 require notification of Mr. Brown's office. You've already
24 excluded low level waste.

25 A I would have to review the records. I have this

ce-●●● Reporters, Inc.

mpb2

1 information available, but not with me today. We have made so
2 many notifications, I would hate to just pull the number out.

3 Q How many people are in Mr. Brown's organization?

4 A I think there are approximately 15.

5 Q Is there any work on shifts?

6 A No, there are not.

7 Q Is there any work on weekends?

8 A Well, they are structured to respond. And the
9 reason I know that is because they have intercepted shipments
10 that we have notified them on. Their response would -- if they
11 know in advance that they're going to have a shipment coming
12 through, Mr. Brown would organize his section to have response
13 capability, and he has responded already just for surveys of
14 shipments.

15 Q If there were over a continuing period of time in
16 excess of 24 hour periods such shipments, what would be Mr.
17 Brown's capability of mounting a responsive individual or a
18 group continuously?

19 A Mr. Brown would have to answer that.

20 Q Would it be your testimony, then, that your Section
21 2 office has a much -- what shall we say? -- more redundant
22 and larger capability for response than Mr. Brown does?

23 A I think that's true at the present time.

24 Q Is it also true that the primary responsibility for
25 dealing with the accident is Mr. Brown's?

1003 115

mpb3

1 A That is correct.

2 Q You have discussed a number of procedures in
3 emergency response, but you've not mentioned the matter of
4 evacuation of people who are at hazard. Could you give some
5 information on that?

6 A If you are talking about evacuation from a
7 transportation event -- I assume that's what you are referenc-
8 ing here?

9 Q That is correct.

10 A The one to answer that would be Mr. Brown. He has
11 developed a transportation plan of which I'm not that familiar
12 with.

13 Q Let us open up another hypothesis. The question
14 is that there is a sabotage event. Would the same chain of
15 command respond to a sabotage event?

16 A Yes, it would. And not from transportation, but
17 there have been similar events that you have described, and
18 they have been in place.

19 Q Well, a sabotage event could occur during trans-
20 portation, could it not?

21 A I think that's possible.

22 Q Would you accept 1.5 million curies as a source
23 term for a 270-day spent fuel assembly?

24 A I do not deal in cask design or shipment content
25 that much every day. I would have to review that before I

mpb4

1 answer that, Mr. Riley.

2 Q Well, would you care to answer this question:

3 If in a sabotage event the saboteur has succeeded
4 in completely exposing a fuel assembly, how would it be dealt
5 with?

6 MR. HOEFLING: Mr. Chairman.

7 CHAIRMAN MILLER: Yes.

8 MR. HOEFLING: I would object to that question,
9 and the basis again is the hypothetical question for which
10 there is no basis in the record.

11 I know the Board's ruling on this in the past, but
12 I would like to make that objection again for the Staff based
13 on the Diablo Canyon --

14 CHAIRMAN MILLER: Well, the objection will be
15 overruled.

16 However, there is a question in the Board's mind.
17 Is this within your area of competence and exper-
18 tise?

19 THE WITNESS: No, it is not, Mr. Chairman.

20 CHAIRMAN MILLER: In that event, the objection
21 will be sustained on that ground.

22 THE WITNESS: We are in charge of making sure the
23 organizations are in place. We're dealing heavily with
24 evacuations from fixed facilities. I'm not involved in
25 evacuation from transportation events.

mpb5

1 BY MR. RILEY:

2 Q But you are the witness for transportation events?

3 A I am the witness on the emergency response of the
4 State Department of Energy in NRC.

5 MR. RILEY: Mr. Chairman, I have a little problem
6 because I thought the witness was called in connection with
7 accidents in transportation.

8 CHAIRMAN MILLER: Well, I think that your reason-
9 able limitation is that connected with the scope of the
10 witness's direct testimony and peripheral matters. This does
11 appear to be beyond the scope of his direct examination, Mr.
12 Riley. So unless you can establish something reasonably
13 incident thereto, we would have to sustain the objection.

14 The Staff has proffered whatever area of the
15 witness's competence they've proffered. We deal with each
16 one as they come.

17 MR. RILEY: Mr. Chairman, one other question to
18 inform my ignorance, and that is:

19 If there is an area of response to transportation
20 accidents such as we are trying to touch on here, will the
21 record be devoid of any content in respect to that unless the
22 Staff offers another witness?

23 CHAIRMAN MILLER: Well, I'm afraid that the Board
24 cannot answer questions, hypothetical, direct, or otherwise.
25 You are a very astute gentleman. You are familiar with the

1003 118

mpb6

1 record as it has been developed to date. And you would have
2 a judgment, other counsel would have a judgment; but it would
3 be inappropriate for you to inquire as to the Board's either
4 memory or judgment in that regard.

5 However, you are familiar with the fact that we
6 have an evidentiary record, that it consists of testimony, of
7 inferences that may be drawn from it, of exhibits received
8 into evidence, or those which may not have been offered but
9 have been an integral part of examination and the like, and
10 that is the evidentiary record. You will draw your own
11 conclusions from what's in it or what is not in it and what-
12 ever results may flow therefrom.

13 MR. RILEY: Right.

14 I'm simply seeking guidance or instruction, Mr.
15 Chairman: if the Staff does not proffer a witness which
16 addresses this matter, that's it. I can't do anything
17 about that.

18 CHAIRMAN MILLER: Well, you could take that matter
19 up with the Staff. You can request additional witnesses.
20 Since you are not represented at the moment by counsel, you
21 can or could have pursued this matter by virtue of discovery
22 in the sense of interrogatories as to what a as will be
23 covered by what evidence.

24 We might indulge, certainly, even though we're
25 in the midst of a hearing -- in other words, we're trying and

mpb7

1 must enforce the rules of evidence, but we temper them
2 reasonably with regard to the fact that this is an evidentiary
3 hearing of the Nuclear Regulatory Commission.

4 We don't wish to debar you from opportunity, but
5 we can neither guide you nor try your case for you. It
6 wouldn't be fair to any party.

7 MR. RILEY: Would it be procedurally proper to
8 request a subpoena, then, for the qualified witness in this
9 matter?

10 CHAIRMAN MILLER: Well, we would once again
11 address that when the matter comes before us by motion. But
12 we're going to have a recess here in about a half an hour.
13 Why don't you take it up with the Staff, and then if you
14 wish to address the Board in any proper procedural fashion
15 now or later, you can do so. We can't prejudge, and it
16 wouldn't be very proper, Mr. Riley.

17 MR. RILEY: Thank you, Mr. Chairman.

18 CHAIRMAN MILLER: You're welcome.

19 BY MR. RILEY:

20 Q Are you familiar with the weight of a transport
21 cask?

22 A Again, Mr. Riley, I do not deal daily with the
23 cask figures that you are referring to. I have an idea.

24 Q Would you accept 50,000 pounds, approximately?

25 A I thought it was more than that.

mpb8

1 Q For a real cask, it is. A truck cask.

2 CHAIRMAN MILLER: Pardon me. What is the differ-
3 ence? You made a statement, and I'm not sure how it's going
4 to show up in the record, something about a real cask and a
5 truck cask. And the record is not going to disclose anything.

6 You're not under oath, nor testifying. And the
7 witness at least hasn't answered. I'm not sure if he has the
8 information, Mr. Riley.

9 So would you clear that up, please, or else with-
10 draw your statements?

11 MR. RILEY: Yes.

12 The distinction I made was between a railroad
13 cask and a truck cask.

14 CHAIRMAN MILLER: I'm sorry, I misunderstood you.

15 BY MR. RILEY:

16 Q If it's required to move a cask some heavy
17 equipment will be required. Is that provided by your
18 agency or any of the related agencies that you described?

19 A The cask manipulators needed for that are the
20 ones I described from the Oak Ridge Department of Energy
21 office. They have -- I think I've seen slides where these
22 manipulators have actually moved a cask of that size.

23 Q Are they air-liftable?

24 A I'm sure they are. My answer is based on the
25 air-lifting capability of our van with the C5A. If it can

mpb9

1 fit into a C5A, which it can, I'm sure it can be air-lifted.

2 Again, I'm not sure of air-lifting anything into
3 North Carolina.

4 Q Could you give us a physical description of the
5 cask manipulator that you just referred to?

6 A Yes, I can, Mr. Riley.

7 It's very similar to an earth -- tractor -- you
8 know, with the metal tires. I want to say an earth-mover,
9 the metal treads. A lot of people have got them confused
10 with the small mobile manipulator, but this is the large
11 mobile manipulator.

12 Q Well, could you inform me somewhat more? Is it
13 sort of like a bull-dozer? Does it have hooks on it or a
14 boom, or just how is it constructed? How does it address the
15 cask?

16 If a cask fell in a ravine, what would it do about
17 it?

18 A I think the cask -- it has the clamping device.
19 I think it moves by just clamping at each end and gradually
20 moving it back. I'm not exactly sure that equipment is avail-
21 able. I've only seen photographs of it.

22 Q Can you describe -- in all likelihood, certainly
23 in any serious event, the NRC would be informed, as well as
24 the DOE, of the event, is that correct?

25 A That is correct, Mr. Riley.

1B flws

Ace...al Reporters, Inc.

mpb10

1 Q You indicated that the central office in this
2 building would receive that information, and you have a 24-hour-
3 a-day person responding here, is that correct?

4 A No, that is not exactly correct. Between the
5 hours of 8 and 5, to be specific with you, the call comes to
6 our office in Atlanta, 221-4503, area code 404. After 5 p.m.,
7 and until 8 in the morning, that same number is diverted to
8 the center here in this building.

9 They receive the call, and then they would
10 refer the call to the -- in other words, they are the
11 answering party for the 12 men that I have already described
12 would be available to assemble a team.

13 Q Would it be correct, then, to say nationally
14 this is sort of the nerve center for messages from any part
15 of the country of that nature?

16 A Yes. Any off-hours, this NRC office now is the
17 receiving center.

18 Q All right.

19 What in addition, then, to contacting the 12
20 management people, say, in Section 2 in a hypothetical event
21 would be undertaken here at NRC headquarters?

22 A Depending upon the event, they have procedures
23 to activate this center. If it's the transportation event
24 that you have described where the cask is actually either
25 sabotaged or fuel assemblies are exposed, or it is certainly

mpb11

1 a -- if the potential is there for a serious event, the center
2 would be manned, the NRC center would be manned in this build-
3 ing, as well as the Region 2 emergency center in Atlanta. And
4 then a response team would go also.

5 Q All right.

6 Now if I understand this correctly, a response
7 team would be organized here in Bethesda and sent to the site
8 of the accident.

9 A No, sir. The call would be received here.

10 Let's talk off-duty hours.

11 Q Fine.

12 A If the call is received during an off-duty hour
13 -- or off-duty time, the call is forwarded to our main duty
14 officer, one of the 12 that I had mentioned. That message is
15 evaluated. The response team goes from Atlanta.

16 But we have centers, the emergency center in the
17 Atlanta office and the center here, that would be manned by
18 management if the potential is there.

19 Q Well, in regard to the potential being present,
20 what is the decisionmaking process involved indicating that
21 further NRC participation is required?

22 A The only thing I can answer that is that we have
23 as many men as we felt necessary. We can dispatch three jet
24 loads if we need to.

25 Q I realize that. The question was what is the

mpb12

1 decisionmaking process by which you decide whether or not to
2 dispatch three jet loads?

3 A Well, I think if the severity is that degree then
4 we would have to go to the Department of Energy which, as I've
5 already stated, is the lead federal coordinator of all
6 agencies.

7 Q And who would establish that the accident was of
8 that severity?

9 A In that case the Department of Energy would have
10 to decide on that.

11 Q Their people at the site would have to decide that.

12 A That's right.

13 Q And the Department of Energy decision, then, would
14 in effect be binding on the NRC, which would organize these --

15 A That is true.

16 Q Thank you, Mr. Hufhan.

17 A Thank you, Mr. Riley.

18 CHAIRMAN MILLER: Any further examination?

19 MR. WILSON: Mr. Chairman, if I might come back
20 and follow one point there --

21 CHAIRMAN MILLER: Yes.

22 MR. WILSON: -- which Mr. Riley raised.

23 BY MR. WILSON:

24 Q Mr. Hufhan, where you have DOE deciding that
25 there is a serious accident, now how does that interface with

mpbl3

1 the state authorities at that point?

2 A Well, Mr. Wilson, in the past the Department of
3 Energy would respond and more or less take over the incident.
4 But now with the sophisticated response organizations that
5 the states have developed, the Department of Energy now
6 awaits a request from the state and they will respond initial-
7 ly and remain there until they feel that the state has the
8 resource capabilities to manage the incident. And when that
9 is confirmed, then they will remove themselves, and the state
10 -- in other words, what I've described to you, the state is
11 still in charge.

12 Q All right, sir. I understand.

13 So DOE's involvement really would be at the
14 request of the state in the long run?

15 A At the request of the state through the initial
16 period of the incident, then they would withdraw.

17 Q All right, sir.

18 Just one last question:

19 Do you know whether or not there is a capability
20 to date to recover a fully exposed spent fuel rod assembly
21 that's been exposed?

22 A Another witness would have to testify to that.
23 No, I don't know.

24 Q You don't know.

25 A No.

1003 126

mpb14

1 MR. WILSON: That's all I have, Mr. Chairman.

2 CHAIRMAN MILLER: Mr. McGarry, do you have any
3 interrogation?

4 MR. MC GARRY: If I may have just one minute,
5 Mr. Chairman.

6 CHAIRMAN MILLER: Yes.

7 MR. RILEY: Mr. Chairman, may I proceed while
8 Mr. McGarry is looking? I know that Mr. Wilson --

9 CHAIRMAN MILLER: You might interfere with his
10 thought processes. We'll give him an opportunity since he
11 hasn't yet examined. Then you may, after Mr. McGarry.

12 MR. RILEY: Thank you.

13 (Pause.)

14 MR. MC GARRY: With the Board's permission.

15 CHAIRMAN MILLER: You may proceed.

16 BY MR. MC GARRY:

17 Q During the examination a question came up, and
18 I'm just seeking clarification from you, if I may. The
19 question focused on sabotage and transportation.

20 I believe you indicated that that wasn't your
21 particular area of expertise. Now the questions that you
22 have responded to today, do they contemplate any accident
23 scenario regardless of it may be sabotage, transportation
24 accident, an accident at a fixed site, are you talking
25 generically?

mpb15

1 A That's correct.

2 Really what I have described to you is our own
3 organization that would respond to any accident, be it a fixed
4 nuclear facility -- let me clarify -- other than where I've
5 described the notification system from the Highway Patrol, to
6 that.

7 The organization that I have described to you is
8 established to respond to any type of incident, not just
9 transportation.

10 MR. MC GARRY: Thank you. That's the only ques-
11 tion I have.

12 CHAIRMAN MILLER: Mr. Riley.

13 BY MR. RILEY:

14 Q Mr. Hufhan, pursuing the question Mr. Wilson
15 asked, the state in a serious situation would ask the DOE
16 to take charge. Now while the state is nominally in charge,
17 would not functionally and realistically the DOE be in charge
18 at that time?

19 A I have to say, Mr. Riley, that we always -- the
20 state remains in charge. In your question you said DOE would
21 be in charge at this time. The state is always in charge.
22 The state is assisted by DOE and the other signatory agencies.

23 Q Well, I realize your language, but what I'm try-
24 ing to do, Mr. Hufhan, is translate it to how things would
25 function if the state feels that they're in over their depth,

mpb16

1 and they don't have the capabilities and so forth and so on.

2 If I understood you correctly, the state would go
3 to DOE and say 'Please handle this'. Is that correct?

4 A I think if the state radiological health director
5 or the response team realized that it was beyond his scope, he
6 would certainly ask the Department of Energy to take over.

7 Q That's what I mean.

8 A There's nothing that prohibits that if the state
9 asks that that be done.

10 Q All right.

11 At what point, then, does the Department of Energy
12 find itself relieved from taking over -- and let me break this
13 in two parts to facilitate your answer:

14 One hypothesis is if the state is unhappy with
15 what the DOE is doing, can the state say to the DOE 'All right,
16 we've had enough, we're going to take charge from this point
17 on'.

18 A The chart of the interagency response team says
19 that the Department of Energy and other agencies will respond
20 to the request of the licensee state contractor and will
21 remain there until the requesting party has control of the
22 incident.

23 Q And who determines who has control of the inci-
24 dent?

25 A If the state is in charge, the state would have to

mpbl7

1 make that decision.

2 Q If the DOE is actually running the show who makes
3 the decision?

4 A I still have to say the state is in charge.

5 Q In quotes.

6 A Yes.

7 Q Would it be your testimony that you are unable
8 specifically to say who would decide at which point the DOE
9 would relinquish its primary functional responsibility?

10 A I would not be able to say that, that is correct.

11 Q Thank you.

12 CHAIRMAN MILLER: Does the Staff have any
13 further questions?

14 MR. KETCHEN: No questions.

15 CHAIRMAN MILLER: Does anyone desire to ask any
16 further questions?

17 (No response.)

18 CHAIRMAN MILLER: Very well.

19 Thank you, sir. You are excused. We appreciate
20 your testimony.

21 (The witness excused.)

22 CHAIRMAN MILLER: We were planning to take a
23 recess shortly. Would this be an appropriate time, or would
24 you rather start with another witness?

25 MR. WILSON: This would be an appropriate time.

mpb18

1 CHAIRMAN MILLER: All right.

2 Let me ask you also now -- we'll take about a
3 ten to fifteen minute recess. We would like now for all
4 parties and counsel to consider very carefully whether they
5 believe it necessary to request this evidentiary hearing to
6 be recessed until the Commission hearing that is to commence
7 at 11:30 -- and we realize that you've given this some
8 thought and we would indicate for the record, since we are
9 approaching the time that it would take to get downtown to
10 participate, we would like for you to have one last chance
11 to think it over and then please indicate affirmatively for
12 the record what your decision is in that regard.

13 We are in recess.

14 (Recess.)

15 CHAIRMAN MILLER: Mr. Roisman has joined us.

16 Let me recapitulate what we have done so far, and
17 then we would like to hear from you, Mr. Roisman.

18 Various parties and counsel have indicated that
19 they were willing, if not desirous of proceeding as scheduled.
20 They explained Mr. McGarry had discussed with you certain
21 witnesses that you did or did not care about cross-examining
22 and we could proceed.

23 The Board then raised the question of the stay,
24 in effect. The Commissioners at 11:30 were hearing argument
25 and so forth. The Board offered to recess if the parties felt

mpbl9

1 that this was necessary.

2 After hearing from each of them on the record,
3 they indicated they felt that it was not necessary. In the
4 case of the Staff, I think there were other counsel that were
5 going to cover the argument, as well as Mr. Ketchen proceeding
6 here.

7 However the Board did ask them at recess to
8 review their position so we could have an affirmative state-
9 ment for the record from everyone as to whether or not we
10 should recess at this time for the purpose of the Commissioners'
11 argument, which is at 11:30. And that means that an hour
12 would be sufficient for everyone who wished to attend.

13 Before I hear from counsel on that, let me
14 indicate also that the Board has received, delivered by hand
15 on September 7, 1979, at 4:45 p.m., the Staff's motion to
16 defer consideration of matters requiring specific route
17 identification.

18 The Board has considered that motion and has
19 decided to grant the motion, and will therefore rule that
20 specific matters requiring identification of the specific
21 routes of the transportation of spent fuel in question be
22 deferred pending Commission consideration.

23 The Staff's motion in that regard is granted.

24 Now we haven't heard from you at all, Mr. Roisman.
25 And the others we've asked to reflect and review. So the

mpb20

1 opportunity is yours.

2 MR. ROISMAN: May I just ask one preliminary
3 question?

4 Is there a Commission order out on this?

5 CHAIRMAN MILLER: Yes. I was handed that this
6 morning.

7 MR. KETCHEN: I put copies on the tables for
8 everyone.

9 CHAIRMAN MILLER: It's dated September 7, 1979,
10 and stamped with the same date. The Board received copies
11 this morning.

12 Mr. Roisman?

13 MR. ROISMAN: Well, I have nobody to cover that
14 hearing, Mr. Chairman. There are no attorneys in my office
15 who are at all familiar with this. And the reasons I wanted
16 to look at this was to see if it was clearly going off on a
17 legal question and therefore that Dr. Cochran, who is down-
18 town in Washington, couldn't cover it.

19 I think I need to go.

20 On the other hand, the parties have already been
21 very lenient to me about scheduling problems I had that weren't
22 even of this magnitude, so I feel a little bit awkward with
23 that. I don't know whether there is work that the other
24 parties are doing that they can continue to do while I run
25 down to the hearing and come back again, which I assume would

mpb21

1 mean missing the hour and a half between now and lunch and
2 being back by the time the lunch break is over.

3 CHAIRMAN MILLER: Yes. We intend to break for
4 lunch between 12 and 2.

5 Well, let me inquiry:

6 Mr. James Hufham has testified this morning. I
7 think you were familiar with the testimony anticipated with
8 reference to the emergency response matters. That cross-
9 examination was had by Mr. Wilson and Mr. Riley.

10 Let me inquire who next would be the subject of
11 testimony today or this morning?

12 MR. KETCHEN: The next subject we are going to
13 take up is identified -- is number two in the August 31st,
14 1979 letter of the State of South Carolina. It involves a
15 panel that would speak to the method of cask inspection
16 systems.

17 That panel would consist of Mr. Hufham and Mr.
18 Spitalny. That follows on, if you'll recall, the testimony
19 of Mr. McNeil. It's in that area of testimony, what system
20 the Staff has with respect to inspection of casks over their
21 lifetime.

22 MR. ROISMAN: That is not an area that I would
23 be doing cross-examination in. If it's going to take as long
24 as an hour and a half then it might not be, or shouldn't
25 cause any problem.

mpb22

1 CHAIRMAN MILLER: Well, I think we can agree that
2 that probably will take until 12. At any rate, we would
3 recess if it didn't.

4 MR. KETCHEN: Yes.

5 And this afternoon I would assume we would go
6 into the third matter, which would be the application of
7 Part 73 regulations in general terms. Mr. Cossen, who would
8 be our witness, is necessary down at the Commission. But
9 I'm assuming -- I may be wrong -- but I'm assuming that the
10 Commission will complete their business in order that he
11 could be back here by 2. or in that range. So that would be
12 our program for today.

13 There is a problem in the afternoon with respect
14 to your order on the specifics of the routes. But my under-
15 standing is the state can go into these matters without
16 doing that.

17 My understanding is the state wants to know the
18 general applications of regulations which would not involve
19 that. So we could conceivably complete the whole day without
20 going across that line that you've drawn.

21 CHAIRMAN MILLER: Yes.

22 Well, the Board does not wish to go into matters
23 which impinge upon the issues which are presently pending
24 before the Commission, whether directly or indirectly. It
25 was our understanding from the descriptions of both Mr. Ketchen,

mpb23

1 Mr. Wilson and Mr. McGarry that essentially today was to be
2 devoted to those witnesses and that testimony which related
3 to the issues and questions that Mr. Wilson on behalf of the
4 State of South Carolina had in mind, for the reason that
5 this was the only day that he could attend these proceedings.
6 And this seemed to be the subject of pretty general agreement.

7 Is this a correct summary?

8 MR. KETCHEN: Yes, sir.

9 CHAIRMAN MILLER: So I guess, Mr. Roisman, that
10 indicates to you the nature of our proceedings today, which
11 will exclude the specific matters in which you are involved.
12 And you may make your decision.

13 We're not pressuring you in any way. If you wish
14 to ask for a recess --

15 MR. ROISMAN: Mr. Chairman, no, no, I don't see
16 any reason for that. It's clear that the matters that will
17 be covered between now and two o'clock, including lunch, will
18 provide sufficient time for me to go down to the Commission
19 and come back.

20 I will say for the record in the interest of
21 conserving energy that I am going to drive, so if anybody is
22 going down there I'll be glad to drive them down.

23 CHAIRMAN MILLER: Thank you. We appreciate the
24 offer.

25 May I ask now, is there any objection to this

1003 136

mpb24

1 procedure on the part of any party or any counsel?

2 MR. MC GARRY: No objection, Mr. Chairman.

3 MR. WILSON: No objection, Mr. Chairman.

4 MR. KETCHEN: No objection.

5 MR. RILEY: No objection.

6 CHAIRMAN MILLER: Very well. We'll follow that
7 procedure.

8 Mr. Roisman, you may be excused, if you wish.
9 And we will go into nothing on the matters that were mentioned
10 or discussed prior to, say, two o'clock. And even then, if
11 by phone call anyone indicates we should defer further, we
12 would certainly do so.

13 MR. ROISMAN: Thank you, Mr. Chairman.

14 CHAIRMAN MILLER: Thank you.

15 All right. I suppose, then, Mr. Ketchen -- pardon
16 me, were there some matters remaining?

17 MR. KETCHEN: I would like to call Mr. Spitalny
18 to take the stand, and I would like to recall Mr. Hufham.

19 CHAIRMAN MILLER: Excuse me just a moment.

20 (Pause.)

21 MR. KETCHEN: Mr. Chairman, both of the witnesses
22 on this panel have been previously sworn.

23 CHAIRMAN MILLER: Very well. You may proceed.

24 Whereupon,

25 JAMES W. HUFHAM

1003 137

mpb25

and

BRETT SPITALNY

resumed the stand as witnesses on behalf of the Regulatory Commission Staff, and, having been previously duly sworn, were examined and testified further as follows:

MR. KETCHEN: And as I just said, this panel is basically here to respond to any questions the state may have with respect to cask inspection system. And just for the record, that was described in a letter of August 31st, 1979, from the State of South Carolina to myself. And it indicated the scope of the State's inquiry. And I would like to pose some preliminary direct questions before I turn the panel over for cross-examination.

CHAIRMAN MILLER: You may do so.

WRB 1B flws

DIRECT EXAMINATION

BY MR. KETCHEN:

Q Mr. Spitalny, first you.

Do you recall the testimony of Mr. William McNeil on August 9th, 1979, in Charlotte on the question of cask inspections?

A (Witness Spitalny) Yes, I do.

Q Do you recall generally that Mr. McNeil discussed cask inspections prior to placing the cask into service?

A Yes, I do.

Q And can you tell us what assurances there are that the cask will function properly after it is placed in service?

A Yes. Basically the procedure that is used to insure the quality of the cask is one that is set forth by regulation. It might be easier to walk you through the regulations a little bit.

I am referring to 10 CFR Part 71 which are the transportation requirements.

A license is issued under 71.12 which is a license that authorizes an applicant or a licensee to ship fuel in accordance with certain requirements, or ship not only fuel but radioactive material. Part of that specific section 71.12 states that a license will be issued provided the licensee has a quality assurance program which satisfies the provisions

WPS/wb2
1 of 71.51.

2 Now if we move through the regulations that go
3 to 71.51, that falls under subpart (d) which is called
4 Operating Procedures. 71.51 is entitled "Establishment and
5 Maintenance of a Quality Assurance Program." What this
6 section requires is that the licensee establish, maintains
7 and executes a quality assurance program satisfying each of
8 the applicable criteria specified in Appendix E.

9 Appendix E is attached to this section which is
10 entitled "Quality Assurance Criteria for Shipping Packages
11 for Radioactive Material." Appendix E spells out eighteen,
12 I believe it is, steps which must be incorporated into the
13 QA plan, the quality assurance, to insure that the integrity
14 of the cask is maintained.

15 I can go into further detail on that if you want.

16 Q Let me just go back.

17 You indicated Part 71 was the applicable regula-
18 tion. I would like to refer you to 10 CFR Section-- Well,
19 let me ask you before that:

20 Is it part of the Staff practice to use the--
21 Let me strike that.

22 Refer to 10 CFR Part 71.51, or Section 71.51.
23 Would you indicate your understanding of whether or not that
24 applies to spent fuel casks?

25 A Yes, it does apply to spent fuel casks.

WPR/wb3

1 Q Okay.

2 Then would you indicate your understanding of what
3 the purpose of this regulation is, 10 CFR Section 71.51?

4 A The purpose of this is to set forth the requirement
5 to the licensee for establishing, maintaining and executing
6 a quality assurance program.

7 DR. LUEBKE: Excuse me. May I interrupt you for
8 clarification?

9 This licensee is the manufacturer of the cask,
10 not the Duke Power Company?

11 WITNESS SPITALNY: No, it is-- It actually applies
12 to both. But it is also the licensee which is a qualified
13 user of the cask.

14 DR. LUEBKE: The user as well as the manufacturer?

15 WITNESS SPITALNY: A qualified user is termed
16 the licensee in this case.

17 DR. LUEBKE: Thank you.

18 BY MR. KETCHEN:

19 Q I would like to refer you now to 10 CFR Section
20 71.54 and ask you, Does Section 71.54 apply to spent fuel
21 casks, in your understanding?

22 A (Witness Spitalny) Yes, it does. This parti-
23 cular section is still under the operating procedures, and
24 it's entitled "Routine Determinations." It continues and
25 says,

ce Reporters, Inc.

1 "Prior to each use of a package for
2 shipment of licensed material, the licensee shall
3 ascertain that the package with its contents
4 satisfies the applicable requirements of subpart
5 (c) of this part."

6 What subpart (c) is is the package standard. So
7 this spells out a number of steps to insure that the package
8 meets the standards established for the design of that pack-
9 age.

10 To give an example, some of the steps are that
11 the package has not been significantly damaged, the closure
12 of the package and any sealing gaskets are present and are
13 free from defects, any valve through which primary coolant
14 flows is protected against tampering. --and it goes on with a
15 number of steps of that order.

16 MR. KETCHEN: Mr. Chairman, at this time I would
17 like to have a document entitled "U.S. Nuclear Regulatory
18 Commission Certificate of Compliance for Radioactive Materials
19 Packages, Certificate Number 6698, Revision No. 8,
20 USA/6698/B()F," marked for identification as Staff Exhibit
21 No. 29. And I will furnish copies to the Board and the
22 parties.

23 CHAIRMAN MILLER: Very well, the document thus
24 described may be marked for identification as Staff Exhibit
25 No. 29, and copies will be supplied by Mr. Ketchen as

1 indicated.

2 (Whereupon the document referred to
3 was marked for identification as
4 Staff Exhibit No. 29.)

5 BY MR. KETCHEN.

6 Q Mr. Spitalny, do you have a copy of Staff
7 Exhibit No. 29 for identification before you?

8 A (Witness Spitalny) Yes, I do.

9 Q I'd like to ask you a couple of questions about the
10 document.

11 I would like to have you respond whether or not
12 this document has any in-service requirements on use of the
13 cask involved.

14 A You're asking, Does this?

15 Q Yes. Does this document place any in-service
16 requirements on the use of the cask?

17 A Yes, it does.

18 Q And would you explain what they are?

19 A The Certificate of Compliance spells out the
20 design and the-- it's basically the Commission's authorization
21 of the design of a particular spent fuel cask. It's authoriz-
22 ing that model, that type of cask, to be used.

23 Throughout the document it basically describes
24 how it's made, what the contents are that it is designed to
25 carry. And on page 5 of the document there are a couple of

WRB/wb6

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

paragraphs which address some requirements that have to be met.

Paragraph 12 specifically says,

"In addition to the requirements of Subpart D of Part 71" -- again, Subpart D was the operating procedures. --"each package prior to first use shall meet the acceptance tests and criteria specified on pages A-21 through A034 of the Nuclear Fuel Services application."

The applications spells out some steps to be taken for evaluating or checking the cask, or periodic maintenance to be done on the cask.

Paragraph 13 continues and says,

"At periodic intervals not to exceed three years, the thermal performance of the cask shall be analyzed to verify that the cask operation has not degraded below that which is licensed."

We skip to page 6, paragraph 15. It says,

"In lieu of the requirements of 10 CFR 71.54(h)...."

3.135

71.54(h) reads,

"The pressure relief valve or valves are operable and set in accordance with written procedures."

What this is saying, in lieu of just determining

/wb7

1 that they're operable, this sets out criteria for testing and
2 determining that they meet that criteria.

3 The other paragraphs that are noted in the
4 Certificate of Compliance simply spell out what type of pieces
5 of gear are on the cask and what they should be, for anybody
6 who is reviewing a cask and comparing it to the certificate
7 of requirements.

8 Q In those areas that you have alluded to, what can
9 you tell us about the NRC Staff's inspection activities in
10 those areas?

11 A The Office of I&E -- Inspection and Enforcement --
12 periodically inspects a licensee to insure that they are
13 conforming with the appropriate requirements that they have
14 to conform with.

15 With regard to the specifics that are spelled out,
16 spent fuel pool activities are done at the facility, are
17 reviewed by I&E. It's done at a frequency which is not dictated
18 by any regulation; all inspections are unannounced, so they
19 may just walk in at any given time and evaluate the spent
20 fuel pool activities.

21 The transportation program -- and this specifically
22 refers to the QA requirements -- is inspected on an annual
23 basis. When they inspect that they are inspecting to
24 Appendix E which are the criteria set forth for the QA plan.

25 The initial use of packaging, which is Part 71.53,

WBR/wb8
1 which sets forth a number of items to be checked before a
2 cask is put into use, is done at three-year intervals.
3 Routine use of packages, which is 71.54, as we discussed, is
4 done on an annual basis. And the receiving and monitoring of
5 packages of licensed materials is also done on an annual basis.

6 So there is a program that is set forth in the
7 Office of Inspection and Enforcement to evaluate these areas.

8 Q Mr. Hufham, do you have anything to add to what
9 Mr. Spitalny indicates with respect to the staff's inspection
10 activities in these areas?

11 A (Witness Hufham) The only thing I have to add is
12 we have a resident inspection program also that is involved
13 with the cask inspection.

14 I'd like to define "resident" for you. We have
15 routine inspectors and we have resident inspectors. The rou-
16 tine inspectors are the ones who perform the annual reviews
17 for the transportation program and the initial use of packag-
18 ing inspections. This individual is stationed in Atlanta and
19 makes quarterly inspections of the site.

20 Our resident inspectors are inspectors whose duty
21 stations are at the sites. We presently have a resident at
22 Oconee, and we will have one at McGuire.

23 There is a transportation inspection program for
24 him, and he assures that in the event that the routine inspec-
25 tor is not there, the resident inspector will insure that the

/wb9

1 licensee is following procedures and is maintaining records
2 of the -- the required records of the cask loading and placard-
3 ing.

4 Additionally, this program-- Mr. Spitalny has
5 described to you the modules. we began initiating in January
6 of this year, 1979. And we intend to invite the State to
7 participate -- we intend to invite the State to accompany us
8 on some of these inspection procedures.

9 That's all I have.

3.190 10 Q Mr. Hufham, when are Duke's spent fuel casks
11 inspected by the Atlanta Region?

12 A In the past shipments we have dispatched someone
13 to the site before each shipment. If the number of shipments
14 develop as planned, I cannot assure you that we will have
15 someone there every day from the Atlanta office for a period
16 of a year to specifically inspect the cask shipment. But in
17 the event this man is not there from the Atlanta office we
18 will use the resident man, the resident inspector.

19 Q Okay.

20 Can you describe, or tell us what the inspection
21 consists of?

22 A I can. They will be a review of-- I can't be
23 very specific with you, but I can give you an overview like
24 Mr. Spitalny did.

25 Q Can you just generally describe it?

WP/wb10

1 A The transportation program that we have, the annual
2 inspection is just to make sure that management has developed
3 procedures for receiving, packaging, delivering and transport-
4 ing licensed radioactive materials; that he has transportation
5 procedures that are written and approved for loading and
6 closing casks, and for implementing DOT requirements, and
7 that he has established an audit group, a QA group to audit
8 the transportation program.

9 The initial use of packaging is that he has
10 established procedures for reviewing the casks for voids, cracks,
11 pinholes, and that the cask has met the certificate of com-
12 pliance.

13 The inspection program for routine use of packag-
14 ing assures us that the licensee has a copy of the certificate
15 of compliance and inspects the cask for routine -- I mean for
16 observable damage; that closures are made, seals are made,
17 primary coolant valves are protected: a quite extensive list
18 of observations.

19 And this module assure that they evaluate the
20 licensee to make sure you're following procedures.

21 There's a maintenance program that is inspected.
22 This is the maintenance of the cask required by the certificate
23 of compliance. And if this maintenance is performed by the
24 vendor, then the inspection is made at the vendor's facility
25 by the Region in which -- by the Region where the vendor is
located.

Ace- Reporters, Inc.

25

2fls

1003 148

1C wrb/agbl

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

I've also mentioned the resident inspection program.

Q And these procedures you describe will be the ones that will apply to Duke's spent fuel casks?

A That is correct.

Q Thank you.

3.250 Mr. Spitalny, back to you. This document, Staff Exhibit Number 29, will you just for the record indicate for us in answering the question -- Strike that.

Would you describe how this document comes about is what I'm looking for.

A (Witness Spitalny) Before a cask is authorized for use, an Applicant submits an application to the Staff of a design of a specific cask. That is a Safety Analysis Report which is an involved report, a thorough document that evaluates all aspects of the cask through normal routine and abnormal uses.

The Safety Analysis is used by the Staff in their Safety Evaluation. The Staff then performs a Safety Evaluation on the order of a Safety Evaluation that might be done for any licensing action. They evaluate the material which is presented by the Applicant and determine that the cask is designed the way it is depicted, and that the way it is shown will meet the specific requirements.

Once it is determined that the design of the cask does meet these requirements, we can then be authorized by the

A General Reporters, Inc.

wrb/agb2

1 Commission for use and this document is this authorization.

2 Q "This document" being the certificate of compliance?

3 A Yes.

4 Q And is there any further identification of which
5 cask this certificate of compliance applies to? In other
6 words, is this the Duke-proposed cask?

7 A The certificate of compliance addresses a design
8 of a cask. On the first page, under Section Five, I guess,
9 which says "A) Packaging: Model Number NFS-4," this is the
10 design for the NFS-4 cask. Duke has indicated they will use
11 an NFS-4 if they are able to.

12 Q Thank you.

13 MR. KETCHEN: Mr. Chairman, at this time I would
14 like to move for admission into the record as Staff Exhibit
15 Number 29 for identification.

16 CHAIRMAN MILLER: Any objection to the offer of
17 introduction into evidence?

18 MR. MC GARRY: No objection, Mr. Chairman.

19 MR. RILEY: No objection.

20 CHAIRMAN MILLER: Very well. Staff Exhibit
21 Number 29 will be received into evidence.

22 (Whereupon, the document
23 previously marked for identifi-
24 cation as Staff Exhibit 29
25 was received in evidence.)

1 MR. KETCHEN: That completes my direct examination
2 of this panel, Mr. Chairman.

3 CHAIRMAN MILLER: Very well.

4 Cross-examination, I assume, will proceed in the
5 same order. Mr. Wilson?

6 MR. WILSON: Thank you, Mr. Chairman.

7 CROSS-EXAMINATION

8 BY MR. WILSON:

9 Q Mr. Hufham, you have mentioned the annual
10 inspections that were conducted by the Staff were actually on-site
11 I take it, is that correct?

12 A (Witness Hufham) That's correct.

13 Q Of the cask in service?

14 A Right.

15 Q And this actually involves laying eyes on the cask
16 and conducting, I presume, certain checks in the critical cask
17 design, is that correct, too?

18 A That is correct.

19 Q And this is conducted on an annual basis?

20 A On an annual basis. The routine use may be more
21 frequently if required.

22 Q All right, sir.

23 Where there are in-service repairs that have to be
24 effected on a cask which may not necessarily require return to
25 the vendor, under what circumstances does the Staff actually

/agb4

1 go out and verify that the repairs have been made in accordance
2 with the certificate of compliance and other regulations?

3 A This is taken care of through the maintenance
4 inspection program that I mentioned to you. Repairs that
5 can be done on-site have to be documented, records maintained,
6 if there is any traceability back to foreign parts that have
7 to be -- there must be traceability back to the origin of
8 any parts that are replaced. That's only for cask maintenance
9 on-site, but this is all documented, the routine inspector
10 as well as the resident reviews these records.

11 Q And the routine inspection, just to make sure I'm
12 clear on this, is an at-large inspector, is that correct,
13 within the region that you're talking about as opposed to a
14 resident, someone who is assigned to actually stay there and
15 oversee operations?

16 A That's correct. Two visits, approximately once
17 a quarter to the site. If there is a reason, if there's a
18 spent fuel shipment and we feel the need that he must go for
19 these inspections, then he will be dispatched at an increased
20 frequency.

21 Q But he is there, the routine inspector is assigned
22 to rotate through once a quarter, is that correct?

23 A His visits are approximately once a quarter.

24 Q If not more frequently?

25 A Right.

w/ab5

1 Q But they do, the routine and the resident
2 inspector do share the same responsibility toward these
3 casks, is that correct?

4 A The routine inspector is more involved in cask
5 inspections than the resident. The resident is a very --
6 the routine inspector is more specialized for transportation
7 inspections than the resident. But in the event that a routine
8 inspector cannot be there, the resident will observe the cask,
9 inspect the cask.

10 Q What other responsibilities does that routine
11 inspector have when he visits the site?

12 A He may be on-site for a number of reasons, he
13 may be there for an inspection of the radwaste system or the
14 in-plant health physics system, or he may be purely there just
15 to inspect a shipment. But normally he is there in some other
16 function and he would tie this into this routine inspections.

17 Q Did I understand you correctly then, in the
18 situation where we have a large number of shipments perhaps
19 on a daily basis as in this particular proceeding, you would
20 not expect a routine inspector but rather the resident in-
21 spector to assume the responsibility?

22 A We would like for the routine inspector to see
23 as many as possible. But in the event there is one every day,
24 he will not be able to, he has other responsibilities at other
25 utilities. In that case, he will have to be replaced, we

Ac...al Reporters, Inc.

wf agb6
1 would think about using a resident.

2 One point here: the inspector procedures that
3 have been discussed, the transportation program, initial use,
4 routine use, maintenance, are all fairly new, they were
5 implemented in January of this year. Our program prior to
6 this date has been somewhat limited to contamination levels,
7 the cask meeting the DOT requirements, the right placarding.
8 These inspection procedures, these more in-depth procedures
9 were initiated the first of this year.

10 Q All right, sir.

11 But there is, I take it then, an intent to provide
12 some NRC, independent NRC verification of compliance in the
13 shipments we are considering here today, is that correct?

14 A That is the intent, with our request that the
15 state attend and a company also.

16 Q In the state and company situation, though, you're
17 speaking more generally though, aren't you, say on a daily
18 basis, is that right?

19 A Well the frequency has not been determined at
20 this point. You will be asked, and it will depend upon you.

21 MR. WILSON: I believe that's all I have at this
22 point, Mr. Chairman.

23 CHAIRMAN MILLER: Thank you.

24 Mr. McGarry.

25 MR. MC GARRY: I don't have any questions,

1 Mr. Chairman.

2 CHAIRMAN MILLER: Mr. Riley.

3 MR. RILEY: Thank you.

4 BY MR. RILEY:

5 Q Mr. Hufham, have you ever had physical access to
6 a cask yourself and minutely examined it?

7 A (Witness Hufham) No, sir, I haven't.

8 Q Have you a knowledge of the variety of types of
9 carriers that are used for the Applicant's type of cask,
10 the NFS-1?

11 A Yes, sir, I deal with the variety.

12 Q Could you tell us about the reasonably probable
13 variety of trailers on which this cask will be borne?

14 A No, I cannot describe the trailer. I thought you
15 were specifically mentioning the company. I deal with the
16 company itself, not the trailer.

17 I would like to go back to my first statement.
18 I am speaking for the Fuel Facility and Materials Safety Branch
19 of the NRC. There are members of this staff who have had
20 and who will be making inspections who have minutely gone over
21 a cask. I have not.

22 Q Do you regard, in transportation, the cask plus
23 the trailer as a relevant system or are there no requirements
24 with respect to the trailer?

25 A I am not sure of any requirements for the trailer,

w agb7

3.375

Ac...al Reporters, Inc.

wrb/agb8

1 other than the placarding and the radiation levels from it.

2 Q What do you know about protective shielding, heat
3 protective shielding on the trailer?

4 A I am not familiar with it. That would be in the
5 review group.

6 Q Is it part of the regulations that the driver of
7 a cask also perform inspections during transit or during
8 stops in transit?

9 A The drivers we have interviewed -- I do not know
10 if it is a requirement, but the drivers that we have interviewed
11 have been aware of what they are carrying and have made
12 periodic stops to review the condition of the trailer as well
13 as the cask.

14 Q Sometimes it happens that a piece of equipment
15 malfunctions after having checked out properly when it was
16 set up. Let me ask a hypothetical.

17 Let's say that the driver of the cask makes a
18 stop and he finds that there is a liquid leak at a fairly
19 appreciable rate. What does he do at this point?

20 A It has been our experience, not specifically with
21 the spent fuel cask, but let's talk -- I can talk from
22 experience even on low-level waste shipments.

23 The driver, having stopped, observing a leak or
24 not even a leak, a collection of liquid, has notified the
25 appropriate highway patrol, who in turn has followed the

1 procedure that we described this morning, and we are made
2 aware through the state.

3 Q Now in this hypothetical, who will take the
4 corrective action after the highway patrol has been notified?

5 A Again corrective or response action is just as
6 we talked this morning. The channels were developed -- do
7 you want me to go through that again?

8 Q Well what I'm seeking, Mr. Hufham, is presumably
9 the person to respond would be somebody familiar with casks,
10 and presumably there is some specialized equipment relating
11 to casks and correcting the defect if it is a corrigible
12 defect.

13 What I'm trying to find out is whether a leaking
14 cask would have to be brought back to a fuel pit before it
15 could be operated on, or whether it can be corrected at the
16 point where it is stopped and the hypothetical was that it
17 was releasing a significant amount of coolant. And I would
18 like you to understand that the coolant was somewhat radio-
19 active.

20 A Okay. This is where the Department of Energy
21 training your teams have been involved, Mr. Riley. The
22 drivers have called in before, not specifically in North and
23 South Carolina, and have described what they thought were
24 leaks. Some of these have been through DOE and discussions
25 with DOE, they turned out to be nothing more than rain that had

w agbl0

1 collected.

2 But to answer your question, this would be the
3 decisions of the teams from the Department of Energy. They
4 are experienced in handling cask problems.

5 Q From whence develops their experience in handling
6 a problem of, say, a specific cask like the NFS-1 --

7 MR. KETCHEN: Excuse me, Mr. Chairman. I would
8 like to interpose an objection, the objection being I think
9 the line of questioning is somewhat cumulative in that we're
10 getting into matters that we covered with the previous panel,
11 which was Mr. Hufham on what you do when something happens.

12 The subject matter of this panel's testimony was
13 compliance with -- well, cask inspection system which was
14 described in direct.

15 We are, I think, outside the scope of the cask
16 inspection system and are now back into what happens to a
17 cask when something -- I'm not saying that it will, but on a
18 hypothetical something happens back into the response of the
19 Department of Energy, which doesn't have much to do in my
20 view with the cask inspection system subject matter of this
21 panel.

22 CHAIRMAN MILLER: Mr. Riley, what is the connection
23 between the subject of the direct examination and this line of
24 inquiry?

25 MR. RILEY: Well on the one part, in the life of the

1 cask, it's moving with fuel in it, and a good inspection system
2 will be dynamic. It won't just take one moment of the time
3 when the cask is in the pit to look at it, but will be able
4 to evaluate and make a judgment on the cask in its actual
5 function. So the question is, how do we check out a cask
6 in a dynamic situation where it is in the road and subject to
7 failure?

8 CHAIRMAN MILLER: Well it sounds reasonable.
9 Let's hear your question rephrased. Rephrase your question,
10 Mr. Riley.

11 BY MR. RILEY:

12 Q What I want to know is in a situation that I
13 just described in the hypothetical, you indicated that DOE
14 not the I&E would respond. And my question is, on what basis
15 can we attribute expertise in the NFS-1 cask to the DOE
16 responder?

17 CHAIRMAN MILLER: I believe we'll sustain the
18 objection to that, Mr. Riley, that seems to be getting more
19 into responses, techniques and the like rather than to the
20 inspection. We will allow questions, however, along the line
21 you indicated was the scope of your interrogation, but we
22 don't regard that question as being that, so we will sustain
23 the objection on that basis.

24 MR. RILEY: Very well.

25 BY MR. RILEY:

W agbl2

1 Q In a response in a dynamic situation, access will
2 have to be gained to the cask. Now in inspecting the cask,
3 is there a provision that such access be provided?

4 To make it a little more specific, let's say
5 there's a problem with one of the ball valves which would be
6 involved in, say, either the venting system or the coolant
7 drain system and a correction has to be made there. Does
8 inspection assure that in a dynamic situation there will be
9 access to that valve for corrective action?

10 MR. KETCHEN: Same objection, Mr. Chairman.

11 CHAIRMAN MILLER: Overruled, he may answer.

12 Do you understand the question?

13 WITNESS HUFHAM: The only answer I can say is
14 through this procedure review -- the procedures require that
15 this provision be made, or if there is some requirement that
16 this be made available, then the procedures must capture it
17 and then we do review the procedures for implementation.

18 Other than that, I have no knowledge, Mr. Riley.

19 BY MR. RILEY:

20 Q The description of the cask indicates there is a
21 device vis-a-vis tampering. Could you provide a description
22 of the device and the inspection that is made of the device,
23 by whom and with what frequency?

24 A (Witness Hufham) No, I cannot.

25 Q Are you familiar with the incident in which a

3.530

Ace Central Reporters, Inc.

C4

wr gbl3

1 spent fuel assembly was shipped from the Oconee Plant to a
2 Florida plant in which the wipe made on the cask surface was
3 within requirements at the point when the cask left Oconee
4 but individual counts of as high as 130,000 dpm were noted
5 when it was received in Florida? The question is are you
6 familiar with that case?

7 A I'm familiar, Mr. Riley, with the date the
8 cask left Oconee, our notification of the states through
9 which it would move, the State of Georgia's inspection of the
10 cask where the surface contamination had increased, and the
11 arrival of the cask on-site at Crystal River and the reversal
12 of that shipment.

13 Q All right.

14 Are you specifically aware, then, of what the
15 maximum count was at any point on that trip?

16 A I don't remember the figures. There were several
17 shipments, it seems like to me there were six shipments of
18 that type.

19 Q Would you accept a maximum count of 130,000?

20 A I think you're approximately right.

21 Q Is it true that the regulation calls for a maximum
22 of 20,000?

23 A Yes, and we can provide you the answer today for
24 the reason or the cause of that. I just don't remember it.

25 Q Well I would like to ask you what the cause of the

1 high dpm is, what corrective action was taken and what
2 verificiation was made through the inspection system.

3 A That can be provided.

4 Q Is it your suggestion that it be brought in later
5 today?

6 A Yes.

7 Q Now when an inspection is made of a cask where
8 there will be a shipment, I gather from what you said that
9 there's an inspection at the initiating end of the trip. Is
10 that correct?

11 A In most cases.

12 Q And is there an inspection at the terminal end
13 of the trip?

14 A Again there may or may not be. I cannot -- I
15 would get away from saying there's a 100 percent inspection
16 at the beginning and at the termination of the shipment.

17 Q But it was your testimony that there's a very
18 high probability that if a routine inspector is not able to
19 be present because of the high frequency of shipments, that
20 the resident inspector would be present?

21 A That's correct.

22 Q How long does such in inspection take at the
23 initiating end?

24 A Well we have -- some of these inspections have
25 lasted at least a day. A day.

wr gb15
1 Q What about at the terminating end?

2 A A matter of hours. One I can remember is the
3 Oconee, the one you have mentioned. There was an inspection
4 made at the beginning of the Oconee shipment and I would have
5 to check but I'm also sure there was one made at the Crystal
6 River site.

7 Q To take another hypothetical then, if a resident
8 inspector at Oconee spends about a day inspecting a cask
9 for each shipment, what provision is made for covering his
10 other duties?

11 A One of his duties as a resident is that he will
12 have time to do all of his modules. These are called inspection
13 modules. We have an inspection modules for his cask involve-
14 ment or inspection.

15 Q Would you please explain for the record what an
16 inspection module is?

17 A These are inspection guidelines that are used
18 by the inspector. The objective of the inspection, the
19 requirement of the inspection and -- there are three sections
20 to it: the objectives, the requirements and the guidance.

endLD
endBloom
Landonflws
21

22

23

24

25

Ac...al Reporters, Inc.

1 Q All right. To use a fairly familiar example, there's
2 a book of times for the various operations in automobile repair,
3 standard time charges. Is there also a standard time for an
4 inspection?

5 A Yes, we have times allotted to the inspection
6 modules.

7 Q What is the time allotted for the inspection modules
8 both on initiating a cask -- I mean assembling a shipment and
9 on terminating?

10 A I do not know. We have so many modules with
11 different times. I cannot answer that.

12 Q Could you provide that information also?

13 A Yes.

14 Now, these are only estimates. We have estimated
15 times for completing a module.

16 Q It will provide some sort of a yardstick, and I
17 can understand that certain circumstances might require
18 increasing the time. But would I assume correctly that it's
19 sort of a minimum time estimate?

20 A Yes, that's right. And also, Mr. Riley, while
21 we're on this, there is a proposal before the Commission now --
22 Ocone is a good example. We have one resident inspector now.
23 We have provisions for what we call a lead resident inspector,
24 in other words additional residents for a site.

25 Q With respect to the current resident inspector, what

1 are his normal hours of work?

2 A Far exceeding 40 hours a week.

3 Q That's why I said "normal." Would it be reasonable
4 to expect that he would normally be present five days a week?

5 A He's present five days a week. He will alter his
6 working schedule to observe activities that may occur on back
7 shifts or weekends. He's required to work a 40-hour week,
8 but it is not a Monday-to-Friday schedule.

9 Q Do you know whether there will be spent fuel
10 shipments made during some periods seven days a week?

11 A I would expect some to be.

12 Q Turning to you, Mr. Spitalny, I asked Mr. Hufham
13 if he had physically examined with some degree of intensity
14 say an actual NFS-1 cask, become acquainted with it as a
15 physical entity.

16 Have you?

17 A (Witness Spitalny) I think as far as the description
18 you're referring I probably have not. I have seen the NFS-4
19 cask. I have not done an extremely detailed examination.

20 Q Thank you for the correction, NFS-4.

21 What about the trailers? Do you know whether there
22 is only one type of trailer for the NFS-4?

23 A The trailer... to answer your question, I'm not
24 sure how many numbers of trailers possibly exist in this
25 particular situation. Duke has its own trailers, two of them,

1 I believe, that they are using for their casks.

2 Q Now, in your understanding of cask inspection, do
3 you regard the cask and trailer as a system, or do you feel
4 that inspection is confined only to the cask itself and to
5 cask operation?

6 A The inspections that cover routine operation call
7 for an evaluation of the procedures which are done by the
8 Applicant. The procedures include preparation and mounting
9 of the cask onto the trailer. That aspect of it would be
10 covered by inspection.

11 I'm not sure what specifics are highlighted in the
12 procedure to actually make a walk-around on the trailer and
13 look at it.

14 Q Is the trailer design subject to certification, as
15 is the cask?

16 A No, not to my knowledge.

17 Q Your answer was no?

18 A Not to my knowledge.

19 Q Earlier testimony indicated that there was a
20 perforated metal heat shield on the cask, on the trailer. Is
21 that correct?

22 A I'm not quite sure what you're referring to. My
23 description of the boundary between an individual approaching
24 the cask would not be that of a perforated shield. I'm not
25 sure what you're referring to.

1 Q Well, to try to clarify this matter, I believe that
2 Applicant and Staff have testified that the exterior surface
3 of the neutron shielded cask have reached temperatures as high
4 as 304 degrees Fahrenheit. Is that approximately right?

5 A I won't testify to the numbers.

6 Q All right. Nevertheless, it would be hot enough to
7 inflict a burn. And it is certainly information provided by
8 Applicant on discovery. I'm not certain that it's part of the
9 record.

10 But there is a shield, so that a person would not
11 be able to contact this and be burned in that way. Are you
12 familiar with that?

13 A Not the way you're talking about it, no. I am
14 not familiar with the cask reaching that temperature. And if
15 there was a shield, as you're talking about, it would be a
16 part of the cask. There is a boundary on the trailer, on
17 the carrier.

18 Q I think we're talking about the boundary on the
19 carrier, Mr. Spitalny.

20 A I'm familiar with that.

21 Q All right. Could you describe the nature of the
22 boundary on the carrier, and what inspection it receives, if
23 any?

24 A The trailer has a truss-type structure running down
25 the length of the trailer, which cradles the cask. It

1 prohibits anybody from actually reaching in and getting to the
2 cask unless they're going to start climbing on it, and if
3 somebody has the intent they might be able to do it.

4 Additionally, I believe now that Duke has indicated
5 that they are putting on some type of screen along that
6 truss structure which maybe is this perforated shield you're
7 talking about. That would be best discussed by the Applicant.

8 Q But this whole area that we've discussed now is
9 not subject to Inspection and Enforcement, is that correct?

10 A The actual procedures that would be used are
11 written by the Applicant, with regard to loading the carrier.
12 I do not know any inspection requirements spelled out by the
13 Staff which says you will inspect certain things on the
14 carrier. It's usually spelled out in the procedure written
15 by the Applicant.

16 Q Is it also your understanding, Mr. Hufham, that
17 there are no requirements for such an inspection?

18 A That's right. It's been answered the only way I
19 can. If it is in the procedure, it will be inspected.

20 Q Right.

21 Now, could you tell us what the procedures are
22 with respect to examining the tamper seals, Mr. Spitalny?

23 A (Witness Spitalny) When you refer to tamper seals,
24 there is one shield that I know of on the drain valve which
25 might be referred to as a temper shield, or it's there to

1 protect the valve. There is a requirement that says all tamper
2 shields will be inspected. That requirement is a general
3 requirement, speaking to any type of package. Whether or not
4 the cask has something that is described as a temper shield,
5 I'm not familiar, and I couldn't tell you specific details.

6 Q You could not provide specifics for the NFS-4 cask
7 in question, then?

8 A That's correct.

9 Q What about you, Mr. Hufham?

10 A (Witness Hufham) No, I can't.

11 MR. RILEY: Thank you, gentlemen.

12 CHAIRMAN MILLER: Any further examination? Mr.
13 Wilson?

14 MR. WILSON: I just have one follow-up question.

15 BY MR. WILSON:

16 Q Mr. Spitalny, can you tell us whether or not Duke
17 Power has adequate quality assurance management programs in
18 place to comply with the regulations we've been discussing
19 here on cask inspection?

20 A (Witness Spitalny) Yes, they do.

21 MR. WILSON: That's all I have. Thank you, Mr.
22 Chairman.

23 CHAIRMAN MILLER: Does Staff have any further
24 interrogation?

25 MR. KETCHEN: I have one or two questions. Mr.
Chairman.

BY MR. KETCHEN:

1 Q I'm not clear, Mr. Hufham, is there now in place
2 right today in the Commission's inspection and enforcement
3 procedures a requirement that a spent fuel shipment be inspect-
4 ed at its beginning and at its end before the shipment takes
5 place?

6 A (Witness Hufham) No, it is not.

7 You mean inspected by an NRC individual?

8 Q That's correct.

9 A We have inspection modules that we do follow.
10 There's usually a percentage with them.

11 I can also check on the percentage that we must
12 see. Export-Import shipments, we must see 25 percent of them.
13 I'd be glad to check on the percentage that we must see of
14 spent fuel shipments, must inspect.

15 MR. RILEY: Is it our understanding, Mr. Chairman,
16 that this information will be provided by Mr. Hufham?

17 CHAIRMAN MILLER: Well, we'll inquire.

18 WITNESS HUFHAM: Sure, it could be provided.

19 MR. RILEY: Thank you .

20 WITNESS HUFHAM: Today.

21 MR. RILEY: Thank you.

22 MR. KETCHEN: Mr. Chairman, I have no further
23 questions.

24 There were two things that Mr. Hufham volunteered
25 for, and that was one of them, I believe.

1 Well, there's a third one, another one. There
2 will be three. Another one was the times for completing
3 inspection of a module. I think you are going to provide
4 that.

5 The other one was some information on a specific
6 inspection that took place during a transshipment between
7 Oconee and Crystal River. And the numbers I recall are
8 20,000 and 130,000. And Mr. Hufham may recall the questions,
9 those three areas.

10 What I would suggest is that over the lunch break
11 secure that information, give it to you and Mr. Riley immedi-
12 ately at the resumption of the hearing.

13 CHAIRMAN MILLER: Very well. If that's convenient
14 it would be helpful.

15 WITNESS HUFHAM: That's fine.

16 CHAIRMAN MILLER: Are there any further questions
17 now that anyone has of this panel?

18 MR. RILEY: I may have one question that I hope
19 will not be objected to. And that is:

20 RE-CROSS EXAMINATION

21 BY MR. RILEY:

22 Q Mr. Hufham, can you tell us the status of the two
23 NFS-1 casks which we learned earlier in the proceeding are
24 both -- have both, in effect, their certification withheld
25 until certain examinations, etc., are made?

WEL/wb3

1 In other words, do we know yet when those casks
2 will be available for the road?

3 A (Witness Hufham) I do not.

4 Do you know?

5 A (Witness Spitalny) I can respond.

6 Q Would you, please, Mr. Spitalny?

7 A Yes.

8 We haven't progressed much further from where we
9 were the last time we spoke on it. The present position of
10 the cask is that the QA audit had taken place at the manu-
11 facturer of the casks and that there were some discrepancies
12 noted at that time.

13 Prior to any authorizstion of the use of the cask,
14 whether it be for the limited use that we had discussed in-
15 volving 2.5 or full restoration of the casks, these QA dis-
16 crepancies would have to be resolved. That is being handled
17 through I&E and the manufacturer.

18 The applicant, being NAC, Nuclear Assurance
19 Corporation, is continuing their evaluation, which was to
20 determine another -- well, to do a buckling analysis and a
21 complete evaluation of the cask the way it exists presently.

22 So, to answer your question, they are still pursu-
23 ing to get back on line, but the problems with the QA audit
24 have to be resolved first.

25 Q All right.

wb4

1 Could you tell us just a bit what you mean by
2 problems with the QA audit?

3 A Well, there are some verifications that have to be
4 made which apparently have not been shown during the audit.
5 It's up to the manufacturer to verify to I&E's satisfaction
6 a number of particular elements. I am not apprised of all of
7 those different areas.

8 Q But would this simply be in the area of perhaps
9 verifying that certain measurements were made and provided
10 for the record?

11 A I would really rather hold off on-- I'm not
12 totally familiar with the QA portion.

13 Q Thank you.

14 CHAIRMAN MILLER: Does that conclude your examina-
15 tion, Mr. Riley?

16 MR. RILEY: It does, Mr. Chairman.

17 CHAIRMAN MILLER: Does anyone else have any
18 further questions before the panel is excused?

19 (No response)

20 CHAIRMAN MILLER: All right. The panel will be
21 excused.

22 (Panel excused)

23 CHAIRMAN MILLER: Does anyone have any short
24 matters?

25 MR. KETCHEN: I have a couple of short matters

1 I would like to discuss just briefly on the scheduling. I
2 would like to discuss briefly Dr. Bateman's appearance, Mr.
3 Chairman. We met with Dr. Bateman -- Staff Counsel did, last
4 week, and there's some indication that he will be a witness
5 in this proceeding, and I think he will be. But we met with
6 him to interview him, and I indicated to the DOE attorney
7 representing Dr. Bateman that I would give her a call as soon
8 as I could verify when he would be required.

9 The parties have stipulated it would be acceptable
10 to them, at least, that Thursday, 13 September, would be
11 set aside for Dr. Bateman, and I would like to just have --
12 I would just like to return that call, and I will do so if
13 the Board would let me, and indicate to Dr. Bateman that he
14 be here at 8:30 on Thursday morning, ready to proceed.

15 CHAIRMAN MILLER: Let me ask, first of all, does
16 Mr. Roisman, who requested the subpoena which the Board issued,
17 has he stipulated to this time for appearance?

18 MR. KETCHEN: That's correct, yes.

19 MR. MC GARRY: Yes, Mr. Chairman.

20 CHAIRMAN MILLER: Does anyone have any objections,
21 or have you all, in addition to Mr. Roisman, agreed to the
22 appearance for the purpose of giving testimony of Dr.
23 Worthington Bateman on Thursday, September 13?

24 MR. RILEY: I have agreed.

25 CHAIRMAN MILLER: I take it everyone has agreed.

1 What time has been set?

2 MR. KETCHEN: Well, I told Dr. Bateman 8:30. Is
3 that correct? That Mr. Roisman had no objection to that time
4 period?

5 MR. MC GARRY: I believe the only trouble, the only
6 time restraints Mr. Roisman had, were Monday and Tuesday
7 morning, and Tuesday afternoon. He did not indicate any
8 problem with whatever time we set for Thursday.

9 MR. KETCHEN: I tentatively told Dr. Bateman that
10 8:30 would be the starting time.

11 CHAIRMAN MILLER: Well, why don't we make it 9:00?
12 It might be a little more convenient. And you can tell us a
13 little later in the week what else is to be taken up on
14 Thursday. But let's schedule -- and you may so inform counsel
15 and Dr. Bateman that we will be pleased to hear from him at
16 9:00 a.m. on Thursday, September 13.

17 MR. KETCHEN: I will do so.

18 MR. MC GARRY: Mr. Chairman, I also have several
19 phone calls to make. At the outset, I indicated we were
20 prepared to call certain witnesses. I had spoken at that time
21 with Mr. Riley and Mr. Roisman, and during the break Mr. Porter
22 spoke with Mr. Ketchen and Mr. Wilson, and I believe none of
23 the parties have any objection to stipulating to the testimony
24 of Dr. Garrick and Dr. Hamilton.

25 With respect to Mr. Lewis, three of the parties have

wel 3

1 no objection to stipulating. Mr. Riley will review the
2 testimony of Mr. Lewis over the luncheon recess, and perhaps
3 we can complete that.

4 The phone call I have to make is to tell these
5 gentlemen not to come. So the stipulation would be that their
6 testimony would be bound in the record as if read, if that's
7 acceptable to the Board.

8 CHAIRMAN MILLER: That's agreeable with the Board,
9 that the testimony of the witnesses, whom you will now re-name
10 for the record, may be received in the form of written direct
11 testimony by agreement of the parties -- by agreement of all
12 parties and counsel.

13 MR. MC GARRY: Mr. Chairman, perhaps I should now
14 mark these documents -- and I have the appropriate number of
15 copies to take care of it.

16 The testimony of Dr. Leonard Hamilton, the supple-
17 mental testimony, consisting of two pages, which was served
18 upon the Board and the parties, I request be marked for
19 identification as Applicant's Exhibit 24.

20 (The document referred to was
21 marked for identification as
22 Applicant's Exhibit 24.)

23 MR. MC GARRY: And the supplemental testimony of
24 Dr. B. John Garrick, which consists of two pages, with an
25 attachment of 3 pages, the attachment bearing the numbers

1 9-A, 9-C and 9-D at the bottom, with an additional attachment,
2 which bears the caption Attachment A, and a further identifica-
3 tion PLG-0102 Addendum, titled "Risk Analysis of Transporting
4 Oconee Spent Nuclear Fuel to the McGuire Nuclear Station."

5 I would request that that document be marked for
6 identification as Applicant's Exhibit 25, and upon providing
7 the appropriate number of copies to the Reporter, which I will
8 do in one minute, I would request that these exhibits be
9 bound into the record and received as evidence as if read.

10 CHAIRMAN MILLER: Any objection?

11 MR. KETCHEN: No objection.

12 (The document referred to was
13 marked for identification as
14 Applicant's Exhibit 25.)

15 CHAIRMAN MILLER: By agreement, the testimony of
16 Dr. Hamilton and Dr. Garrick can be received as Applicant's
17 Exhibits 24 and 25, respectively.

18 (The documents heretofore marked
19 for identification as Applicant's
20 Exhibits 24 and 25 were received
21 in evidence.)

22 CHAIRMAN MILLER: These documents will be received,
23 and such direct written testimony will be incorporated and bound
24 into the record.

25 (The documents follow:)

1 MR. MC GARRY: Thank you, Mr. Chairman.

2 CHAIRMAN MILLER: Anything further?

3 MR. KETCHEN: A couple of things that I wanted to
4 just fill in about the schedule, Mr. Roisman, in going through
5 the sch edule mentioned that at one point I believe this
6 afternoon -- I don't know whether we're going to get to it or
7 not, because Mr. Roisman may or may not be here -- but that
8 the Staff had a panel on the FOIA, and this would take up
9 Tuesday afternoon, and possibly Tuesday morning, and maybe
10 part of the afternoon on Tuesday.

11 In addition to what he represented, I just wanted
12 to fill in that Mr. Spitalny would also cover a series of other
13 things, or items, which are sort of open, loose ends, like
14 Mr. Spitalny was asked to report on certain Board questions or
15 other party's questions, so there's a whole host of things that
16 Mr. Spitalny would be filling in that time with.

17 I just wanted to make that clear.

18 CHAIRMAN MILLER: When would that be?

19 MR. KETCHEN: _ That would be after we've finished
20 with the State's questions on Part 73 regulations, application.
21 And I'm not sure we'll get through it today, but if we do,
22 we'll go into these other items, such as pin compaction and
23 the reracking doses, and the critical events chart that I
24 believe the Board asked for. And then the Freedom of Information
25 Act cross on materials that Mr. Roisman received under his

1 request, and that sort of thing would either begin sometime
2 today or first thing in the morning, and proceed on.

3 CHAIRMAN MILLER: All right.

4 Anything pertaining to Mr. Roisman, of course, we'd
5 either have to have his prior stipulation and consent or else
6 his presence.

7 MR. KETCHEN: That's correct.

8 CHAIRMAN MILLER: Mr. Roisman, on behalf of NRDC,
9 has filed as of September 7, 1979 the submission in response
10 to the Board's request pertaining to scheduling and triggering
11 dates, and the like.

12 Now, I have been out of the office for a week, and
13 perhaps others have filed similar documents, I don't know.
14 But these were matters where the Board had asked for the
15 filings. Am I correct on the state of the record on that?

16 MR. KETCHEN: Yes, you're correct. You asked us --
17 at this point in time, the way the Staff understood was that
18 probably the Applicant would best have access to that informa-
19 tion. I think Mr. Roisman alluded to that as well. The
20 Applicant did come up with a document which we have reviewed,
21 and we have a document that we are having typed in final, and
22 we would probably present to the Board as to our review of
23 the Applicant's document.

24 I don't know whether the Applicant is going to put
25 that in or not.

A M DELOAN
Flw MEL
mpbl

1 CHAIRMAN MILLER: We suggest that it would be
2 helpful if you could do that, well, say, by tomorrow at the
3 latest so the Board can have a chance to discuss it with
4 counsel if it seems to be indicated.

5 We have received Mr. Roisman's.

6 I take it, Mr. McGarry, you have one --

7 MR. MC GARRY: We have a document. We did not
8 furnish it through the mails. We'll furnish it this week,
9 Mr. Chairman, tomorrow.

10 CHAIRMAN MILLER: Tomorrow.

11 Anyone else? Mr. Riley?

12 MR. RILEY: We did not produce a document.

13 CHAIRMAN MILLER: Okay.

14 Mr. Wilson?

15 MR. WILSON: No, sir, we did not.

16 CHAIRMAN MILLER: Very well.

17 Anything further at this time?

18 (No response.)

19 CHAIRMAN MILLER: If not, then we'll recess until
20 two o'clock.

21 (Whereupon, at 11:40 a.m., the hearing in the
22 above-entitled matter was recessed, to reconvene at
23 2:00 p.m., this same day.)

24 Ace- [redacted] Reporters, Inc.
25

AFTERNOON SESSION

(2:00 p.m.)

CHAIRMAN MILLER: Are we ready to proceed?

Who's the next witness?

MR. KETCHEN: Mr. Chairman, Mr. Hufham is back to answer the questions asked on the cross this morning, I think there were three questions and we could cover those now.

CHAIRMAN MILLER: Yes.

MR. KETCHEN: I'll just prompt Mr. Hufham by giving him the subject areas, and maybe he could report as to the facts that he discovered during the break.

CHAIRMAN MILLER: All right.

Whereupon,

JAMES W. HUFHAM

was recalled as a witness on behalf of the Regulatory Staff, and, having been previously duly sworn, testified further as follows.

FURTHER DIRECT EXAMINATION

BY MR. KETCHEN:

Q Mr. Hufham, you were asked questions about a particular spent fuel shipment in which the surveys taken by the inspectors revealed certain information, and the numbers I think were 20,000, and also questions about other numbers, 130,000. Do you recall that questioning?

1003 181

1 A Yes.

2 Q And you indicated that you could provide the
3 information but it would take a little research. Have you
4 done that research at this time?

5 A Yes, I have.

6 Q Could you repeat your response to those questions
7 on that subject matter, please?

8 A The shipments in question were the shipments
9 from the Oconee facility to the Crystal River facility early
10 spring of this year. We had a man, an inspector was on-site
11 when the shipments would leave Oconee and we had a resident
12 on-site in Crystal River where the shipments would arrive
13 at the Florida facility.

14 In review with these men, I reviewed the shipments
15 with them and the information as I have now is what we re-
16 ceived several months ago, that our confirmatory measurements
17 made of the Oconee cask before they left as well as that of
18 the licensee were below the DOT requirements. But as the
19 cask would leave and travel to the Crystal River site, the
20 surface contamination did increase.

21 And in our investigation, or as I was asked to
22 find out what we did, we did meet with the Licensee to try
23 to define the problem. And in talking with the men that were
24 responsible for this, they concluded that as the casks were
25 loaded, as the elements were loaded into the cask and the cask

b/agb3

1 was submerged, the cask will be brought up loaded with the
2 fuel element, the cask would be washed, deconned and surveyed.
3 But as the cask would move along the highway, there would be
4 some leaching from the stainless steel, the water, the spent
5 fuel coolant that had been absorbed in the non-coated stainless
6 steel surface of the cask.

7 As far as corrective action, no real affirmative
8 action has been taken at this point. We recommended from the
9 Region 2 office that the cask be sealed in some type of
10 sealant, and we were informed that that would interfere with
11 the heat transfer system of the cask.

12 As we have it now, we are generating written
13 communication to the NMSS Division of NRR -- I mean of the
14 NRC.

15 Q Does that complete your answer?

16 A Yes, it does.

17 MR. RILEY: May I ask a question, Mr. Chairman?

18 CHAIRMAN MILLER: Pardon me?

19 MR. RILEY: May I ask a question?

20 CHAIRMAN MILLER: Well I don't think we're
21 completed yet. Let him finish his testimony.

22 MR. RILEY: Oh, okay.

23 BY MR. KETCHEN:

24 Q The second area that you were asked to do some
25 gathering of information on, Mr. Hufham, was in the area of

mp gb4

1 the times necessary for completing inspection of a module.
2 Do you recall that question?

3 A Yes, I do, and I answered one day, and that is
4 still the correct answer, estimated one day.

5 Q And does that apply to the beginning of the
6 shipment or the end of the shipment or both, could you break
7 it down?

8 A It's only the beginning of the shipment, it's
9 a procedure review of the cask, a review of the QA audit
10 program.

11 Q Okay. How about at the end point of the shipment,
12 do you have any time --

13 A I mentioned several hours. That would be it
14 also, there would be no change in that answer.

15 Q All right.

16 I think the third area was a redirect question
17 which I did cover. I believe that responds to Mr. Riley's
18 request for Mr. Hufham to do some research and give some --
19 those are the open items, I believe.

20 A Well there was another one on the frequency of
21 inspections, the required percentage.

22 Q That's right, that's correct, thanks.

23 Okay. Would you give us what you found out
24 about that?

25 A Mr. Riley, I would have answered it earlier in

mpb/agb5 1 today's hearing but I wanted to check, all of the inspection
2 modules carry a different frequency. And I did verify, the
3 frequency of these modules are annually.

4 But as I have stated earlier, it is a regional
5 policy -- maybe I have not stated it was a regional policy
6 earlier, I just mentioned that we do make these inspections
7 more frequently than annually. But it is the regional policy
8 that we do have someone attend or to perform an inspection
9 with every spent fuel shipment that occurs.

10 Now we have had the Oconee to Crystal River
11 shipments, and we have had the Robinson facility to the
12 Brunswick facility shipments, and we've had inspectors at
13 those sites at least at the origin of the shipments.

14 Now that doesn't mean that we will see every
15 cask and personally inspect every cask that leaves that site.
16 But we will do some cask inspection, procedure review in-
17 spection, as well as the recordkeepings of the shipments and
18 the QA program.

19 I have a further answer.

20 CHAIRMAN MILLER: You may continue.

21 THE WITNESS: In the event that we suspect a
22 problem or a problem develops with a series of shipments,
23 we do have the resources to have someone there for every
24 shipment for the duration of the series. But we have other
25 priorities at this time that we feel that we must perform.

CHAIRMAN MILLER: Does that conclude your answer?

m agb6

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

THE WITNESS: Yes, it does.

CHAIRMAN MILLER: Anything further on behalf of the Staff on redirect?

MR. KETCHEN: Nothing further.

CHAIRMAN MILLER: Mr. Riley, do you care to cross-examine?

MR. RILEY: Thank you.

FURTHER CROSS-EXAMINATION

BY MR. RILEY:

Q Mr. Hufham, what is your understanding of the word "leaching?"

A The exact -- well, coming to the surface. It appears again as a surface contamination on the cask.

Q Mr. Hufham, are you familiar with either chemistry or chemical engineering?

A Well I've had chemistry.

Q Well is that your understanding of your definition of the word "leaching" in the context of chemistry?

A Well these are the words that we have been using on the Ocone cask situation.

Q I realize those are the words that have been used. What I'm trying to do is find out their communicative appropriateness.

Now is it not true that in the normal context in leaching a solid material is exposed to a liquid phase and

Ac...al Reporters, Inc.

mp/ agb7

1 material within that solid phase dissolves in the liquid. Is
2 that not the normal definition of leaching?

3 A I have not checked the definition lately. You may
4 be right.

5 Q Well if hypothetically we accept what I represent
6 as the normal definition of leaching, then how was the leaching
7 process carried out in regard to this cask? Was the cask
8 at some time in transit submerged or in a heavy rainstorm or
9 something like that?

10 A It quite possibly could have been. In March is
11 when these shipments occurred and we had very heavy rains.
12 I can't say for sure.

13 Q Can you say of your personal knowledge and
14 expertise that leaching was, indeed, the cause of the increase
15 in the dpm during transit?

16 A That is the information that I have been informed
17 of by the men that were evaluating the shipments and the
18 problems with these shipments.

19 Q Can you tell us specifically the qualification
20 of these men to make a judgment as to whether or not the
21 phenomenon was leaching?

22 A I cannot tell you the qualifications of all of
23 the men because it was a combination of NRC as well as Duke
24 Power officials or representatives. I can address the quali-
25 fications of the NRC personnel.

Ac General Reporters, Inc.

1003 187

m agb8 1 Q Do we have in that group qualified chemists or
2 chemical engineers?

3 A You might from the Duke Power group. You do not
4 from NRC.

5 Q In other words, you are not able to testify
6 affirmatively to your own knowledge a qualified expert made
7 the judgment that leaching had occurred?

end2A 8 A I cannot testify today.
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

1 Q Is it not possible, then, that in following the
2 regulations of the NRC that in a period of one year in which
3 Duke shipped 150 fuel assemblies, hypothetically, that there
4 might be only one inspection of a cask loading? I said
5 hypothetically possible in terms of the regulations, bearing
6 in mind the policy statement that you'd like to do it more
7 than once a year.

8 A If you continue in the hypothetical and in
9 accordance with the requirements of the inspection module,
10 that would be correct.

11 MR. RILEY: Thank you.

12 CHAIRMAN MILLER: Does that conclude your
13 examination, Mr. Riley?

14 MR. RILEY: Yes. Thank you.

15 CHAIRMAN MILLER: Mr. Wilson?

16 MR. WILSON: Thank you, Mr. Chairman.

17 BY MR. WILSON:

18 Q Mr. Hufham, I take it from your earlier testimony
19 regarding the cask and apparent leeching problem with it,
20 that that matter was still under investigation. Is that
21 right?

22 A It sure is, Mr. Wilson. And I delayed this
23 morning hoping I could have answers to the written -- our
24 way of handling a problem like this is to generate a written
25 action item for someone to look into it, and that action item

!B DELON
mpbl

Ace Central Reporters, Inc.

mpb2

1 as of now has not been answered.

2 CHAIRMAN MILLER: Has not been answered?

3 THE WITNESS: That's correct.

4 CHAIRMAN MILLER: It has, however, been initiated
5 in the process?

6 THE WITNESS: I cannot give you the exact action
7 item number. We list them by numbers.

8 CHAIRMAN MILLER: All right. Your understanding
9 is sufficient.

10 THE WITNESS: Yes.

11 MR. WILSON: That's basically all I had there,
12 Mr. Chairman.

13 CHAIRMAN MILLER: Mr. McGarry?

14 MR. MC GARRY: No questions.

15 CHAIRMAN MILLER: Mr. Roisman?

16 MR. ROISMAN: No questions.

17 CHAIRMAN MILLER: Anything further, Staff?

18 MR. KETCHEN: No further questions, Mr. Chairman.

19 CHAIRMAN MILLER: Thank you, sir. You may step
20 down.

21 (The witness excused.)

22 CHAIRMAN MILLER: Next?

23 MR. KETCHEN: Can you give me just a couple of
24 seconds?

25 CHAIRMAN MILLER: Sure.

mpb3

1 (Pause.)

2 MR. HOEFLING: Mr. Chairman.

3 CHAIRMAN MILLER: Yes.

4 MR. HOEFLING: At this point in the normal course
5 of the schedule that the Staff was contemplating, the subject
6 of the Part 73 physical security requirements would come up
7 as requested by the State of South Carolina. That subject
8 area is clouded by the Staff's petition to the Commission on
9 routing.

10 But let me just talk a little bit here.

11 The Commission -- I don't know whether Mr. Roisman
12 has made any comments on the subject or not.

13 CHAIRMAN MILLER: No.

14 MR. HOEFLING: There was no quorum this morning.
15 Mr. Hendrie and Mr. Gilinsky were present. They have taken
16 the matter under advisement. But basically the matter is
17 before the Commission and we haven't moved beyond the
18 Commission's formal order which issued last Friday.

19 The Staff has a witness, Mr. Don Cosson, who
20 reviewed Duke's proposal in the Part 73 area, specifically
21 Part 73.37. Of course, the specifics of that involve, number
22 one, the routing question which is before the Commission, and
23 number two, other security areas that the Staff would maintain
24 should be treated in a confidential fashion.

25 So we have possibly some problem proceeding at

mpb4

1 this point in meeting the request of the State of South
2 Carolina. It would be possible for Mr. Cosson, when he
3 arrives -- and he's getting a bite to eat. The Commission
4 broke after 1:00, I believe, or between 12:30 and 1:00. Mr.
5 Cosson could take the witness stand and provide some general
6 information in this area, but at some point we would be
7 getting to material which, number one, either -- if we
8 pressed into details, number one, either would get us into
9 routing or, number two, would get us into other areas which
10 again as I mentioned the Staff would urge would be proprietary
11 information.

12 So that's kind of where we are right now from
13 the Staff's perspective.

14 CHAIRMAN MILLER: Well, from that description
15 I don't know where we are.

16 Mr. Roisman?

17 MR. ROISMAN: Let me explain -- by the way, and
18 this would be for the record so that the Reporter will have it,
19 NRDC's address has changed since the last hearing. Our
20 offices are now located at 1725 I Street, N.W., Sixth Floor.
21 And our telephone number is area code 202-223-8210. That
22 change took place over the Labor Day weekend and has been
23 in the process of taking place since then, I regret to say.

24 As a result, mail hasn't necessarily caught up
25 with us. If the Staff has prefiled testimony on Part 73, I

mpb5

1 don't believe I've received it yet.

2 Is there a piece of prefiled testimony?

3 MR. HOEFLING: The Staff has prefiled its
4 supplemental report, which contains a very abbreviated
5 description of the Staff's Part 73 review, and other items.
6 But the Part 73 review is addressed in that document. That
7 was filed to meet the Board's deadline. That was filed the
8 Friday before Labor Day.

9 MR. ROISMAN: Well, I got in the mail a copy of --
10 you're not talking about the Glenn-Spitalny --

11 MR. HOEFLING: No.

12 MR. ROISMAN: That's the only thing that I've
13 received.

14 CHAIRMAN MILLER: Is that the Staff testimony of
15 R. Daniel Glenn and C. Vernon Hodge?

16 MR. HOEFLING: No, Mr. Chairman.

17 CHAIRMAN MILLER: With a cover letter of
18 August 30th?

19 MR. HOEFLING: Staff Report Related to Spent
20 Fuel Storage of Oconee Spent Fuel at McGuire Nuclear Station
21 Unit 1, which was transmitted by letter of August 31, 1979,
22 to the Board and the parties. And that document has a
23 section in it which speaks to Part 73 and the Staff's review
24 of those requirements.

25 MR. ROISMAN: Mr. Chairman, I'm sure through no

mpb6

1 fault of the Staff, but I have not yet seen that document.

2 I got in the mail today in my office a letter
3 sent by Duke Power on the 30th of August. I mean, we're
4 just having a huge mail lag.

5 MR. HOEFLING: Mr. Chairman, I'm going to give
6 Mr. Roisman a copy of that now.

7 (Handing document to Mr. Roisman.)

8 DR. LUEBKE: Mr. Hoefling, while he's reading
9 that, I'm looking at the letter by Mr. Wilson, and he
10 suggests in his third subject here that we could proceed
11 generally to discuss the regulations without delving into
12 the specifics of the Applicant's proposed action.

13 This morning I have the feeling that we could
14 still go ahead with this Part 3 in lieu of the Commission's
15 situation.

16 MR. HOEFLING: The Staff is suggesting that we
17 have Mr. Cosson here who can speak in generalities, and we
18 could proceed in that fashion.

19 CHAIRMAN MILLER: But you also suggested that
20 proceeding in generalities, cross-examination would test the
21 basis of any generality, and we're going to get into what
22 you deemed a verboten area. That's why I said I really
23 couldn't understand what the bottom line was, because you
24 spoke of both. And there's no point in going into general-
25 ities and pursuing the will-o-the-wisp if the first touch at

mpb7

1 cross-examination is going to come up against this same
2 argument.

3 I'd rather go one way or the other. But I find
4 these hybrid kind of things take a lot of time.

5 MR. HOEFLING: I understand, Mr. Chairman. I'm
6 just trying to, as best I can, tell you where we are and see
7 if there's anything that could be done to get around this.
8 But I fully agree that if we're going to test these areas
9 we would have to get into specific information which the Staff
10 would --

11 CHAIRMAN MILLER: So the only way that we could
12 proceed would be if the Intervenors or other parties interest-
13 ed in interrogating on this are willing to waive those por-
14 tions of the underlying bases for conclusion which normally
15 are tested by cross. If we can't, then there's no point.
16 However willing six letters indicate, you're going to be up
17 against the same stone wall.

18 MR. HOEFLING: If I could just raise one other
19 point, I think we have three areas here. We have number one,
20 CESG Contention number two. And we have testimony from Glenn
21 and Hodge which has been prefiled that discusses that
22 contention, and would be an area where route information
23 would be relevant.

24 The second area that we have or may have or may
25 not have is NRDC's Contention number six, which relates to

mpb8

1 sabotage. And as the contention is presently framed, I believe
2 the contention reads somewhat to the effect as to whether or
3 not Duke's proposal has met the regulations. And if that
4 contention is going to be pressed, then again we deal with
5 information that would take us into the specifics of security
6 measures.

7 The third area that we have, possibly, is the
8 interest of the State of South Carolina to have some informa-
9 tion related to Part 73, and it's not entirely necessary
10 perhaps that we reach the level of detail to satisfy that
11 demand that we would reach in responding to CESC Contention
12 number two or the NRDC sabotage contention.

13 CHAIRMAN MILLER: All right.

14 Let's hear from Intervenors, then. What's your
15 position?

16 MR. ROISMAN: Well, I don't have any problem if
17 the Board doesn't -- is agreeable with this, with having the
18 State of South Carolina proceed as far as it chooses to
19 proceed. If it doesn't want to touch on the routes or the
20 other in camera stuff, that's all right with me, if they're
21 satisfied with what's here.

22 For my purposes it would be fruitless to attempt
23 some cross-examination which they think might ultimately
24 touch on routes and then try to keep sculpturing it to keep
25 the routes out. That wouldn't be very fruitful

mpb9

1 cross-examination.

2 But as a preliminary matter, it appears to me
3 according to this document on page 7 that the Staff isn't
4 ready to go to hearing yet on this question.

5 CHAIRMAN MILLER: Page 7 of what?

6 MR. ROISMAN: Of the document called Staff Report
7 Relating to Spent Fuel Storage. This is the document trans-
8 mitted by letter of August 31st.

9 They list on page 6 ten requirements that need to
10 be met before they would authorize transshipment. In the
11 middle of the page they identify requirements five, seven,
12 and nine as having not yet been demonstrated in their entirety
13 by the Applicant, and propose a procedure which I think we
14 discussed earlier in this hearing, which is to take away from
15 the Licensing Board in the hearing the opportunity to review
16 the adequacy of the Applicant's proposal and leave it
17 exclusively to the Staff. And one of the items in there
18 would be one certainly of interest to us, which is item
19 number five, develop procedures for coping with threats and
20 safeguards emergencies.

21 The proposal is that we have no hearing on that,
22 but that the license be conditioned upon the Staff later
23 saying 'We're satisfied'. That would not be satisfactory to
24 us in the least.

25 Items seven and nine, I'm not clear what's so

mpb10

1 complicated about the Applicant explaining those, I mean
2 assuring the escorts are trained in accordance with specified
3 requirements.

4 Nine is equip the transport vehicle with features
5 that permit immobilization of the cab and cargo carrying
6 portion of the vehicle. I might point out that five, seven
7 and nine look like sort of the heart of the Commission's new
8 regulations dealing with safeguards, except for routing
9 itself.

10 So I don't know that the Staff is ready to go
11 ahead, even if the Commission had decided when we were at
12 the oral argument this morning on the protective order ques-
13 tion, because I think those items need to be addressed in
14 the hearing. And they don't look like they're ready to
15 address them this week.

16 MR. HOEFLING: Mr. Chairman, can I respond to
17 that?

18 CHAIRMAN MILLER: Yes, you may.

19 MR. HOEFLING: The language there may not be
20 totally clear. What the Staff is saying is that it has looked
21 at these areas. It has completed its examination of these
22 areas. But that prior to shipment there is going to be a
23 physical review by the Staff to see that everything is in
24 order.

25 CHAIRMAN MILLER: Well, how do you meet the

mpb11

1 contention raised by Mr. Roisman that five, seven and nine
2 are very substantial aspects of the procedures set forth,
3 that they're not either described or in fact it affirmatively
4 appears from a statement of Staff on page 7 that the Applicant
5 has not yet demonstrated in their entirety compliance with
6 or adequacy of, or even nature and extent of the three
7 subject areas, that therefore the Staff's position is simply
8 to remove from the examination and analysis in this
9 adjudicatory hearing, proceeding, and leave it for future
10 Staff action sans adjudication.

11 MR. HOEFLING: Let me explain that.

12 At the time this report was written, these areas
13 were open. The Staff has since then examined these areas
14 in addition to that, and has prepared --

15 CHAIRMAN MILLER: And then would the statement on
16 page 7 be considered superseded? I won't pursue it further
17 if that's what you tell me is the state of the record.

18 MR. HOEFLING: Yes. In a sense there has been
19 further Staff review in these areas, and we're prepared to
20 go forward with them. But there was also an intent here to
21 indicate that prior to the shipment the Staff would go out
22 in the field, regardless of what happens in the hearing room,
23 go out in the field to assure that everything was in order
24 before the first shipment was made.

25 MR. ROISMAN: I'm not quarreling with that aspect,

mpbl2

1 Mr. Chairman, I mean, if what they're saying is we now can
2 tell you exactly what it is the Applicant is going to do.
3 And we think that's satisfactory, but we're going to double-
4 check them by going out into the field and making sure they
5 do what they said they were going to do.

6 Obviously we can't review that. And I understand
7 that that's not the question.

8 But what I read on page 7 was that the require-
9 ments five, seven and nine, which were distinguished from
10 the requirements four, six and ten, that the ones on five,
11 seven and nine hadn't yet been demonstrated.

12 That is, whether we were in an in camera session
13 or open session, if we were to ask the question of the Staff
14 'What do you consider to be the status of the Applicant's
15 procedures for coping with threats and safeguards', they
16 would say 'We haven't yet approved them'. And that would be
17 where I would find fault.

18 If what Mr. Hoefling is saying is now they would
19 say 'We've approved them', and then we could argue about
20 whether we're going to discuss them in camera or out of
21 camera, what have you, that's a different matter, and I don't
22 have any quarrel with it.

23 MR. HOEFLING: The position is that we have
24 approved these areas and we're prepared to go forward now
25 in those. The material in the Staff report on page 7 is

mpbl3

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25

superseded to that extent, just for clarity. The item areas
 five, seven and nine have been satisfactorily dealt with in
 the Staff's mind, and the Staff is prepared to go forward
 and indicate why.

EL5 flws

1 MR. RILEY: Mr. Chairman, that still leaves a
2 question with respect to this report on page 7 where, going
3 a quarter of the way down the page, we have a chicken-and-egg
4 proposition:

5 "Applicant's ability to comply with the require-
6 ments of 4, 6 and 10 cannot be demonstrated in their
7 entirety prior to commencement of shipments."

8 Well, if we can't approve and they can't demonstrate,
9 it makes an interesting problem.

10 MR. WILSON: Mr. Chairman, might I chime in here
11 for a minute too?

12 CHAIRMAN MILLER: Chime away.

13 MR. WILSON: Our initial position is, as Dr. Luebke
14 noted in the letter, was forced upon us more or less through
15 the time constraints, in the hope that we could proceed in
16 some fashion today. It does appear that we're going to have
17 to come back for a further session at some point down the
18 road. And as a matter of coherence in the record, as well as
19 providing everybody an effective means of cross-examination,
20 it might well be advisable at this point to defer the matter
21 again until that later session.

22 Given the fact that we're going to have to come
23 back, we would propose that to the Board.

24 CHAIRMAN MILLER: It appears to the Board that we
25 are going to have to defer it, because of the positions taken

1 by the various parties, between the Staff and Intervenors.
2 It's obvious that we can only go part way with some ill-defined
3 area beyond which one cannot trespass, and this is a very
4 unsatisfactory way to conduct an evidentiary hearing, and the
5 Board just doesn't want to do it under those terms.

6 So we're going to defer it until there's some
7 resolution of the issue of the in-camera proceedings.

8 MR. MC GARRY: Mr. Chairman, let me be the last
9 one to jump in here. I would just hope that we could complete
10 the hearings this week. Of course, we don't know what the
11 Commission is going to do. But the proposal that we're going
12 to have another session, I would just hope that that seed has
13 fallen on barren soil at this point in time, and see what
14 the Commission does in the next day or two, hopefully.

15 It very well may be that we can complete this.

16 CHAIRMAN MILLER: Well, the state of the soil is
17 neutral at the moment. We don't know. We're not going to
18 second-guess what the Commission does or doesn't do. As soon
19 as we know, whether it be sooner or later, we'll all be able
20 to schedule and proceed with that aspect or those aspects.
21 In the meantime, we can only hold them in abeyance.

22 MR. ROISMAN: I'd like to join Mr. McGarry, not
23 necessarily in the analogy but in the wish. That is, I'm
24 curious, if it came up and we did it on Friday -- let's assume
25 the Commission finished everything, would the State be able

1 to come back?

2 MR. WILSON: The matter I'll be with won't be
3 finished until at least lunch time on Friday, so I doubt that
4 I could get here in time to participate.

5 Now, Saturday is another story.

6 CHAIRMAN MILLER: Saturday is sure another story.

7 (Laughter.)

8 MR. ROISMAN: Not for me it's not.

9 CHAIRMAN MILLER: You're talking about my time now.

10 MR. ROISMAN: A tale told by a fool?

11 CHAIRMAN MILLER: Well, if we can accommodate you
12 this week, which goes up to 5:00 or 6:00 o'clock on Friday,
13 we certainly -- or even later, if we can accomplish the
14 termination of the evidentiary hearing, we would certainly
15 be receptive. But we will simply have to abide with the event
16 of what happens to the Commission without a quorum, I guess.

17 Is that the status of things? You've talked to
18 two out of five, or --

19 MR. ROISMAN: It's my understanding that there's a
20 quorum in Washington, but there just wasn't a quorum sitting
21 at the oral argument.

22 CHAIRMAN MILLER: Do you have any information at
23 all as to what the Commission procedure would be on this
24 matter?

25 MR. ROISMAN: I asked that of the Chairman. At the

1 risk of paraphrasing the record, it's my understanding that
2 what he responded was that the Commission kept the protective
3 order in effect, because it didn't have a quorum to change it
4 even if it wanted to, and that they would hope in a day or
5 two that they would be able to address the question. But
6 there was no commitment. They were going to need to wait for
7 the transcript to be prepared, so that the other Commissioners
8 could see it. It's not clear to me whether or when the
9 Commissioners who were out of town are due back in town, or
10 whether they would wait for them or not.

11 That's all he said on the subject.

12 CHAIRMAN MILLER: Well, we'll see. If it comes to
13 pass by Friday we'll certainly accommodate you. And if not,
14 we'll just do the best we can.

15 All right. Where do we go now? What is the
16 uncontroverted area, at least insofar as we can proceed with
17 the testimony and evidence?

18 MR. KETCHEN: Mr. Chairman, we would propose to
19 call -- the stipulated schedule would call for Mr. Spitalny
20 to come at this time tomorrow in the sequence of things. I
21 also understand that Mr. McGarry has some witness in the
22 other areas that the Board wanted reports on. I'm talking
23 about -- or Mr. Roisman -- the pin compaction problem, the
24 radiation dose estimates survey question. The question -- just
25 to flavor it a little bit -- was where Mr. Spitalny was

1 asked if he could re-create the research he did in pulling
2 together information that he had prepared for the last hearing
3 on actual doses at other plants in a spent fuel expansion
4 versus estimates -- I think I've got that backwards --
5 estimates, and then how did the actuals come out.

6 The what I call critical events chart, the Board
7 asked -- and we had some discussion of it this morning -- if
8 the parties would either separately or jointly or in some
9 fashion address the matter of what you do at such and such a
10 time with such and such an alternative. Mr. Roisman, I think,
11 filed a paper on September 7 on that subject. We can talk
12 generally about that.

13 I think on that question we would probably want to
14 follow Mr. Roisman and Mr. McGarry's presentations, because
15 our presentation depends on a review of Mr. McGarry's presenta-
16 tion.

17 CHAIRMAN MILLER: Dr. Luebke asked me to inquire:
18 Is there any possibility that Dr. Lateman could accelerate
19 his Thursday appearance to tomorrow or Wednesday?

20 MR. KETCHEN: I can check. I'll check with his
21 counsel.

22 MR. ROISMAN: It's my understanding that the only
23 two days available were Wednesday or Thursday.

24 DR. LUEBKE: Maybe that was taken light-heartedly.

25 CHAIRMAN MILLER: Well, I don't know. You might

1 check, since we're revising our schedule. You might check to
2 see if he's available and would care to come on Wednesday
3 instead of Thursday.

4 MR. KETCHEN: Well, that I'll check. It's my
5 understanding they are preparing some written submittals, and
6 I understand that would be available tomorrow. It may not
7 be available until Wednesday. I think that would impact his
8 schedule.

9 We also, as one of the other items, have the matter
10 of the -- Mr. Roisman had wanted to talk to Mr. Spitalny
11 about the drafts, several prior draft environmental impact
12 appraisals. That could follow our report on pin compaction
13 and the other areas either today or tomorrow.

14 So, it's a little before 3:00 now. We would
15 propose to call Mr. Spitalny, if everyone is amenable, on the
16 pin compaction issue and the re-racking subject matter. And
17 I think Mr. Spitalny also had a correction to the record about
18 some testimony on the DOT regulations. I can't gauge how far
19 that would go, but I can outline what -- we can fill in the
20 time.

21 CHAIRMAN MILLER: Well, we're not needing to fill
22 in time. We want to get some substantive matters accomplished.

23 First of all, on this question of the report that
24 we had asked all counsel to give us, in terms of the triggering
25 dates and so forth, NRDC, Mr. Roisman, have filed theirs. It

wel 7

1 was included with the filing they made before the Commissioners.
2 We had expected to have promptly today or tomorrow the
3 similar documentation from the rest of you. This isn't
4 something you're supposed to be doing your homework at night,
5 and so forth. We asked that a studied effort be made to
6 locate the places in the transcript, to have a studied,
7 carefully thought out scheduling of the impacts of various
8 actions and the triggering dates.

9 We asked this over a month ago. This was not
10 meant to be something off the top of your head, done at the
11 last minute or in the course of hearing. We had expected
12 that would be turned in today, frankly, in written form.

13 MR. KETCHEN: Well, that's not my understanding,
14 Mr. Chairman. I understood that we were supposed to do a
15 joint effort, if we could, stipulate to it, and that there
16 was no -- if we could stipulate to some written form, that
17 it wouldn't be required that each party file anything. And
18 we're ready to indicate what our view of Mr. McGarry's
19 analysis is, and we haven't done it at the last minute.

20 CHAIRMAN MILLER: Are you ready, Mr. McGarry?

21 MR. MC GARRY: Mr. Chairman, as I stated earlier
22 today, I would appreciate having tonight to look it over. We
23 do have a document. It is completed. We do recognize that
24 the Board said the 10th, and if it's the Board's pleasure we'd
25 go forward. But I would appreciate tonight.

1 CHAIRMAN MILLER: All right. Will you be ready to
2 do it, then, tomorrow morning?

3 MR. MC GARRY: First thing in the morning, Mr.
4 Chairman. Let me just amend that. Not the first thing in the
5 morning, but perhaps 9:30, because --

6 CHAIRMAN MILLER: All right, in the course of the
7 morning. We have no objection if these matters are stipulated.
8 In other words, Mr. Roisman has brought forth his work
9 product, you have yours, and you're ready to present it, as
10 I understand, sometime in the morning.

11 Now, to the extent that they overlap and you can
12 agree to the overlap, fine. We're not asking that it be done
13 independently, just to have it done independently.

14 But on the other hand, it's not something we want
15 to just talk about and kick around like a contention. We
16 regard it as a substantive matter, and we asked that it be
17 keyed to the transcript in the event there was no evidence
18 from which the information could be adduced directly or
19 inferred indirectly, that counsel consider supplying such
20 data for the record.

21 In other words, this is a substantive matter. Okay.
22 We'll look forward to discussing with counsel sometime during
23 the course of the morning, at the reasonable convenience.

24 As far as Staff is concerned, do you have any
25 written document now, Mr. Ketchen?

W agbl
flw e18

1 MR. KETCHEN: We were going to offer our comments
2 on what we understand to be the Applicants review of this
3 matter.

4 CHAIRMAN MILLER: In other words, the Staff has
5 not independently examined the transcript and prepared a
6 written document with the triggering dates, is that what it
7 amounts to?

8 MR. KETCHEN: No, that's not true.

9 CHAIRMAN MILLER: Well then do you have the paper?

10 MR. KETCHEN: We prepared something. We were going
11 to do it in chart form and it was just almost impossible to
12 do with any degree of ability to communicate the information,
13 it got so complicated it was impossible. So we elected to --
14 we did meet, under the advisement of the Board, with the
15 Applicant because it's our view that the Applicant has the
16 other information that would be necessary in its planning.
17 We understood Dr. Luebke's request to include not only the
18 transcript thing but other types of events that might come
19 up in the future.

20 We looked at the Applicant's format which is a
21 textural or a literature type of presentation and we decided
22 that we would give up our attempts to display this in a
23 chart form and to give our review and analysis of what the
24 Applicant did.

25 So we did look at the transcript and critical events

Ad. ral Reporters, Inc.

wel/agb2
1 in that context in reviewing and trying to review what the
2 Applicant had proposed, and we did meet with the Applicant
3 several times on that.

4 CHAIRMAN MILLER: If I'm still following you,
5 the Staff has not made an independent study of the transcript
6 and come up with triggering dates or data.

7 MR. KETCHEN: We've made an independent study of
8 the transcript but we haven't written down in any format
9 that kind of information in a presentation.

10 CHAIRMAN MILLER: Well do you expect to do so?

11 MR. KETCHEN: No. Our intent was -- we thought
12 about that. Our intent was to give our analysis based on that
13 kind of a review of what the Applicant is going to present.

14 And if that meets the requirement of stipulating
15 -- I thought it was to be a joint or separate project to
16 the best we could, and that's our way of it becoming a joint
17 project.

18 CHAIRMAN MILLER: Well that sounds like one horse
19 wandering but I don't see that the Staff has done very much
20 in analyzing the transcript. You discovered a good deal
21 of testimony, exhibits, many of which were generated by the
22 Staff but at this late date we requested -- we don't have a
23 table, whatever form it is, and I think it was written on
24 brown paper where you give the triggering dates for certain
25 things.

we agb3

1 All right. Give us what you've got in writing
2 tomorrow and then we'll expect to have it say by noon. It
3 doesn't have to be elaborate, but it certainly should be in
4 written form and should certainly address these various
5 alternatives much in the manner, mechanically, as NRDC in
6 their submittal and I think that if you analyze the transcript
7 and exhibits you will be able to get the data and to put
8 your numbers down.

9 Now as I say, we're not requiring any fancy
10 form or that you have the exhibits and the flip cards and
11 all that, but we do expect to have the data, the triggering
12 dates, the information and transcript references in written
13 form. Now can you do that by noon tomorrow?

14 MR. KETCHEN: I don't know. I assume we could
15 repeat what the Applicant has done and do that. The question --

16 CHAIRMAN MILLER: If it's just copying the
17 Applicant, I guess to the extent you say me too would be a
18 stipulation compared to a by-product.

19 MR. MC GARRY: Mr. Chairman, may I just ask a
20 question here? That gets to the nature of this document.
21 Again I represent to the Board that we do have a document
22 prepared. In reviewing the document, I have a question and
23 that is is the Board concerned with seeing a table of the
24 options that are available to the Applicant once the spent
25 fuel pool at Oconee becomes full, keeping in mind a full core

Academy of Professional Reporters, Inc.

w agb4
1 reserve capability?

2 CHAIRMAN MILLER: And for that remember we were
3 looking at different options.

4 MR. MC GARRY: Yes, but I guess my focus is
5 are we directing our attention strictly to Oconee or are
6 we then to assume McGuire, Catawba, Cherokee, Perkins, that
7 was --

8 CHAIRMAN MILLER: We start with the present
9 existing spent fuel storage facility, the nuclear facility
10 is producing or generating spent fuel and work your way
11 forward in time insofar as those have been back and you have
12 triggering dates.

13 You start with the most immediate, what is the
14 immediate effect of action A, B, C, D and E. Then as it gets
15 multiplied with the other facilities, actual projections you
16 mentioned, I guess you would carry it on down chronologically,
17 but we'd certainly want to know starting at the earliest date
18 what the impacts are in a variety of situations.

19 MR. MC GARRY: We have no problem with the
20 beginning, the immediate situation at Oconee. But then
21 looking at the Board's request, it said discuss alternatives
22 that are the subject of this proceeding. Of course, we think
23 the subject is narrow but the Board has ruled it is not narrow.

24 CHAIRMAN MILLER: Consider all possibilities.

25 MR. MC GARRY: That was the question, how broad

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

/agb5

it would be. So I take it we will first focus on the narrow
and then focus on the broad, which we also have.

CHAIRMAN MILLER: Yes, I think that would be it,
yes.

endWEL5

WEL/6
agbl1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

CHAIRMAN MILLER: Now what evidence do we --

Yes, Mr. Roisman?

MR. ROISMAN: Mr. Chairman, I'm troubled by what has happened with regard to the Staff, even somewhat with regard to the Applicant.

Although we were in the midst of moving last week, I considered that it was necessary for us to have in the Board's hands this morning as of the time the hearing started what it was that you asked for at transcript page 3712.

Now I gather the Applicant has it but is not ready to hand it over and Staff doesn't have it at all.

Now I can only surmise what would happen in a hearing if an Intervenor didn't meet one of these filing deadlines. We get contentions stricken and, you know, all these sorts of remedial actions were taken against us.

Now I would like to see something done to the Regulatory Staff. There is no reading of what you said at transcript page 3712 which would accomodate what Mr. Ketchen has described as what the Staff intended to do, that is, to comment on a written document prepared by another party, the comments to be made orally and not prepared in advance of the hearing and distributed on the 10th.

In fact, at one point here, although I didn't find the page, I'd asked you the question whether you wanted it by the 4th or the 10th, whether we should treat it as

Accidental Reporters, Inc.

wel/agb2 1 prefile testimony and you said the 10th was all right.

2 CHAIRMAN MILLER: Yes, I recall that. You indicated
3 it may not be prefiled but we certainly expected it to be
4 filed first day of the hearing.

5 MR. ROISMAN: Now that's right. I have no idea
6 what the remedial measures are that one can take against a
7 party that doesn't have a contention that you could throw out.

8 CHAIRMAN MILLER: What did you ask the Commissioners
9 to do?

10 MR. ROISMAN: Today?

11 CHAIRMAN MILLER: Yes. I saw some lurking hint
12 of that kind with the position you took in your response
13 before the Commissioners.

14 MR. ROISMAN: I asked the Commissioners to take
15 the position that the wisdom of the three members of this
16 Board and the wisdom of the Appeal Board be allowed to stand
17 and that the Commission reject the Staff appeal as improperly
18 brought because of the conduct of the Staff without ever reaching
19 the merits.

20 CHAIRMAN MILLER: Is that your customary position
21 when you win below, isn't it?

22 MR. ROISMAN: It always is, of course. But here
23 I was even saying I mean you were imminently right on the
24 merits and I urged them only secondarily as an alternative
25 to take the appeal and affirm on the merits. But I thought

we gb3
1 that the Staff had been put on notice that its conduct was
2 such that the Commission wouldn't even review an order when
3 they came up to them in that form, that maybe they'd be
4 less likely to do it.

5 I confess I have not come up with one comparable
6 here. I mean, a public stoning, for instance, would probably --

7 CHAIRMAN MILLER: Flogging, perhaps?

8 MR. ROISMAN: Emotionally I may feel committed
9 that way, but seriously I am troubled by this, I don't know
10 what to do about it. I guess I just bring it to your atten-
11 tion. You do have some authority under 2.713, but it only
12 reaches to counsel and counsel are not always responsible
13 for all of the mistakes that it and its clients makes.

14 Under 2.718 you have general supervisory
15 authority of the hearings, but I don't know what you could
16 do. Make Mr. Spitalny appear in sackcloth instead of his
17 nicely tailored suits or something.

18 CHAIRMAN MILLER: He probably has some numbers
19 down, he's done some work.

20 MR. ROISMAN: Yeah, he may very well, I don't
21 know, we could have an investigation to find out who struck
22 John.

23 But I do think something should be done or at least
24 something should be said on the record so that any party is
25 aware that when the Board issues what I consider to be the

1 equivalent of an order, and this was a fairly explicit one
2 as orders go from Boards orally made, as to wanting something
3 that it means it and that it means something to the parties
4 if they don't comply with that.

5 I guess I'm particularly disturbed because it
6 took some effort on our part. We had to locate typewriters
7 hidden behind file cabinets and all of that before we could
8 even get the thing typed up last week, to do some'ning about
9 the Staff's just ignoring the order.

10 CHAIRMAN MILLER: Well the Board cannot pursue
11 sanctions to an unreasonable extent or take an unreasonable
12 amount of time.

13 However, we have indicated and do indicate for
14 the record that we expected to have these matters carefully
15 and thoughtfully prepared in writing and submitted on the
16 first day of the hearing, which is today. We can understand
17 the Applicant has done this, that they have a document which
18 approaches it from two different points that they
19 wish to do some harmonizing, but they have it and will have
20 it in the Board's hands and that of counsel tomorrow,
21 that we can understand.

22 We do not understand that the Staff has made
23 such a representation or, indeed, that it is able to do so.
24 To the extent that it hasn't, we do reprimand the Staff for
25 not having produced a reasoned analysis that was requested

wed agb4

Accountant Reporters, Inc.

1 more than 30 days ago by the Board to be turned in at this
2 time.

3 We're not at all happy with it, Mr. Ketchen,
4 we just might as well tell you straight out that we are not
5 and also that this kind of sloppiness is not conducive to
6 the presentation of the Staff's position in terms of public
7 interest and the interest of all of us in the manner it
8 should be.

9 I hesitate to say this and I hesitate to try
10 to make it appear you're to blame because I don't know who --
11 the Staff is an all-encompassing type of term -- but whoever
12 is responsible, whatever persons are responsible have not
13 complied with the Board's very direct, very explicit request,
14 cast not in precatory terms. So we'll let it stand there
15 and we'll expect to have something in writing by noon tomorrow.

16 We expect also that we don't have this kind of
17 shilly-shallying about the production of evidence, testimony,
18 documents and the like in a way that we can move forward
19 in a clearcut fashion and that we don't have to engage in
20 housekeeping chores and taking the time of people who have
21 come a long distance at some considerable sacrifice to them-
22 selves no doubt personally and professionally. We want to
23 get on with this hearing, we want to complete it this week.

24 Now what witnesses, what evidence can we proceed
25 with now? Not just fill in kind of things, I mean something

w agb6

1 of substance.

2 MR. KETCHEN: May I be heard on the point? I have
3 not been heard at all. I've just been sitting here quietly
4 and I think Mr. Roisman's comments are entirely out of order
5 and are incorrect. I think he misreads the transcript and
6 our understanding of what we were told to do.

7 It was our understanding that counsel would
8 cooperate and that you didn't expect separate documents,
9 or you didn't expect a joint document but you expected some-
10 thing be presented on the Board request.

11 And my reading of the text of the transcript was
12 it was not that each party would provide a specific document
13 on this subject matter and that they would be compared,
14 and I would like to read from the transcript 3712 which,
15 after making the request, it says, starting at line 20:

16 "We request that this be prepared.

17 We don't mind, it could be done jointly or
18 individually, however it is easiest for counsel.
19 But this is the information that we would like
20 to have in the record at our September hearing."

21 Now we read that to mean that we met with counsel
22 and that counsel for the Applicant in trying to come up with
23 this document. And what we are proposing -- or proposed to
24 present was in essence a stipulation with respect to
25 Mr. McGarry's document with a qualification orally of what

1 our stipulation is.

2 But unfortunately at the last minute -- and our
3 technical people did meet. Unfortunately, at the last minute
4 there was some confusion in Mr. McGarry's own mind about
5 essentially what the substance of what the Board wanted was.

6 And he has suggested what that was today. And
7 we will give our stipulation and our comments on how that
8 affects our stipulation as well.

9 But we never understood this comment by the Board
10 that the Staff itself would be required to produce the
11 document. My understanding of what these words meant was
12 that we could join with another party in agreeing that the
13 information provided was the information in response to the
14 Board request.

15 CHAIRMAN MILLER: Well the material that you just
16 read from the transcript in no way is in conflict with what
17 the Board just stated to be its view, we said whichever is
18 easier for counsel. Counsel is a plural term, and whether
19 they do it jointly or individually meant to the extent that
20 all counsel could get together and stipulate, fine, we don't
21 regard the so-called stipulation between Applicant and Staff
22 as very much of a stipulation. The point is that the parties
23 with conflicting and varying points of view can either
24 agree upon a joint product on the one hand or the parties
25 will individually submit in writing -- we've carefully said

1/agb8

1 several times in writing -- and with transcript references
2 on the other, those were the two choices. Not the Staff
3 saying well we had a meeting with Applicant, we've listened
4 to what they said at the hearing and we can agree with them
5 on most things, where we don't we'll tell you orally. That
6 just isn't doing it. That's not an adequate response,
7 Mr. Ketchen.

8
9 MR. KETCHEN: Well it may not be, Mr. Chairman,
10 but it's our understanding -- and I may have made a mistake
11 and if I did I apologize for it.

12 CHAIRMAN MILLER: Apologies aren't necessary,
13 we'll let it go on from where we are. Please let us have it
14 in writing, together with transcript references, by noon
15 tomorrow. I don't think you have time at this point to sit
16 down with Mr. Roisman, Mr. Riley and Mr. McGarry and come up
17 -- and Mr. Wilson and come up with a true stipulation. If
18 you can, fine, but I suspect you have many other things to do
19 tonight. But you're better off to set it forth clearly in
20 writing and the transcript references and we'll go from there.

21 All right. Who has witnesses or evidence or
22 testimony that they can go forward with now at this time?
23
24

1E
WBRloom/wb 1
Landon

2 MR. KETCHEN: Mr. Chairman, we can put Mr. Spitalny
on on the pin compaction matter.

3 CHAIRMAN MILLER: Mr. Wilson, I think you said-
4 this was the only day you were going to be able to participate
5 in this aspect of the hearing. Is this consistent with what
6 the State of South Carolina wishes to have covered today?

7 MR. WILSON: Yes, sir; up to the point of the
8 physical protection regulations, of course. The other
9 material we've already covered this morning, and we're very
10 pleased with that. We do appreciate the cooperation of the
11 parties and the Board.

12 At this point I don't believe we have anything
13 further to contribute.

14 CHAIRMAN MILLER: Very well.

15 MR. RILEY: Mr. Chairman, at the luncheon recess
16 we spoke with Mr. Hufham about his understanding of the
17 devices for handling the casks, which he had been pretty in-
18 definite about. I wonder if we could put into the record
19 a description of this.

20 Mr. Ketchen and I have very briefly chatted about
21 this.

22 CHAIRMAN MILLER: Is the witness here?

23 MR. WILSON: I believe he just left for the air-
24 port. Mr. Riley and I both discussed this matter with
25 Mr. Hufham and he indicated he might be able to obtain some

Acc. Reporters, Inc.

WPR/wb2

1 diagrams and specifications as to the manipulation equipment's
2 ability. He says that that material-- He informed me just a
3 few minutes before he left that that material was in DOE's
4 possession and that he didn't have it at this point but he
5 was going to mail this to me within the week. And we should
6 have that. I'll be glad to forward that on to Mr. Riley and
7 the other parties if they're interested in it.

8 CHAIRMAN MILLER: To become part of the record
9 it would have to be in the form of an affidavit or some ap-
10 propriate method consistent with our rules of practice.
11 When you get the data and the information you requested, if
12 you wish to do anything more to make it part of the record
13 then you can proceed in the normal fashion.

14 MR. WILSON: Very good.

15 MR. RILEY: Does that mean, Mr. Chairman, that
16 the record can be left open for receipt of this material?

17 CHAIRMAN MILLER: It looks to us like the record
18 is going to be left open whether we want it or not, Mr. Riley.
19 I am finding it increasingly difficult to close it.

20 However, yes, we can leave it open for this
21 specific purpose.

22 The next witness, then, I suppose is Mr. Spitalny;
23 is that correct, Mr. Ketchen?

24 MR. KETCHEN: That's correct.

25 CHAIRMAN MILLER: Very well. Mr. Spitalny, you have

1003 224

1 been previously sworn and need not be sworn again. In fact
2 you have been sworn several times previously.

3 Whereupon,

4 BRETT SPITALNY

5 resumed the stand as a witness for and on behalf of the
6 Regulatory Staff and, having been previously duly sworn, was
7 examined and testified further as follows:

8 DIRECT EXAMINATION

9 BY MR. KETCHEN:

10 Q Mr. Spitalny, at one of the last hearings there
11 was some testimony given with respect to the alternative of
12 pin compaction as a technique for, I assume, reducing the
13 storage pit space necessary for spent fuel. Are you familiar
14 with that? Do you recall that testimony?

15 A Yes, I do.

16 Q And following those hearings did I ask you to
17 look into the issue of the matter of pin compaction?

18 A Yes, you did.

19 Q And did I ask you to find out who knows about the
20 pin compaction matter?

21 A Yes, you did.

22 Q And to find out the best you could the status of
23 pin compaction as an engineering technique for accomplishing
24 some space savings in the spent fuel area? Did I ask you
25 to find out the status of pin compaction?

WFB/wb4
1 A Yes.

2 Q And did you do some investigation into that area?

3 A Yes, I did.

4 Q And at this time I would like for you to report
5 to the Board what you did, and the method you went through,
6 and describe what you found out about the status of pin
7 compaction within the NRC staff, what the staff knows. And
8 that would be the (a) part of the question.

9 The (b) part would be what you found out about
10 others knowing, outside the NRC staff.

11 At this time I would ask you to answer the (a)
12 part. Tell us what you found out about what the staff knows.
13 And then later I will ask you to tell us what the others know.

14 So, if you will, proceed with that description.

15 A Okay.

16 What I did was to start off with areas that I
17 knew existed. And that was initially the Maine Yankee applica-
18 tion. I tried to determine who on the staff, and what areas
19 of the staff, are familiar with, and what anybody might know
20 about pin compaction.

21 To start off with, Mr. Chris Nelson, who is a
22 project manager who reviewed the application which was sub-
23 mitted by Maine Yankee, was contacted, and I asked him what
24 the status was on that, what had been done by the staff with
25 regard to that application.

1 As we had previously, I believe, discussed in the
2 August hearing, that application was not an application
3 actually to proceed with pin compaction but it was an applica-
4 tion that spoke to two aspects. Part (a) of it was, they
5 wanted to rearrange the assembly, one spent fuel assembly, in
6 a means which would be considered pin compaction, to determine
7 the feasibility of this type of storage. And they were asking
8 if they could do it under Part 50.59 which is a request to do
9 it as an experiment which would not require a safety evalua-
10 tion or prior approval by the Commission.

11 The second part of their application was to in-
12 crease the capacity of the spent fuel pool. That part of it
13 they were asking for a safety evaluation. It would result in
14 a higher density, and, if it were shown that the pin compaction
15 worked out, they would indeed go to that means and probably
16 use a greater density of the fuel rods in that higher pool
17 capacity.

18 The request from Maine Yankee was denied under
19 Part 50.59 as well as Part B which was requesting a safety
20 evaluation of the increase in capacity.

21 The staff went back and said that this application
22 could not be considered under two parts. It would require
23 them to re-apply. There would be a safety evaluation that
24 would be required for this rearrangement of the assembly, and
25 that they would address the greater capacity at the same time.

1 That response was in June of '79, I believe.
2 And there has not been any further communication from Maine
3 Yankee on that aspect.

4 The people in Nuclear Reactor Regulation who were
5 in evaluating this looked at it in the various areas of -- that
6 are, I guess, normally undertaken in a normal safety review.
7 They looked at criticality, they looked at thermal aspects,
8 structural, seismic, and so on and so forth. And they did
9 come up with a basis that it looked like it was possibly a
10 valid area of proceeding.

11 There have been no other applications by any
12 other utility or facility or industry requesting this type of
13 review by the staff.

14 I also touched base with different areas of the
15 staff to determine if any research projects or studies or
16 anything was going on, either by the staff directly or under
17 contract to the staff. And in evaluating this I talked with
18 the Research Division, I talked with other members in NRR,
19 I talked with Standards, the Office of Standards. I have not
20 been able to find anybody who has worked in this area on the
21 staff or knows of a contract to the staff with regard to pin
22 compaction.

23 At that point I turned to the industry and
24 started making some phone calls.

2. Q Excuse me; let me interrupt.

WBR/wb7

1 Does this go into the (b) part, the others?

2 A I guess actually it goes into the (b) part. The
3 (a) part is summarized by saying, to my knowledge and anybody
4 I contacted I could not find anybody on the staff who was
5 familiar with this or was pursuing this particular alternative
6 right now.

7 Q All right. Thank you.

8 A With respect to Part (b), I wanted to find out
9 what industry was doing about this, just to ask them a few
10 questions and find out what the specifics were, and when we
11 might expect this alternative to be available, is it indeed
12 a viable alternative; questions on that order; what experience
13 did they have, exposure, costs? Did they do studies on
14 criticality, structural, and so on?

15 I contacted a number of industries, included in
16 which are Combustion Engineering, Babcock and Wilcox, Oak
17 Ridge National Laboratory, TVA, General Electric, DuPont
18 Savannah River, Allied General Nuclear, AGNS, NAC, Nuclear
19 Assurance Corporation, and Westinghouse. I felt that I was
20 getting a pretty wide spectrum as to what the industry is
21 seeing. And with each one of these companies I spoke with
22 somebody who seemed to be knowledgeable on the subject and
23 got their input as to what they're doing.

24 I have specifics relative to everybody I talked
25 with, and they range-- I guess, to speak about it generally,

Ace Reporters, Inc.

1003 229

WFB/wb8

1 there isn't anybody right now who has the option of pin
2 compaction as an alternative which is acceptable today.

3 Of the nine or ten industries I talked with the
4 closest one that might be available to do anything with was
5 six months to a year away from possibly pursuing a licensing
6 action. A lot of these are dependent upon whether or not they
7 find contracts with utilities to fund it.

8 Some of the people I spoke with, specifically AGNS,
9 NAC and Babcock and Wilcox, are under contract to DOE to evalu-
10 ate pin compaction. AGNS is evaluating it in a hot cell which
11 would require the dry disassembly and storage. It would not
12 involve dry storage of fuel but dry disassembly, putting the
13 rods in a can, sealing the can, and putting it back into the
14 spent fuel pool.

15 Babcock and Wilcox, as well as NAC, are evaluating
16 the disassembly of the fuel under water, done as a remote
17 operation.

18 To sum it all up, there are a couple of problems
19 that are still trying to be resolved. The alternative as an
20 acceptable alternative still looks like it's a couple of years
21 away at the earliest.

22 In general, that's what I did.

23 Q Okay.

24 Could you indicate, What do you mean by the term
25 "couple of years away at the earliest?" Can you be more

WPR/wb9

1 specific about that?

2 A In contacting each one of the individuals, there
3 are very few who are doing it exactly the same, or for exactly
4 the same reason. And I have found that it looks most feasible
5 for this type of alternative to be pursued on a commercial
6 basis or a basis -- a method which would be employed in an AFR
7 or could possibly be employed by a service vendor, somebody
8 who has a service contract with a utility and would show up on
9 the site with their gear in a trailer and perform an operation
10 for them, and move on to the next utility.

11 Or another one is-- The costs that were involved
12 in preparing for this type of procedure were extremely high,
13 and it wouldn't actually be seen as a feasible idea unless it
14 was done in a commercial operation or an AFR operation where
15 the costs would be spread out over much greater storage.

16 I'm trying to get back to your question as to
17 what I mean by "a couple of years."

18 Looking at the different approaches people are
19 taking, if it would be six months to a year to two years on
20 the average before somebody was willing to come in with a
21 license application, it might then at that point take another
22 year. I won't speculate as to what time it might take for the
23 staff to evaluate the alternatives. But for the time being,
24 if we assume a year for that it could be two years before
25 anybody would be willing to commit themselves to this

1003 231

1 alternative; two years being on the short end of the scale.

2 Q What do you mean by "short end of the scale?"

3 A It would stretch from two years to possibly five
4 years in some of the cases before some of the industries would
5 complete their research and be in a position where they are
6 ready to try and either perform it for a utility or sell it
7 to a utility as an option.

8 Q You mentioned -- I think you used the phrase
9 "couple of problems" in your response to my question about
10 "couple of years." You mentioned some problems. I would like
11 to ask you what you mean by "couple of problems." And if you
12 would just give us more specifics about that, if you have
13 not done so already.

14 A I can touch on some of the problems they're
15 running into.

16 The No. 1 problem it seems most of the industries
17 are finding is that the structural aspect of this type of
18 storage is becoming a limiting factor. Some of the spent
19 fuel pools, if they are not built on top of bedrock are not
20 capable of -- if they have some type of floor loading limit
21 on it, it is becoming difficult for a utility to pursue an
22 extremely dense compaction of spent fuel rods. That structural
23 aspect seems to have popped up with most of the people I've
24 talked with as being the No. 1 limiting factor.

25 Another limiting factor is the thermal capabilities

W/W/wb10

1F fls

7.170

Acc. Reporters, Inc.

wbll 1 at an existing operation. If you were to try and backfit
2 this operation into an existing pool you'd have to evaluate
3 what the thermal capabilities of that pool are, if you have
4 to supply greater cooling capacity or exactly how far can you
5 go before you are at the limit of the cooling capacity.

6 If you are using this alternative which is one it
7 was designed for you can take care of possibly the structural
8 and the cooling problems as you are designing it.

9 Some of the other problems that they're running
10 into are the types of fuel that are used. Exxon, for example,
11 as well as GE, I believe, have fuel which are easier to work
12 with than does Westinghouse. And in that list Babcock and
13 Wilcox is the hardest fuel to work with.

14 The reason that this comes into it is the way
15 the fuel is assembled in an assembly. There is a top end
16 fitting at the very top of the fuel assembly which has to be
17 removed and the fuel rods have to be freed so that you can
18 pull them out of the assembly. It seems that the GE and the
19 Exxon fuel, I believe, have a means of removing the top end
20 fitting easier than the other. and it is easy to grasp the
21 fuel and pull it out.

22 Babcock and Wilcox I believe has a shroud between
23 the end fitting and where the actual cut is made, and it
24 makes it very difficult to grasp the fuel and separate it.

25 So these are some of the problems that they are

wbl2 1 dealing with.

2 Basically, I think those are the problems that
3 they are still looking at. In different areas they are still
4 evaluating the seismic considerations, the criticality con-
5 siderations. Although presently they don't seem to be a
6 problem, I assume they can be handled.

7 Q Was there anything else with respect to your
8 investigation of matters and what the status of this technique
9 is in the industry as it exists that you haven't given to us
10 at this point?

11 In other words, does that complete your response?

12 A I believe it does. I've touched on most of the
13 hard spots that they're having.

14 The only other comment I would have is that what
15 I have found by talking with individuals is much in line with
16 what I have tried to express, I guess, in the past, in that
17 pin compaction, which is -- well, it looks like it is an
18 option which is being worked on in a lot of different areas.
19 It looks like it may come about. Taking everything into
20 consideration, it's difficult to say exactly what it could
21 do for us today. You have to take into consideration what the
22 structural problems are, what kind of capacity can we have,
23 will there be an increase, and when is it to be available?
24 There are still a number of unknowns.

25 That's all I have.

1 MR. KETCHEN: Mr. Chairman, that completes the
2 report of the staff on its response to the pin compaction
3 question, I believe raised by Mr. Roisman.

4 CHAIRMAN MILLER: Mr. Roisman, do you care to
5 interrogate?

6 MR. ROISMAN: Yes.

7 CROSS-EXAMINATION

8 BY MR. ROISMAN:

9 Q You had at one time in the hearing, Mr. Spisalny,
10 indicated when we were looking well out into the future for
11 the storage solutions for Oconee that you considered pin
12 packing as an option that they would probably have available,
13 let's say in the 1990's sometime, as opposed to in 1979.

14 After this survey you have done are you still
15 convinced that that's correct, that pin packing will be an
16 option that Duke could reasonably count upon to be available
17 with respect to its spent fuel storage?

18 A Yes, with some things that would probably have to
19 be highlighted; if I may give you an example.

20 Q Sure.

21 A The specifics at Oconee would have to be looked
22 at in that the structural integrity tends to take pin compac-
23 tion on top of poison racks, for example. The cooling charac-
24 teristics of Oconee would have to be looked at.

25 There may be some gain that can be received at

wbl4 1 Oconee going to poison racks and then pin compaction. But
2 it's difficult at this time to say whether it would be a
3 factor of 1.5 or a factor of 2. I can't put a number on it
4 without doing quite a bit of study on it.

5 It's my understanding with regard to the Duke
6 situation that the McGuire pools and the Catawba pools are
7 constructed on bedrock which would eliminate -- or, if not
8 eliminate, alleviate, help alleviate part of the structural
9 problems. If the design is such that the cooling can take it,
10 or if they are working on Catawba, if they were to put in an
11 extra heat exchanger, or whatever might be necessary, these
12 considerations could be taken into account.

13 I believe as you move closer and closer to this
14 alternative coming about in the next few years the questions
15 will be resolved and somebody can sit back and find out
16 exactly what the gain is from this alternative.

17 The answer to your question is Yes, I still believe
18 it's an alternative. But it does have to be looked at.

19 Q Well is it your understanding that there may be
20 things that Duke could be doing now that would make the option
21 more available to them in the future, or less available than
22 in the future? You mentioned, for example, an extra heat
23 exchanger at Catawba or McGuire.

24 A I believe Duke could evaluate exactly what thermal
25 load a pool could take, and then they could make a decision as

W-15/wb15 1 to whether or not they wanted to increase the cooling capabilities.
2

3 With respect to developing the alternative, I
4 don't think there is much that Duke can do that isn't being
5 done now by these industries.

6 Q I didn't ask you about the development; I meant
7 preparing themselves to use it if it gets developed and they
8 decide they want to use it. That's what I was focussing on.

9 A There are probably things they could do.

10 Q And is it true that -- Do I understand correctly
11 that the Babcock and Wilcox fuel which is in use only at
12 Oconee of the Duke units in general, that that may in your
13 judgment present a special pin packing problem that one might
14 not have with other fuels? Do I remember your testimony cor-
15 rectly?

16 A Yes, that's correct. That was as a result of
17 speaking with somebody at Allied General who has been looking
18 at the different fuels. And it's his comment that -- he said
19 Babcock and Wilcox is the most difficult to work with.

20 Q So, for instance, having the Babcock and Wilcox
21 spent fuel in the McGuire spent fuel pool might at some sub-
22 sequent date complicate a pin packing proposal for that whole
23 pool that wouldn't be there if only the McGuire pool -- if
24 only McGuire fuel; excuse me; were going to pin packed at
25 some subsequent date?

1 A Well it doesn't rule out the option for that
2 pool. If they were only able-- Let's just say if they were
3 only able to reconsolidate, or pack Westinghouse fuel, that
4 the storage space that is taken up by the Oconee fuel could
5 limit the amount of assemblies they could use. But it doesn't
6 hinder the option of packing the Westinghouse fuel.

7 Q I understand. But what I meant was, it limits the
8 potential maximum capacity of the pool utilizing pin packing
9 if it should subsequently turn out that Babcock and Wilcox
10 fuel couldn't be, or it wasn't economical to pin pack it, but
11 Westinghouse fuel it was?

12 A It could have an impact on the total number.

13 Q Now you mentioned that you spoke to the Nuclear
14 Assurance Corporation. Do you remember -- and I'm going to
15 show you a copy to try to refresh your memory -- NRDC Exhibit
16 No. 11, which was a letter from Mr. Houston, the Assistant
17 General Manager, Sales and Marketing, at Nuclear Assurance
18 Corporation, to Mr. Sneed, Manager, Nuclear Fuel Services,
19 at Duke, which contained a proposal from Nuclear Assurance
20 Corporation for some 400,000 dollars designed to obtain
21 for Duke all of the necessary engineering and Nuclear Regula-
22 tory Commission assurances for a pin packing proposal at its
23 facilities?

24 I'm going to show it to you now so you can see
25 if you remember it.

W /wbl7

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

(Handing document to the witness)

This is the cover letter, and that's the document.

Do you have any recollection of this?

A I remember the document being introduced, yes.

1F(2)
WR gbl

1 Q When you talked to Nuclear Assurance Corporation
2 just recently, did you discuss with them the status of this
3 proposal, which appears to be a proposal based upon the
4 assumption that pinpacking is possible in general and that
5 this proposal is designed to find out whether it's possible
6 for Duke Power?

7 A Duke Power came up in the discussion, well,
8 first of all, when I introduced it, I guess, saying what I
9 was doing. But secondly the person I spoke with came back
10 as soon as I mentioned Duke and said oh yes, we've done a
11 study. We didn't get into a discussion of this particular
12 study or this may have been what she was referring to, I
13 guess.

14 The point that -- she was citing from memory,
15 and the point she came up with was that they believed they
16 had evaluated Oconee and they did come up with some limiting
17 factors based on the structural integrity of the pool,
18 based on the floor loading.

19 Other than that, she didn't reference this
20 particular report or the findings of this report, this
21 proposal.

22 Q You didn't ask her for that report, you don't
23 have a copy of that report?

24 A Of this?

25 Q No, of the report that you think she said that

Accidental Reporters, Inc.

1 NAC had done for Duke with regard to the use of pinpacking
2 at Oconee.

3 A No, I do not.

4 Q I'm a little puzzled, maybe you can help explain
5 to me. On the one hand, you have indicated that someone
6 like Nuclear Assurance Corporation has done some feasibility
7 studies on the use of pinpacking for a facility like Oconee,
8 and on the other hand, that it's a technology that is not
9 here.

10 Are there problems that exist with regard to
11 pinpacking site and reactor specific, or are they generic?
12 And if they are generic, how do you explain Nuclear Assurance
13 Corporation being able to do a study on the feasibility of
14 pinpacking if there are generic problems outstanding?

15 A I think they are a combination of site specific
16 and generic problems, site specific relating to the cooling
17 and structural problems I've been mentioning, generic problems
18 would be relative to the fuel that might be involved.

19 My reason for saying or being able to explain that
20 NAC may have been in a position to provide a proposal is
21 such that they had done a feasibility study for the disassembly
22 and storage of fuel rods. They have determined that it is
23 possible to be done, they have not gone through a wet demon-
24 stration, an actual demonstration of the procedure yet.

25 They may feel that they're in a position that the

w... agb3

1 problems that are outstanding today can be resolved over the
2 next year or whatever time that they would be getting ready
3 for a licensing action.

4 If they were to supply all the necessary
5 information necessary to go to the Staff to start a licensing
6 action for Duke, whatever time frame that would be for them
7 to prepare, they may be in a position to say that they may
8 be able to resolve their problems.

9 If I could just take a minute and let me see what
10 they said there, I may have something else to add.

11 Q Sure.

12 (Pause.)

13 A Basically the conclusion that I've drawn from
14 the discussion with NAC is that it looks feasible, although
15 it is not viable for all utilities, depending on the evaluation
16 of the site specific problems. They are about 50 percent
17 of the way into a three-year contract with DOE, and the end
18 of that contract resulting in a complete hot demonstration at
19 a utility of doing this. So that's another 18 months or so.

20 Q You mentioned something about the question of
21 whether you can do pinpacking in conjunction with poison
22 racks. Do you have any information to indicate that there
23 are going to be poison racks at Oconee?

24 A No.

25 Q You don't have any applications being talked about?

1 A No, I do not.

2 Q -- that you're aware of?

3 A No.

4 I was just using that in sequence with other
5 alternatives.

6 Q Okay, that was a question I wanted to ask you,
7 are there some alternatives that are more amenable to a
8 subsequent use of pinpacking than others that could be
9 pursued at the -- looking at what you consider to be the
10 technically-available alternatives to Duke today, are some of
11 them more compatible with pinpacking in the future and others
12 less compatible with pinpacking in the future?

13 A Possibly, I guess. If there was a limit to the
14 Oconee pool, how much fuel you could put in the pool, whether
15 it be structural or thermal, if you go to poison racks and
16 you approach that limit, that would indeed hinder pin
17 compaction. If you would prefer to go to pin compaction prior
18 to poison racks, you may be able to do pin compaction in its
19 entirety in the spent fuel pool and still not reach that
20 limit. So it becomes a one or the other and not both
21 situation or a one and the other or one and part of the other,
22 you may be able to go poison and fill half the pool with
23 compacted assemblies.

24 Q Well let me ask you. As I understand it, and
25 correct me, that if there are more, the sort of mechanical

1 limitations that you're discussing, one is the cooling
2 capacity of the pool, is that right, and another is a structural
3 capacity, can it take the weight.

4 A That's right.

5 Q And are there any others like that that you're
6 aware of?

7 A I believe those were the only two that really
8 came up.

9 In my endeavors, I guess, criticality seemed
10 not to be a problem. Seismic is sometimes hand-in-hand with
11 structural. If it is capable of supporting it, it may well
12 be capable of seismic restraints.

13 Basically those two factors.

14 Q Okay, let's take the heat loading for a moment.
15 Is it correct that the heat problem is constant based upon
16 the number of fuel rods that are in the pool, regardless of
17 whether they are stored in a pinpacking configuration or in
18 a poison rack configuration?

19 A Not necessarily, depending on the type of
20 storage. If you have an open lattice structure where you have
21 coolant going in throughout the assembly, that works as your
22 cooling medium. And if you compact the fuel or take all
23 the rods out, there are two approaches also in this com-
24 paction. One is to rearrange it into a tighter grid, so
25 that you're closing the gaps between the fuel rods. The other

/agb6

1 is to take all the fuel rods out of an assembly and throw
2 them into a can in which they are actively touching each
3 other. In the latter technique there is a longer decay
4 period, which is usually used so that the fuel will be at a
5 much cooler level. But depending on what method you're
6 taking and what method you're starting with in the pool and
7 what you're ending up with, there could be a difference in
8 total value the way it's stored.

9 Q In other words, the same number of rods stored
10 in a can, the same number of rods stored in a tighter lattice
11 and the same number of rods stored in the normal lattice
12 but in a poison rack, each of those might have different
13 thermal loadings for the same number of rods, is that what
14 you're saying?

15 A Yes, that's what I'm saying. But I think the
16 largest difference that really comes into play is the fact
17 that you're adding more assemblies to the pool, and that's
18 really why your thermal value goes up.

19 Q Okay. But in that sense, then, if the pool has
20 a limit as to how many fuel assemblies it can cool, whether
21 you get that many in there by pinpacking or by poison racks,
22 the limit -- if we are going to use cooling as the limit,
23 the limit will be reached with roughly the same number of
24 rods, then, is that right?

25 A But the cooling factor is not based on the number

w agb7
1 of assemblies, it's based on BTUs.

2 And if I could just use some examples, if you
3 have 100 assemblies which today reaches your capacity, if you
4 wait a year you could add 50 more assemblies because these
5 have cooled down and so they have decayed longer and the
6 thermal level is lower. So it is not really a matter of
7 how many assemblies you get in there, but it's a matter of
8 what is the heat load that is being produced by the
9 assemblies.

10 Q So the age of the assemblies would also be a
11 factor?

12 A Oh, yes.

13 Q So if you were always transshipping away your
14 oldest fuel rods, you would always be making your pool less
15 amenable to putting more fuel rods in it insofar as the heat
16 load is a limitation, because you'd be keeping your freshest
17 and hottest rods around, is that correct?

18 A That theory is correct. I don't know if the
19 application of the theory is correct.

20 CHAIRMAN MILLER: I think if it is convenient,
21 we'll take a recess at this time.

22 (Recess.)

23 endlF2

24 Ace-Federal Reporters, Inc.

25

1003 246

3A DELOON
flw WRB
c9 mpbl

1 CHAIRMAN MILLER: Are we ready to proceed?

2 You may resume, Mr. Roisman.

3 MR. ROISMAN: Okay.

4 BY MR. ROISMAN:

5 Q Mr. Spitalny, if I remember correctly, we were
6 just discussing this question of the poison racks use in
7 conjunction with pin packing. We talked about the heat
8 loading question.

9 Now what about the structural weight question?
10 Is there more weight if the spent fuel is stored in poison
11 racks and then pin packed than if it's pin packed without
12 ever having stored it in poison racks?

13 A Yes. What you're doing when you go to poison
14 racks, you're increasing the number of assemblies you can get
15 into a pool.

16 Q Right.

17 A When you go, then, on top of that and go to pin
18 compaction, you're increasing the number of rods in each one
19 of those assembly locations.

20 Q Okay.

21 I guess my question was do the racks themselves
22 add a weight factor, that if you were to go directly to pin
23 packing from just regular stainless steel racks you wouldn't
24 have put as much weight into the pool?

25 A I don't think that the racks themselves would

mpb2

1 contribute that much to the problem. I think the problem is
2 the number of assemblies.

3 Q Okay. All right.

4 In your judgment is there something which Duke
5 could be doing now that would make the pin packing option more
6 viable in the future that to the best of your knowledge they
7 are not yet doing?

8 A Well, I thought that you had just asked this ques-
9 tion. There isn't anything that they can do to make the
10 option more viable. Assuming the option is available, there
11 might be something they can do to determine how it will be
12 used outside.

13 Q And the Staff has not done any detailed investiga-
14 tion of precisely what the decision dates might be for when
15 pin packing would have to be decided upon if the Applicant
16 wanted to decide upon it, or when decision dates for other
17 options that might impact on pin packing might come up or not,
18 is that correct?

19 A No. The Staff has done an analysis of that.

20 Q Is that the thing that we're going to see tomorrow?

21 A I'm not quite sure what you're going to see
22 tomorrow.

23 I have done an analysis of the alternatives --

24 Q Okay.

25 A -- and dates. The problem that I have is carrying

mpb3

1 it out as far as I believe the request would like it to go.
2 There are so many options and so many paths that somebody can
3 take, and you have to make so many assumptions that it really
4 confuses the issue, and that's where my problem is.

5 Q Okay.

6 I think my question was:

7 Given that there are some things that Duke might
8 do or might avoid doing in order to make a technologically
9 feasible pin packing option more available or less available
10 for Ocone in the future, have you tried to analyze exactly
11 how that fits into the scheduling of Duke taking various
12 actions to deal with its spent fuel storage problem?

13 A I believe I have considered it, and I don't
14 believe those problems to be the critical path items. And
15 so I have not -- I did not put dates on when they would have
16 to determine what their cooling capabilities are or when they
17 would have to do all this, because I don't believe that
18 that's the critical path.

19 I have looked at what would be the date in order
20 for Ocone to go to pin packing following this action that
21 they've just taken. I have looked at that part of it.

22 Q You mean the action going to denser stainless
23 steel racks.

24 A Yes, I'm sorry.

25 Q Okay.

mpb4

1 Is the problem of heat loading a problem that can
2 be solved by simply adding additional cooling capacity to the
3 pool, or does it involve something as fundamental as under-
4 pinning the pool to make it stronger?

5 A You asked about cooling, and then you started --

6 Q I was trying to use the distinction between
7 physically altering the structure of the whole pool if it
8 wasn't strong enough to hold something versus simply adding
9 another cooling leg onto the pool so that it can cool better.
10 I'm trying to say is one really simpler than the other?

11 A I have not looked at Ocone specifically close
12 enough to determine what would actually be required in the
13 cooling capabilities or structural capabilities. Cooling
14 could require a number of different modifications, one of
15 which could be changing the impeller in a pump, which would
16 be a simpler one, and possibly get greater turn-around, turn-
17 over of the pool water.

18 If that did not work you may have to add on
19 another pump, maybe add on another heat exchanger. You may
20 also then get into a problem of flow rate through an exist-
21 ing pipe and through an existing -- well, basically through
22 the existing pump and into the wall of the spent fuel pool.

23 So if, for example, changing the impeller would
24 not change your flow enough because of restrictions of pipe
25 size, you may have to add on additional piping and then break

mpb5

1 into the integrity of the pool wall to add these inlet and
2 outlet pipes.

3 Again, these are the items that I mean have to be
4 looked at. Exactly what would have to be done at Oconee, I
5 have not done that because there are a number of different
6 methods of working with the problem and it depends how
7 severe the problem is.

8 Q Okay.

9 MR. ROISMAN: I have no further questions for
10 Mr. Spitalny on this.

11 Thank you, Mr. Spitalny.

12 CHAIRMAN MILLER: Mr. Riley, do you have any
13 cross-examination?

14 MR. RILEY: Yes, I do.

15 CHAIRMAN MILLER: You may proceed.

16 BY MR. RILEY:

17 Q Mr. Spitalny, in response to one of Mr. Roisman's
18 questions about whether it would make any difference with
19 respect to the heat evolved as to whether a certain group
20 of specific pins were in one of three configurations, ranging
21 from pin packing to high density, you said that the heat
22 evolved of Btu's differ.

23 Could you give us your basis for that?

24 A Okay.

25 I guess I should clarify it then. The thermal

mpb6

1 output of the fuel rods may be putting out one consistent --
2 well, let me think about it.

3 (Pause.)

2B flws

4 I believe -- and I may have to resort to having
5 somebody who is a heat transfer expert -- but I believe that
6 there is a buildup if the fuel rods are placed adjacent to each
7 other which does work like a pyramiding effect of one heat
8 load acting on the adjacent fuel rod. And then if you have
9 a round assembly of the fuel rods, the inner temperature would
10 be higher than that of outer temperature.

11 Q But we weren't talking temperature, were we?

12 A Well, I'm just relating the temperature as a
13 result of the heat load.

14 Q Yes, temperature is a function of the heat
15 generated and the heat removed. But we were talking about
16 pool cooling requirements, the total amount of heat given
17 off by this specific aggregation of rods. How would it be
18 different as a function of configuration?

19 A The heat given off in an assembly which has
20 coolant as a medium between all the fuel rods, there would
21 be a constant Btu thermal value going out into the water
22 as well as that same constant value which, if they were
23 pushed next to each other, go into the adjacent rod.

24 My distinction, I guess, that I was trying to
25 make was the cooling medium which is between the rods would

mpb7

1 be the heat transfer. It would be greater if the assemblies
2 were separated than if they were put next to each other.

3 Q Would you accept the statement that delta-H,
4 namely the Btu per unit time, would be the same in any event?

5 A Independent of the heat transfer to the cooling--

6 Q All right.

7 Would you agree, then, that depending upon the
8 configuration, rate of circulation of coolant, temperature of
9 coolant and so forth, that in a pin packing configuration the
10 temperature of the individual rod would probably be higher than
11 in a high density packing?

12 A Yes, it would, sir.

13 Q Now we realize, of course, that the objective of
14 pin packing is to increase the potential capacity of a given
15 pool, and I believe you gave a number before, but I'd like
16 to ask you again:

17 What is the anticipated improvement in storage
18 capacity in going from 15 and 1/2 inch high density centers
19 to a variety of these pin packing arrangements? And you've
20 indicated there is one type where you serve the assembly but
21 maybe space it closer. There is another where you put it in
22 a can and the pins touch one another.

23 Could you give us those numbers, please?

24 A Yeah. I believe the increase of capacity factor
25 is independent of center-to-center spacing, center-to-center

mpb8

1 being the spacing of the racks, the assembly.

2 Q Yes.

3 A The factors range, depending on the technique,
4 from about a factor of 1.6 to as high as 2.1. The 1.6 on a
5 reconfiguration of the assembly and closer spacings, and 2.1
6 to putting the fuel rods next to each other.

7 Q Right.

8 A Once that is done and you gain that factor, then
9 you are just placing it into the racks, the existing racks,
10 which is an independent function, how close the fuel assemblies
11 are.

12 Q This is the point I don't believe I was clear on.
13 You're saying that you use the same physical racks to place
14 the compacted assembly or pins.

15 A That's correct. If I can give you an example,
16 if you have an existing pool with some assemblies in it, you
17 pull one assembly out and take it aside and compact it. You
18 can get two assemblies into that same space. You then put
19 this new can, which would be the same dimension as one spent
20 fuel assembly, but holds the equivalent of two assembly rods --

21 Q Right.

22 A -- into the same location for one assembly.

23 Q So that makes it clear there would be no recon-
24 figuring of the pool. If your racks are in place, those same
25 racks would remain. And the only operation that would be

mpb9

1 performed would be on the assemblies themselves.

2 A That's correct, unless you're using it in
3 conjunction with reracking.

4 Q Right.

5 Now you indicated two of your concerns. One was
6 thermal capacity and the other was structural integrity of the
7 pool, very straightforward. You said you weren't concerned
8 about criticality.

9 How is the criticality problem dealt with?

10 A Well, criticality has been evaluated by a lot of
11 people as well as the Staff. The Staff has looked at
12 criticality of the fuel rods being pushed on top of each
13 other, and actually what takes place as the fuel rods become
14 closer and closer together and you're displacing the coolant
15 or the water in this case, the water acts as a moderator
16 which thermalizes your neutrons and as you're displacing the
17 water the K effect or the criticality is actually going down.

18 Q Okay. That was the point that I was concerned
19 about.

20 So K effect goes from a maximum, then, as a
21 function of pin-to-pin distance? If it started to go down
22 it has to go through a maximum, doesn't it, because it was
23 going up originally as you got pins closer together?

24 A That's true. My only hesitancy is that I don't
25 know that it's at a maximum when it's stored in an assembly.

mpb10

1 Q No, that wasn't the question. It has to go
2 through a maximum, I said, in order to be on its way down
3 under the packed condition.

4 A Yes. But I guess to explain my point, it would
5 be that it is starting at its highest point, but maybe not
6 starting at the maximum value of K effective that could be
7 reached.

8 Q Right.

9 A K effective is a curve, and we're on a downward
10 slope. We're starting at that point and we're just going
11 farther down. We're not hitting that peak.

12 Q Right.

13 And we simply haven't defined or tried to define
14 the center-to-center distance that corresponds to the maximum
15 K effective, right?

16 A Okay. That has been done. I have not alluded
17 to it at all in this.

18 Q But it would be somewhere between 15 and $1/2$ and
19 the square root approximately of 15 and $1/2$.

20 A No.

21 Q Let's say the square root of two multiplied by
22 15 and $1/2$, because you point out that you could get up to
23 about a factor of two pin-to-pin, and to get the diameter of
24 the distance you would use the square root of two times the
25 original dimension, would you not?

mpb11

1 A I don't believe that's the method of determining
2 the maximum K effective.

3 Q No, I wasn't talking about that.

4 A Okay. Then maybe I misunderstood you. I thought
5 you were asking me how you would calculate the maximum K
6 effective.

7 Q All right.

8 Somewhere between the 15 and 1/2 inch -- well,
9 let's go back a little bit farther.

10 The spacing of pin-to-pin depends upon the
11 particular assembly, and there are assemblies which I think
12 are 15 by 15, is that correct, 15 pins by 15 pins?

13 A Yes.

14 Q And so the center-to-center spacing involved is
15 approximately 1/2 an inch, because the outside dimension of
16 the assembly is about 8 and 1/2 inches, is that correct?

17 A Okay.

18 The place where we're becoming confused is the
19 discussion of center-to-center.

20 Q Right.

21 A When we discuss center-to-center I'm talking
22 the center line of the fuel assembly to the center line of
23 the next adjacent fuel assembly.

24 Q Right. All right.

25 What, then, is the role of the center-to-center

mpb12

1 spacing of pin-to-pin?

2 A I don't know it offhand. It's in the FSAR.
3 There's a complete diagram of it.

4 Q Well, the thrust of the question -- I certainly
5 don't want to confuse you -- the thrust of the question is:

6 Can a single assembly be so compacted that you
7 have a criticality problem with it if water, and just straight
8 water, is the moderator? Now when I say "just straight water"
9 I'm distinguishing it from borated water.

10 A The only place water becomes a problem is if you
11 lose it. As you get closer and closer together with the
12 fuel assemblies which are under water, K effective goes down.
13 The only place you would run into a problem is if you lose all
14 your water.

15 Q Well, in normal packing, classical, you do not
16 have to borate the pool water, do you?

17 A It does not have to be done.

18 Q It is done?

19 A It's done in many cases, yes.

20 Q Is it necessary to borate the water with high
21 density packing?

22 MR. KETCHEN: Mr. Chairman, may I impose an
23 objection on relevancy grounds, the basis being that Mr.
24 Spitalny was called to respond to a question on the status
25 of pin packing research, and he did indicate, I admit, that

mpb13

1 he didn't think from his survey that criticality would be a
2 problem.

3 But now I think Mr. Riley and Mr. Spitalny are
4 getting into solving the pin compaction problem. And I think
5 that that's what's going to be done in whatever time limits
6 Mr. Spitalny reported on as part of his testimony. But I
7 think it's not relevant, this line of questioning, in trying
8 to figure out how to solve the problem today. I just don't
9 think Mr. Spitalny is going to be able to do it.

10 I would probably, if that would pursue that line
11 of questioning, indicate that Mr. Spitalny would not be the
12 witness on that subject. And if there is a witness in
13 existence today--because I think that many of these problems
14 and things that are being raised are things that have yet to
15 be looked at and resolved by physicists and nuclear engineers.
16 So it's a relevancy objection.

17 MR. RILEY: Mr. Chairman, my question had to do
18 with whether or not there would be introduced a new spectrum
19 of criticality problems if pin packing were resorted to. I
20 would be happy to see pin packing take place if I didn't
21 think we were introducing a new problem, and I'm simply
22 trying to get something for the record which will show which
23 way it goes.

24 If it seems to be the present drift that we would
25 not be able to see further criticality considerations, well,

mpb14

1 good. On the other hand, if we were, I think we should look
2 into it.

3(lws

3 (The Board conferring.)

4 CHAIRMAN MILLER: The Board does feel it's beyond
5 the scope of this testimony and the relevancy for which it was
6 proffered. The objection will be sustained.

7 MR. RILEY: All right.

8 BY MR. RILEY:

9 Q In contacting these various vendors, dealing
10 with the pin packing question, was the matter of releases of
11 radioactivity during the disassembly, say, of a Westinghouse,
12 Babcock and Wilcox spent fuel assembly given consideration?

13 In other words, it would seem to pretty much a
14 lay-point of view that if the sheath had been embrittled
15 thereby being a greater likelihood of release of materials
16 inside the sheath by a breaking of the sheath during
17 mechanical handling?

18 A I did not bring up the topic. It was not brought
19 up voluntarily by anybody I spoke with.

20 Q Right.

21 Would you have your own personal engineering
22 judgment on what might happen to sheaths on the process of --
23 I assume it would be basically crushing the assembly to
24 compact by that route the 1.61 storage improvement ratio?

25 A It's not crushing the assembly that is taking

mpb15

1 place. The procedure that is used is taking an assembly
2 and cutting loose the top end fitting which is retaining the
3 rods in their position. They fit down into a grid which also
4 holds them separated actually from each other. It's a method
5 of cutting loose the top end fitting and by removing the
6 top end fitting you are making available the top portion of
7 the rods where you can actually mechanically grab the rods
8 and pull them out of an assembly.

9 The rods are then taken out of an assembly and
10 put on a table, and they roll into a trough. There is a
11 pusher at one end of the trough and it just simply pushes
12 them into a can. And when they get into the can the rods
13 are then basically lying on top of each other.

14 So it's not a crushing technique.

15 Q Well, that was one of two technologies. That
16 gives you the 2.1 improvement, correct?

17 But you mentioned an approach which gave you a
18 1.6 improvement effect, and my impression was -- and would
19 you correct it -- that the rods remained in their original
20 assembly hardware.

21 A It's my understanding that they are reassembled
22 in a closer grid configuration. I don't know the specifics
23 of how they actually pull the rod out and put it back into the
24 new grid, but it was my understanding that it's just a re-
25 structure of the assembly into a closer grid arrangement.

mpbl6

1 Q I see.

2 It is put into a new grid. It's not a case of
3 modifying the old grid by compaction.

4 A That's correct.

5 Q What would be the nature of the preparations that
6 the Applicant would have to make to get pin packing done at,
7 say, the Oconee Plant?

8 A Well, the areas that they would have to look into
9 are exactly what their floor loading capabilities are, their
10 structural supports, seismic, what their cooling capabilities
11 are, exactly what thermal capacity they could handle.

12 I don't envision that being the critical path
13 because I think whenever they would see fit to undertake
14 that particular study they are probably capable of doing it.
15 And I think it's a matter of showing that the alternative is
16 here to use, and then you can go back and try to backfit it.

17 Q It would be a study rather than a physical
18 preparation?

19 A It would be a study initially that may result in
20 physical preparation if you do have to modify any of the
21 things we've discussed.

22 Q Is there any aging requirement on the fuel prior
23 to reassembly or putting in a can?

24 A Yes, there is.

Ace-Federal Reporters, Inc.

WEL7 flws

1003 262

1 Q Could you tell us what it is, please?

2 A (Pause.)

3 MR. KETCHEN: I don't understand the question. May
4 I have a clarification? What is meant by requirement here?

5 CHAIRMAN MILLER: Can you rephrase the question?

6 MR. RILEY: Yes.

7 BY MR. RILEY:

8 Q How long must the fuel be left sit after removing
9 from the reactor before the pin packing operation is put into
10 effect?

11 A (Pause.)

12 Q That was the question, Mr. Spitalny.

13 A (Pause.)

14 MR. KETCHEN: I'm going to object again on the
15 relevance of this. This assumes, it seems to me -- I don't
16 know whether it's a hypothetical or not, but it assumes that
17 that technique is available, and that there are requirements.
18 And I assume requirements in the regulations.

19 It's Mr. Spitalny's testimony, as I understand it,
20 that that does not exist today, and I think it's beyond the
21 scope of his direct testimony.

22 CHAIRMAN MILLER: Objection overruled. You may
23 answer.

24 THE WITNESS: I think the word requirement that
25 we're talking about is not necessarily a regulatory requirement,

1 but what the industry has found, that they must wait for the
2 fuel to decay before they can actually handle it.

3 BY MR. RILEY:

4 Q That was the sense of the question.

5 A And that has varied, depending on who I've talked
6 to. But it varies from a low of two years to -- some people
7 have indicated that it must decay not less than two years,
8 to as high as five years. Others have indicated they would
9 not perform that operation with fuel less than five years.

10 Q And in the context of rigging dates for actions
11 by the Applicant over the whole fuel storage plan, this then
12 would be relevant information? In other words, if the
13 Applicant considered a pin packing option, the period of
14 aging becomes a factor in the scheduling?

15 A Yes, I guess, in that you cannot completely
16 compact the entire pool if you have a requirement for five
17 years, yes.

18 Q All right.

19 Now, you indicated that in order to increase the
20 thermal capacity of a pool the limiting factor might be the
21 piping into the pool. Do you see any problem with having a
22 pipe enter from the top of the pool, and having a system for
23 priming the pump, after which you will operate without any
24 further problem?

25 A I don't know that I can really speak to those

1 problems or requirements.

2 I have been told that the method would involve a
3 new penetration into the pool. Now, I don't know if there is
4 a problem that does come about for restraining that piping
5 seismically.

6 To answer your question, I don't know the problem.

7 Q In your engineering experience, Mr. Spitalny, have
8 you seen the use of steam injectors to create enough of a
9 vacuum to lift the level of the liquid to a point where the
10 pump would be primed?

11 A I'm not familiar with that operation.

12 MR. RILEY: Thank you. That will be all.

13 CHAIRMAN MILLER: Thank you. Mr. McGarry, do you
14 care to interrogate?

15 MR. MC GARRY: Thank you, Mr. Chairman.

16 BY MR. MC GARRY:

17 Q Mr. Spitalny, you made reference to B&W fuel, and
18 I believe your reference stemmed from Allied General's comment
19 that you received. Is that correct?

20 A That's true.

21 Q Did any other company make reference to B&W fuel?
22 By any other company, I mean any other company that you had
23 conversations with in the past month?

24 A Yes. I believe Westinghouse. There was somebody
25 else. Yes, I believe it was Westinghouse.

wel 4

1 Q Did either one of these companies or individuals
2 say that definitely B&W fuel could not be used in pin
3 compaction?

4 A No, they did not.

5 MR. MC GARRY: No further questions, Mr. Chairman.

6 CHAIRMAN MILLER: Any further questions?
7 Dr. Luebke?

8 EXAMINATION BY THE BOARD

9 BY DR. LUEBKE:

10 Q I may have missed it in all the conversation, but
11 in your inquiry, Mr. Spitalny, did you come across any case
12 where someone had actually disassembled a spent fuel
13 assembly and then physically compacted the pins?

14 A The procedure has been done only with a mockup.
15 In other words --

16 Q It's never been done with radioactive fuel?

17 A That's correct.

18 Q Now, wouldn't you say that belongs on your list
19 of problems, perhaps?

20 A Yes, perhaps.

21 Q And maybe rather high on the list?

22 A Yes.

23 Q I'm suggesting here that this is a conversation
24 piece we're talking about, rather than a reality.

25 A That's true. The operation has been shown to work

1 in a mockup situation and on paper. It would have to be shown
2 in a hot demonstration to be a feasible operation.

3 DR. LUEBKE: Thank you.

4 BY CHAIRMAN MILLER:

5 Q Well, what problems exist in that field, so far as
6 you know or have been able to determine, as to whether or not
7 it is feasible to take the next step?

8 A I have found from almost all the inquiries that
9 pin compaction is a feasible alternative.

10 Q It's regarded in the trade or in the industry as
11 being a feasible alternative?

12 A It's a feasible operation to compact the fuel
13 assemblies. The details have to be ironed out to get it to
14 the point where it can be offered to any utility as a product
15 that they can sell.

16 The industry has not shown to anybody yet that they
17 have actually performed a demonstration, but they cannot find
18 anything that is stopping them from actually saying that it
19 could not be done.

20 Q There's nothing to bar it as a reasonable
21 possibility, then, as far as this type of development?

22 A No, not as far as I know.

23 Q Is it any different than stating that spent fuel
24 management has not been demonstrated on a substantial scale in
25 perpetuity, and yet the technology is deemed to be present and

1 available when needed? Is it in a different category than
2 that in your judgment?

3 A Yes, I believe a little bit.

4 Q Please explain.

5 A I don't think I would be willing to say that we
6 can clearly go to any specific alternative that has not been
7 shown to get through the process of, number one, a demonstra-
8 tion and, number two, the licensing aspects.

9 It is shown to be -- that it looks like it is
10 going to come about and it looks like the state of the art is
11 about there. But I would resort from putting it on my list
12 of things that I could do until it was shown to me that, yes,
13 it could be done.

14 Q Would that answer apply to spent fuel management,
15 waste management, or did that apply to the pin racking proposal,
16 the things you would look at to see whether or not it's
17 feasible?

18 A When you make the distinction between spent fuel
19 management and waste management meaning it is this alternativ ?

20 Q Waste disposal, waste management, the concepts
21 which have not yet been proven, in fact where the technology
22 at least according to some experts seems to be available in
23 their judgment.

24 Is that state of the art as you understand it?

25 (Pause.)

mf WEL
flws wel 5
mpbl

/mpb2

1 If not, give me your judgment.

2 A I guess I'm not sure. I guess if you're saying
3 -- if what you're referring to is the statement that we have
4 the available technology to store wastes indefinitely and how
5 does it compare to this, I guess my answer would be yes, the
6 technology is there, yes.

7 CHAIRMAN MILLER: Did you learn anything else in
8 your study and analysis besides what you've already told us?
9 I want to assure that we've given you the opportunity to give
10 your full dimensions of your study and analysis.

11 THE WITNESS: I think the record has been
12 completed.

13 CHAIRMAN MILLER: All right. Fine.

14 Any further questions?

15 MR. RILEY: Yes, Mr. Chairman.

16 FURTHER CROSS-EXAMINATION

17 BY MR. RILEY:

18 Q The Chairman asked you, as I understood, Mr.
19 Spitalny, something that involved the long term storage of
20 fuel. How can we evaluate the technology for long term
21 storage when the technology is going to be required to
22 perform greatly in excess of the human lifetime?

23 A Greatly in excess of?

24 Q The human lifetime.

25 A I hesitate to make a comparison here of this

WHL/mpb3

1 particular alternative as being technically available and
2 comparing that to how we consider the waste management
3 program coming about.

4 I guess where I have a problem is the goal that
5 we're looking for. In pin compaction you're trying to save
6 a little bit of space, and the monetary commitments are not
7 that excessive when you're comparing it to an overall waste
8 management plan, that you can't try something and determine
9 its feasibility and make a judgment based on what you've done.

10 In contrast to a waste management plan where
11 technology exists to store these things, but the ultimate goal
12 is something which is difficult to assess, and that is will
13 there ever be a release, can we store these things indefinitely
14 for thousands of years... I guess my only thing is I
15 would try to separate these things and not try to talk about
16 them in the same sentence other than saying the technology is
17 here to look at pin compaction.

18 Q Right.

19 And the technology is in the frame of reference,
20 then, of some finite number of years like, oh, less than 100
21 or less than 50? Is that approximately correct?

22 A You're talking to when it will be available or --

23 Q No. The context in which you expect pin compac-
24 tion to function is a limited number of years, perhaps for
25 the duration of the plant's life or something like that. Is

WFL/mpb4

1 that the proper frame of reference?

2 A That's true. This is still considered an interim
3 measure until there is a final repository or means of coping
4 with the spent fuel.

5 Q And your technology judgment is in that limited
6 judgment where we live a significant portion of the period
7 involved, where human lifespan is a significant part of the
8 period involved.

9 A Well, I think the technology for this particular
10 thing has just been done over a small period of time, and
11 it's only looking to be an interim measure to store fuel.

12 They are, however -- one of the -- I believe it
13 was NAC is evaluating it for use in a final either DOE or
14 AFR repository, they are evaluating techniques of storage.

15 Q Then when you say the technology has been
16 demonstrated, do you mean that based on limited experience
17 and extrapolating from it we feel it will perform over some
18 finite period like, say, 20 or 30 years?

19 A Yes, but I don't know that I would limit it to
20 20, 30 years. I don't know all the research that's gone on
21 in this area. They're saying Yes, it looks like it's avail-
22 able as an interim solution, but not only is available as an
23 interim solution, it may work for a repository. I don't know
24 how far out the actual research has gone.

25 Q But would you hesitate to say 2- to 3000 years?

1 A I can't go beyond 20 or 30. I don't know what the
2 research has been in that area.

3 Q How do you do research to show something will be
4 reliable for 2- or 3000 years?

5 MR. KETCHEN: Objection, Mr. Chairman. The
6 witness answered that he doesn't know where the research is
7 on this type of --

8 CHAIRMAN MILLER: That's right. I think he did.
9 Objection sustained.

10 MR. RILEY: Well, we might almost say that it was
11 a philosophical question, Mr. Chairman. It can't be
12 empirically answered. And I think that it's a fair question
13 in the context.

14 CHAIRMAN MILLER: I don't think this is the
15 philosopher who has that answer.

16 MR. RILEY: We'll have to get a subpoena for him.
17 Thank you, Mr. Spitalny.

18 CHAIRMAN MILLER: I think that's probably all,
19 then, unless there are any further questions.

20 We'll adjourn then. You're excused, on this
21 occasion, at least, Mr. Spitalny.

22 (The witness excused.)

23 CHAIRMAN MILLER: We'll recess--

24 MR. ROISMAN: Mr. Chairman, can we just approach
25 the bench?

./mpb5

L/mpb6

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

CHAIRMAN MILLER: Yes, or you needn't if you --

MR. ROISMAN: I didn't see any reason to hold the Reporter for it, but it had to do with scheduling.

CHAIRMAN MILLER: All right.

We'll recess for the day. The Reporter may go home.

(Discussion off the record.)

CHAIRMAN MILLER: All right. We're back on the record.

What is it you wish to have on the record, Mr. Ketchen?

MR. KETCHEN: Just what we're going to talk about if we're going to talk about scheduling.

CHAIRMAN MILLER: I don't know what we're going to talk about.

MR. ROISMAN: All I wanted to find out, Mr. Chairman, was who we had that didn't fall under the problem of being a witness who would inevitably run us into difficulties because they would touch on the safeguardings question to find out do we have anything else to do before Worth Bateman gets here.

CHAIRMAN MILLER: All right.

What's the schedule for tomorrow, then, excluding for the moment Mr. Bateman who is Wednesday or Thursday? What's next?

MR. MC GARRY: Why don't I take the lead, then?

L/mpb7

1 CHAIRMAN MILLER: Go ahead.

2 MR. MC GARRY: As I see it, we have our decision
3 state document, Mr. Roisman has his, Staff will have their
4 position. Well, let me present those to the Board and that
5 may entail some questioning. I don't think that's going to
6 take a great deal of time would be my guess.

7 CHAIRMAN MILLER: I would doubt it.

8 MR. ROISMAN: I think it depends on what it says.

9 CHAIRMAN MILLER: Or doesn't say.

10 MR. ROISMAN: I mean if it's literally merely a
11 reference to -- if it's like the earlier form of proposed
12 findings of fact and noncontroversial but just a reporting
13 of the parties that they think this is what the record shows
14 at this point as to this issue, that's fine. If it's a
15 witness who is testifying about their judgment as to when
16 these various things can happen, how we're either getting into
17 the nature of some redirect or some additional testimony, and
18 it seems to be different than what we had before, then that's
19 a different situation.

20 CHAIRMAN MILLER: That's true. And we haven't
21 been advised if there are any witnesses who were going to
22 testify as to these matters.

23 MR. ROISMAN: We provided ours over my signature,
24 although Dr. Tamplin did the work. And if somebody wanted to
25 know how did you get the number, I'm more than happy to bring

1 Dr. Tamplin up here on some reasonable amount of notice and
2 he'll be glad to explain it.

3 But we weren't offering it as testimony. We weren't
4 trying to present it as testimony.

5 CHAIRMAN MILLER: For the most part you have
6 transcript references and you were either going to facts in
7 the record or conclusions that flowed from there or inferences
8 based on the data of record, as I understood your presenta-
9 tion.

10 I was assuming, I suppose, for the moment that
11 that was likely to be true of the others, but not necessarily
12 so; in the event that there are interstitial areas where the
13 record is not complete and yet there is some triggering times,
14 we would then expect to have it built in some fashion.

15 MR. MC GARRY: Our "d'ruthers", Mr. Chairman, is
16 to simply go by the record, as NRDC did. It may be that
17 we'll have to present some additional evidence, but certainly
18 we're not trying to get another bite at the apple, but to
19 comport with the Board's request. It may shape down that way.
20 That's the first thing I've seen.

21 With respect to the Applicant's case, given the
22 present state of affairs, the witnesses that we have remaining,
23 that would be Mr. Lewis -- I failed to report to the Board
24 Mr. Riley has questions for Mr. Lewis, so we will make Mr.
25 Lewis available. But it seems to me that could get into the

W- /mpb8

L/mpb9

1 area of these routes.

2 And then we have --

3 CHAIRMAN MILLER: Well, what areas are covered
4 by Mr. Lewis?

5 MR. MC GARRY: Mr. Lewis is our dose man, the
6 doses that are associated with the transportation of the --

7 CHAIRMAN MILLER: What does the route have to do
8 with the dose?

9 MR. MC GARRY: Well, as far as our testimony goes,
10 we'd be prepared to put the testimony on because all we're
11 simply doing is saying with respect to the alternate routes
12 Mr. Lewis's testimony doesn't change. However, the premises
13 with respect to the alternate routes, Mr. Lewis's testimony
14 doesn't change.

15 We don't envision any questions for Mr. Lewis
16 concerning alternate routes, but conceivably it could lead
17 that way.

18 CHAIRMAN MILLER: Well, in what respect would
19 alternate routes have a material bearing upon his testimony?

20 MR. MC GARRY: The distance of the maximum
21 individual was an area of interrogation last time.

22 CHAIRMAN MILLER: You mean the individuals' houses,
23 buildings?

24 MR. MC GARRY: Population.

25 MR. ROISMAN: Other cars.

1 CHAIRMAN MILLER: And the testimony prior to the
2 descent of the curtain was going through Charlotte, wasn't it?

3 MR. MC GARRY: Yes.

4 CHAIRMAN MILLER: At least that was the revealed
5 testimony before we had the question, isn't that correct, so
6 wouldn't that be maximum?

7 MR. ROISMAN: No, as I understand it, no, because
8 in an interstate road the space between the edge of the driv-
9 ing surface and the nearest house or gas station, what have you,
10 is relatively far; when you're traveling on small two-lane
11 roads, houses and stuff would be quite close. So you might
12 actually end up -- or you could in theory end up with more
13 exposure because people tend to live along a strip next to
14 the road versus going through the center of a big blob where
15 you've marked off 100 feet before anybody can live at all
16 because it's an interstate road with its restrictions.

17 So I take it in theory you could end up with
18 different doses depending upon what the nature of the popula-
19 tion area that you've going through is.

20 CHAIRMAN MILLER: Haven't we already had substan-
21 tial testimony as to the side roads and the routes that some-
22 body took to go fishing and the fact that you had a strip of
23 stores, and didn't we by painful amount, going along the kind
24 of thing regardless of whether it's Highway A or Lane B or
25 whatever?

/mpb11

1 MR. ROISMAN: Well, I guess it really does depend
2 upon where you're going. I mean --

3 CHAIRMAN MILLER: Or where you'd been. We've
4 been through this quite extensively.

5 What I'm inquiring now: Is it really necessary to
6 do it regardless of the ongoing dispute?

7 MR. ROISMAN: I think the question is the
8 particular route, group of roads that the alternate is
9 presumably addressing are new roads whereas they haven't
10 been considered before. Until somebody looks at it you
11 don't know whether it might change the situation. There may
12 be a stretch of road that's very highly populated right along
13 the road. That was different than anything that we had seen
14 before, and it wouldn't be a simple matter of simply multiply-
15 ing 50 more miles of two-lane roads by what we had discovered
16 was --

17 CHAIRMAN MILLER: What if you took the worst case
18 of what we spent hours going over before? We covered this
19 very extensively.

20 Supposing you took your worst case, multiplied it
21 by whatever miles there are involved. Are you going to
22 significantly vary the result, whatever the result may be?

23 MR. ROISMAN: I can't answer that.
24
25

wd 8/wel 1

1 MR. RILEY: Mr. Chairman, the Applicant, over Mr.
2 W. O. Parker, Jr.'s signature, has filed a statement with the
3 NRC indicating its preference for the initial route, arguing
4 in part that the chances of a sabotage incident are higher on
5 the alternative routes.

6 Now, if a sabotage incident would involve the major
7 sort of release I guess that we're all concerned about, I
8 certainly think that bears on the matter.

9 CHAIRMAN MILLER: Do you concur with the Applicant's
10 request for administrative change of position, restoring the
11 initial publicized route through Charlotte?

12 MR. RILEY: That's an excellent question, Mr.
13 Chairman.

14 CHAIRMAN MILLER: How about the answer?

15 MR. RILEY: My answer, which is quite appropriately
16 requested, is if I knew what the routes were, I could say. I
17 have worked out what I thought would be a route with minimum
18 exposures, which would not involve too high an exposure, along
19 secondary, lightly traveled roads, with high population
20 densities, which would avoid Charlotte. In other words, sort
21 of a compromise thing. And I think that it wouldn't be too
22 bad from either standpoint, but I can't say whether or not
23 the Applicant is constrained to use one of those routes.

24 MR. ROISMAN: Mr. Chairman, I think it is inevitable,
25 the natural tendency of a party asking to look into a dark box

wel 2

1 and predict what the consequences would be of taking something
2 out of the dark box, is to dream up the worst possible
3 consequences, until somebody turns the light on. And I think
4 that's sort of what we're trying to say.

5 We're not trying to say we know we're going to have
6 cross-examination for Mr. Lewis, but we really don't know
7 exactly what the route changes are. And today, in front of
8 the Commission, the Staff made the representation that the
9 whole route may, in fact, be different. And the fact that
10 they have disapproved the original route means that there may
11 be three alternates that don't have any substantial, if any,
12 parallel to the original.

13 I happen to think that's a bunch of bunkum, but I
14 can't prove that at this point, except by this letter that
15 they sent to the Applicant talking about merely disapproving
16 a portion of the route through Charlotte, which makes it
17 sound like that old 10 percent-90 percent thing.

18 But we're shooting in the dark, and I assume that
19 if we held Mr. Lewis, and we find out where the routes are,
20 and we think there's a lot of cross-examination there, you're
21 still free to tell us that's just a bunch of bunkum, and that
22 we can't have it for any of that cross.

23 CHAIRMAN MILLER: Well, we're curious about Mr.
24 McGarry's urging reconsideration of the question. At least
25 on the document filed with us, and we presume it's a public

1 document -- it is a public document, isn't it?

2 MR. MC GARRY: It certainly is. We filed it with
3 the parties.

4 CHAIRMAN MILLER: It seems to be rather finite with
5 reference to whether it was seeking a change. It didn't seem
6 to be going to any 50-60 and 80 percent, as we read it.

7 MR. MC GARRY: I would raise one possible alterna-
8 tive here with respect at least to Mr. Lewis, that -- and I
9 tread lightly here -- is there any way that we can take Mr.
10 Lewis under a protective order?

11 MR. ROISMAN: Not for me.

12 CHAIRMAN MILLER: I don't know that it makes any
13 difference, but I'll inquire.

14 Mr. Roisman?

15 MR. ROISMAN: No.

16 MR. RILEY: I don't understand, Mr. Chairman.

17 MR. ROISMAN: They want to take Lewis and let him
18 disclose the routes for purposes of his cross-examination only,
19 but we do it in an in-camera, non-public session.

20 MR. RILEY: I'm reluctant to participate in an
21 in-camera session.

22 CHAIRMAN MILLER: Pardon me?

23 MR. RILEY: I'm reluctant to participate in an
24 in-camera session.

25 CHAIRMAN MILLER: We got one no and a reluctant

wel 4

1 non-position. I think that constitutes a veto.

2 (Laughter.)

3 MR. MC GARRY: I won't press it. Anyway, we have
4 Mr. Lewis. And I think you can see the problems that are
5 developing.

6 CHAIRMAN MILLER: What do we have besides Mr.
7 Lewis and these verboten areas? Anything else? Or are you
8 telling us we're coming to a screeching halt, and go home?

9 MR. MC GARRY: I'm just speaking for the Applicant.
10 We have Mr. Bostian, and perhaps Mr. Elliott. Mr. Elliott
11 will speak to sabotage, if called. And that well could get
12 into the routes. And Mr. Bostian's sole purpose is to say
13 here are the routes.

14 CHAIRMAN MILLER: Well, then, you don't have any
15 evidence, or any witnesses or any testimony that is not
16 related to the verboten areas, correct?

17 MR. MC GARRY: I think that's true.

18 CHAIRMAN MILLER: Anybody else have any testimony
19 which stands apart from or is unrelated to the routes
20 question and the in-camera problem?

21 MR. RILEY: I'm not sure that the Applicant has
22 testimony here, but the cask drop question is coming up.
23 Staff certainly has some testimony there, and I thought
24 Applicant might.

25 MR. MC GARRY: We might. We're going to argue

1 whether or not that's relevant, but that's for another day.

2 CHAIRMAN MILLER: What about tomorrow? It looks
3 like we're fast running out of productive --

4 MR. MC GARRY: We had planned to take this up
5 tomorrow afternoon, the cask drop.

6 May I just say one thing? I just spoke for the
7 Applicant. I think there are some other matters that we can
8 take care of tomorrow.

9 MR. KETCHEN: I'm just waiting for my turn.

10 CHAIRMAN MILLER: All right, we'd better hear
11 from Staff. We've heard from everybody else.

12 Mr. Ketchen? What would you like to do tomorrow,
13 if you had your druthers -- besides that?

14 (Laughter.)

15 MR. KETCHEN: A rhetorical question; a rhetorical
16 response.

17 Mr. Chairman, in all seriousness, we filed a
18 supplemental report in three areas, and one of them was cask
19 drop analysis, and the other one was in the physical security
20 at the McGuire site. And the third item was physical security
21 of spent fuel in transit, and I just won't talk about that
22 one.

23 In the other two areas, I had asked at the last
24 hearing -- and this was an open item, and we said we would file
25 the supplemental report, completing all our analyses -- I had

wel 6

1 asked counsel to contact me if they wanted witnesses available
2 in those two areas. In neither area was I contacted. And I
3 don't mean anything by this. It's just a statement of fact,
4 as I see it.

5 But with respect to the physical security at
6 the McGuire site, it's my understanding that's just not a
7 question here. So I need guidance, because we don't think
8 there's an issue in being on that, and if nobody wants to
9 talk about it, we don't want to talk about it.

10 On the other hand, if for some reason -- that's
11 why I asked if somebody wants to talk about that -- we do
12 have the witness that prepared that analysis.

13 With respect to the cask drop analysis, sort of
14 the same situation arises. In response to the Board's
15 directive we did complete the analysis and filed a supplemental
16 report. -On the other hand, in our view there is no issue or
17 contention in this case involving the cask drop analysis.
18 Obviously we have the people available, though, that did the
19 analysis, once again.

20 So we need guidance. If we're going to talk about
21 for example physical security at McGuire, and we don't think
22 we should, but that would be a witness.

23 And there are a lot of other -- not a lot, but
24 other open items that we sought to address at this hearing that
25 were held over from the last hearing, and it was our

1 understanding -- originally, in the stipulation we started out
2 with a couple of days, and the way this hearing got set in the
3 beginning was that Mr. Bateman was somebody to report from
4 DOE on what DOE's policy was with respect to AFR's, and that's
5 where it all started. And then other things got held into
6 this hearing week.

7 So we do have things that have to be done, or at
8 least we were asked to do them, and we would propose to do
9 that. And one of them is, according to an agreement with Mr.
10 Roisman to have available Mr. Spitalny to talk about the
11 drafts of the EIA, the preliminary drafts, that were -- that
12 came before the final EIA. So that's one thing Mr. Spitalny
13 would be back here for.

14 MR. ROISMAN: Is that Mr. Spitalny and Mr. Glenn?

15 MR. KETCHEN: And Mr. Glenn, too. I'm sorry. We
16 were asked to do some research to re-create the reracking
17 information. Mr. Spitalny has done that. So Mr. Spitalny
18 would talk about that.

19 Then there's left Mr. Bateman, and we contacted
20 him around 4:00 o'clock -- or his attorney, Ms. McGovern, down
21 at the Department of Energy. I had reported to him earlier,
22 after this morning, that the agreement was 9:00 o'clock
23 Thursday, and I reported that during the noon break. But
24 based on our discussion, we called again at about -- or
25 Mr. Hoefling did, and found out that although Mr. Bateman has

wel 8

1 two hours in the morning on Wednesday at 10:00 o'clock, his
2 counsel does not have -- just has an unbreakable, as I
3 understand it, unbreakable commitment in the afternoon of
4 Wednesday.

5 But besides that, Mr. Bateman had offered to the
6 Board, in response to the motion of Mr. Roisman for the
7 subpoena, to respond in writing to the questions, and Ms.
8 McGovern informed us that she was being very -- wanted to go
9 through the transcript, and that anyway that written material
10 would not be available until Wednesday afternoon, and I
11 don't know when, but . . . so they're shooting for Thursday
12 morning, as we tentatively scheduled.

13 So I guess, depending on what we want to do, we'd
14 probably fill up tomorrow with the loose-end items by Mr.
15 Spitalny, and I assume we're going to argue about whether the
16 cash drop analysis is in issue, and then, because of the
17 current situation with the Commission, we were planning to do
18 Hodge and Glenn on Wednesday on their report, and we can't
19 do that. So I guess it's depending on our guidance, it's
20 Mr. Spitalny and Mr. Glenn, and then Mr. Batemen.

21 One other thing, I guess . . . let's see, we also
22 had at some point in time --we never did do this, and it just
23 keeps getting put aside, but we wanted to go through the SER
24 and the EIA, at least to offer those documents by Mr. Spitalny,
25 and offer Staff Exhibit Number 24 for identification, which

wel 9

1 was the errata sheet to that, and we've never done that. I
2 don't know whether that's going to take a long time or not.
3 It depends on whether anybody has questions.

4 So I guess the problem in the scheduling comes that
5 there's not a lot left to be done on any major issues. It's
6 a lot of incidental questions that have to be addressed.

7 That's the best I can report to you.

8 DR. LUEBKE: How about this motion to strike by
9 NRDC? Does that get into more --

10 MR. KETCHEN: I don't think so. We answered that.
11 We've done that. Mr. Roisman moved, and we answered it, so
12 I guess that's . . .

13 MR. ROISMAN: We didn't contemplate any oral
14 argument, unless the Board specifically asked for it.

15 CHAIRMAN MILLER: Well, we think it's covered by
16 the motion and the response.

17 DR. LUEBKE: Who is going to tell the Commission
18 we're waiting on them?

19 (Laughter).

20 MR. ROISMAN: I thought I did this morning. It
21 didn't have a lot of impact.

22 CHAIRMAN MILLER: Did you serve the subpoena, Mr.
23 Roisman, on Mr. Bateman, or was this an agreement?

24 MR. ROISMAN: No, we had the subpoena to serve, and
25 Dr. Cochran spoke to Mr. Bateman directly while I was out of

1 town and worked out an understanding that he would come
2 voluntarily, and we saw no need to formally serve the
3 subpoena. It was authorized to be served, but we did not
4 serve it.

5 CHAIRMAN MILLER: Well, since the Board issued
6 the subpoena duces tecum, we don't like to have these things
7 treated as being just an empty piece of paper. We'd like to
8 have it returned, then, with a notation of counsel that it
9 was not necessary to serve it.

10 MR. ROISMAN: Okay, I'll be glad to do that.

11 CHAIRMAN MILLER: All right. I guess you've
12 outlined the matters that we will cover tomorrow, and towards
13 the end of the afternoon if we run out of information or
14 witnesses, I suppose we are postponing to the future.

15 MR. ROISMAN: Can we start at 9:00 instead of
16 8:30?

17 CHAIRMAN MILLER: Yes, we can start at 9:00.

18 MR. MC GARRY: Would we go on Thursday, to
19 accommodate Mr. Bateman, or not -- Dr. Bateman?

20 CHAIRMAN MILLER: If we run out of evidence
21 tomorrow?

22 MR. MC GARRY: Yes.

23 CHAIRMAN MILLER: Well, I suppose we look to you
24 ladies and gentlemen. We'll be here. So the Board can be
25 available, if you wish.

1 11

1 MR. ROISMAN: I would favor doing that, even if we
2 have a lost day on Wednesday.

3 CHAIRMAN MILLER: The Board has no objections.

4 MR. ROISMAN: We can have a picnic on Wednesday,
5 if the weather holds, a near-the-end-of-the-hearing picnic,
6 sponsored by the Staff.

7 CHAIRMAN MILLER: We might entertain motions for
8 summary disposition, and that kind of thing. That always
9 livens it up.

10 (Laughter.)

11 All right, we'll recess.

12 (Whereupon, at 5:10 p.m., the hearing was adjourned,
13 to reconvene at 9:00 a.m., Tuesday, 11 September 1979.)