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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BRIEFING ON CATAWBA

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

BRIEFING ON CATAWBA

CLOSED MEETING

Nuclear Regulatory Commission
1717 H Street, N.W.
Washington, D. C.

Monday, July 16, 1984

PRESENT:

- J. ASSELSTINE
- W. DIRKS
- J. O'REILLY
- V. STELLO
- G. CUMMINGHAM
- E. CASE
- D. EISENHUT
- T. NOVAK
- T. ROBERTS
- H. PLAINE
- M. CUTCHIN
- S. CHESTNUT
- J. MEYERS
- M. MALSCH

- B. REAMER
- D. GARNER
- D. BECKHAM
- N. HALLER

P R O C E E D I N G S

1:10 P.M.

1
2 COMMISSIONER ASSELSTINE: Let me start just
3 by saying I did send you a memo on the low power
4 license for Catawba and I had a brief discussion a
5 couple of weeks ago with Tom and with Harold about
6 Grand Gulf and, quite frankly, I have some real reser-
7 vations about a phased licensing approach to the extent
8 that it resembles something like what happened at
9 Grand Gulf.

10 It doesn't seem to me, as a general
11 proposition, to be real prudent to be issuing a
12 license for a plant where a good deal of work still
13 needs to be done.

14 I've talked to both Harold about it, as well
15 as some other regional administrators and I have to say
16 that those discussions tended to reinforce that view.

17 And it just seems to me that it's, it
18 presents the problem of added complications if you
19 have a utility that's trying to complete construction
20 work, particularly where there are a large number of
21 open items, on a plant at the same time that they're
22 trying to load fuel and then do the testing program.

23 I gathered that in other regions when you
24 look at other plants that have been licensed since
25 TMI either the utilities or the regions themselves have

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1 been fairly strong in, in insisting that as many open
2 items be closed out as possible because of that very
3 fact, that it tends to minimize any additional problems
4 that the utility has to, to face.

5 As I say, the first, the concern first came
6 to my attention when I really began to dig into the
7 Grand Gulf situation. I haven't reached any final jud-
8 gements on that because John and I are going down
9 there, I guess, Landa is going with me now, to see the
10 plant and to talk to that utility.

11 But when I began to understand that the
12 Staff might be considering the same thing or that
13 the utility had requested the same kind of approach
14 for Catawba, I did want to hear about it, how much of
15 the plant is complete, how many open items there are,
16 how that compares to the other plants that have
17 been licensed since TMI... I really wanted to hear about
18 it before you all went ahead with, with the low power
19 license for that plant because I really am concerned that,
20 about the approach.

21 As I said, it seems to me that that kind of an
22 approach ought to be approached very carefully and really
23 make sure that the circumstances warrant, warrant that
24 kind of an approach.

25 I'm particularly concerned, I have to add,

1 as a result of what the Commission did on Grand Gulf
2 because now the Commission is drawing a real distinction
3 between when you've got a license and before you have a
4 license, and now the Commission seems to be saying once
5 you've got that license nobody can step in and do anything
6 unless you've really got a compelling, immediate public
7 health and safety problem, whereas before you have a
8 license the burden really is on the applicant to justify
9 that, that it's ready to go ahead.

10 So given the stronger distinction or sharper
11 distinction that's been drawn both before and after a
12 license has issued, that's another concern I have.
13 It seems to me to wigh against the phased licensing
14 approach.

15 But with that introduction, that was the
16 kind of concern I had and that's why I wanted to have
17 this meeting.

18 MR. DIRCKS: I think before we start off we
19 want to mention just a few points which got us here
20 today. One, we did, in reviewing the Catawba
21 licensing, it's not the only one that you'll be
22 facing and giving some consideration, be talking about
23 today.

24 We've had Catawba. We've had the, the
25 Shoreham decision. We've had the discussion with

1 Grand Gulf. We have your memorandum of July 10th, Jim,
2 with some of your concerns about that.

3 And as the licensing process proceeded on
4 Catawba, I think it dawned on all of us very, very
5 quickly that we were in a gray area that we wanted
6 to get some more guidance on.

7 I think that's the purpose that we're
8 down here today. When we talk about significant
9 amount of work to be done in the plant, I think
10 that's the area that we're looking for, what is
11 significant, where, we (INAUDIBLE).

12 We thought it would be prudent to get down
13 here and get this guidance before we move one way or
14 the other. I think we're down here not at the last
15 minute, but I think it became very clear as the issues
16 developed and as the review developed.

17 We came down here to get that guidance.
18 We're not down here crying wolf, creating an incident.
19 We're down here because I think there's real doubt
20 and concern that we didn't want to step over a
21 boundaryline here and proceed to get into the position
22 where we might be acting contrary to, to the Commission
23 as it develops its thinking on this subject.

24 I think today we might go over the number
25 of and specific terms, the number of items remaining

1 to be done, keeping in mind, I think, whereas,
2 however you come out on this one, we've got two
3 or three other in the pipeline that...

4 COMMISSIONER ROBERTS: Such as?

5 MR. DIRCKS: We'd be talking about Waterford.

6 MR. EISENHUT: Calloway comes up next...

7 MR. DIRCKS: Calloway.

8 MR. EISENHUT: ...two or three weeks.

9 MR. DIRCKS: Diablo.

10 MR. EISENHUT: Diablo, Grand Gulf yet this
11 month.

12 MR. DIRCKS: So it's in a class. I think
13 Friday we'll be getting more generic in a policy
14 approach. This one, I think we've got a plant that's
15 ready for fuel loading. We've got a board decision
16 outstanding and we want to know what we can do today,
17 picking up the generic clarification of policy on
18 Friday.

19 MR. CASE: And in that connection, Jim, it
20 would be helpful to know whether your concerns relate
21 specifically to low power, as your memo indicated, or
22 do they extend to just a fuel load license which is
23 the situation here, and we do need a little guidance
24 on that. You may have written low power as a generic
25 term rather than a specific term.

COMMISSIONER ASSELSTINE: I did to the extent
that I have this concern that once you have a license
issued, then the burden shifts to us. If we're going

1 to take any action, then that would apply, I assume, to,
2 to a zero power license as well because that is, as I
3 understand it, that's a full power license with a
4 restriction that says but you can't exceed a certain
5 power level.

6 MR. EISENHUT: In principle that's the way
7 all of them have been written. This one, I think
8 we're going to be proposed to write a little different
9 because the Board really didn't give us the authority
10 to issue a full power license conditioned at fuel load.
11 So I think in this case it's taking a little different
12 form.

13 MR. DIRCKS: The basic difference between
14 getting specific and getting some movement today and
15 the generic approach, which I think we're going to have
16 to outline what the generic term is on Friday.

17 We've got a policy drift here that we want to
18 narrow down and fix it if we can.

19 MR. PLAINE: May I just interject one little
20 caution, and that is that rather than get off into the
21 specifics, if you can avoid it, you could avoid any
22 problem with an ex parte problem, it would seem to me
23 that your memo kind of suggested that you could deal
24 with this generically and, as Mr. Dircks indicated,
25 there are a number of reactors that will be involved
in (inaudible).

To the extent that you certainly want to
avoid talking about contested issues in any one case,

1 it would be preferable to avoid that and try as best you
2 can to keep the discussion in this, in the generic mode.

3 MR. CASE: I think that's almost impossible
4 to do, that is talk generically, because
5 Mr. Asselstine's memo is a plant specific memo. And
6 in order to understand the significance of his concern
7 for this plant, I believe he has to understand exactly
8 what has to be, yet to be done on this plant and
9 how much that might divert from the attention of the
management or the attention of the operators.

10 MR. CUNNINGHAM: I think what we called the
11 Shoreham Issue, the implication of the Shoreham decision
12 we can do wholly generically, but the phased licensing
13 issue has to be dealt with in terms of specifics
applicable to Catawba.

14 COMMISSIONER ASSELSTINE: I think that's right.

15 MR. PLAINE: I've just issued a word of
16 warning.

17 COMMISSIONER ASSELSTINE: I think to the extent
18 that we can avoid those issues that are still contested
19 issues in the full power proceeding, we ought to try
and do that, but I agree with you.

20 MR. O'REILLY: I'd like to say a few words
21 generically then, oriented around Catawba, our program,
22 as time has gone on, you know, with the, with the con-
23 cerns of the Commission, the field has been putting
24 more and more effort into ensuring that the items
25 identified as not being totally complete are, is a

1 very high standard that's directed to ensure that
2 list is complete.

3 To my knowledge, there's never been a case
4 that's complete as we have at Catawba, and it's
5 pretty close to the same situation at Grand Gulf. The
6 types of concerns you indicate in your memo about
7 it being concerned of what items would be left open
8 before making a recommendation or what items would
9 interfere with the possibilities of fuel loading or
10 other safety related activities is the primary con-
cern making up that recommendation.

11 It has always been that way and it's reviewed
12 at various levels, you know, within the region and
13 at NRR. In the Catawba case just the number of letters
14 that have been coming in from the Duke Power company,
15 for example, indicates the amount of effort and con-
16 trol that the Staff has directed to Catawba to ensure
17 that there was no issue that was not identified and
that the safety implications were, were addressed.

18 And that's what we have up to the, I think
19 the most specific letter we've ever received from the
20 company relative to their commitment relative to
finishing the requirements of the FSAR.

21 MR. CASE: Well, what we thought we'd do in
22 the presentation is first go over their program and
23 schedule from getting to where they are today up to
24 full power; talk about the issues that we've identified
25 where remaining work has to be done, both from a con-

1 instruction standpoint and from other license conditions,
2 and using the Shoreham approach most of these have
3 resulted in the need for exemptions.

4 And then talk about the situation generally.
5 And Tom's got a, some slides generally along those
6 lines. They're meant to be thought-provoking and talk-
7 provoking rather than exhaustive of the kind of things
8 that we would dig up.

9 COMMISSIONER ASSELSTINE: If you can also, as
10 part of that process, give me some sense of comparison,
11 say, for the extent of completeness of this plant, the
12 amount of work that still needs to be done for this one,
13 compare that to...

14 MR. CASE: We'll do it in two phases. We'll
15 give you numbers and then Jim can fill in what do these
16 individual items mean.

17 COMMISSIONER ASSELSTINE: ...compared to other
18 BWR's that have been licensed since TMI, say like
19 sequoyah, McGuire.

20 MR. NOVAK: Shall we get started?

21 COMMISSIONER ASSELSTINE: Right.

22 MR. NOVAK: My name is Tom Novak. I'm the
23 Assistant Director for Licensing and I do have a
24 handout that can be part of the record if it's chosen
25 to be so.

26 Commissioner Asselstine, in your memo of
27 July 10th you asked for a discussion as to how the
28 Staff views the phased licensing approach for Catawba

1 and, in a sense, recognizing that a certain amount of
2 construction would continue after the license has been
3 issued.

4 And as noted earlier in this discussion,
5 the proposed license that would be issued would be a
6 fuel load subcritical license. It would not permit
7 criticality.

8 As far as the status of the plant is con-
9 cerned, it would have been ready for licensing under
10 other circumstances about a week ago. So I think from
11 about a week to today the process has evolved where
12 fewer and fewer items still remain to be done, but
13 there will be a certain number of them that are still
14 to be completed, and I can mention them in my presenta-
15 tion.

16 If, in fact, a license were to be issued for
17 a fuel load license today, on the slide that I've
18 given you, and if you want to look toward the, the
19 licensee is prepared to begin fuel load today.

20 And as we go through this very quickly, he
21 would take through the 23rd of July to load fuel.
22 From that point on, for the next week he would then
23 install the upper internal, install the reactor
24 vessel head, complete torquing head studs and so forth.

25 This is typical of a pressurized water
reactor. I might note just for the record that Catawba
is a Westinghouse four-loop design having an ice
condensator containment design.

1 On or about July 30th he would enter Mode-5
2 which is a cold shutdown. He would then basically
3 fill and vent the system, do a number of testing on
4 in-core thermo-couples and do what's referred to as
5 a cold rod drop test.

6 These are just tenting the time for indivi-
7 dual rods to bottom. On or about the 24th of August
8 he would then propose to go into his heat-up program,
9 which would be energizing the reactor coolant pumps
10 and to proceed above 200 degrees Fahrenheit.

11 At that time he would do typical thermal
12 expansion tests and do additional testing related to
13 containment. On or around August the 28th he would
14 enter Mode-3 which is just simply being above 350
15 degrees Fahrenheit.

16 This would be the highest mode he would be
17 permitted to operate within the license. He would be
18 permitted to heat up above 350 but not go critical.
19 At that point in time he can do a number of in-core
20 thermo-couple testing again.

21 He will do reactor coolant system leak
22 testing. He will do a number of things. For example,
23 he will test the pressurizer. The system would be hot;
24 he could see how pressure and temperature behaves.

25 He will then go back and do some more control
rod type drop testing to see what the difference is.
And probably one of the most important tests he does
there is the reactor coolant system flow coastdown

1 testing.

2 He would be operating all four reactor coolant
3 pumps, trip them and monitor the flow decay. Under
4 the current license, then, he would be permitted to
5 do that testing from about the middle of July through
6 the end of August.

7 If, in fact, we were to issue a license
8 then for what we would call a low power license, that
9 would permit him to operate up until 5%. About the
10 end of September, then, he would propose to do his
11 initial criticality tests which generally run about 10
12 days in duration.

13 They are low power physics. He has his
14 health physics people do biological shield surveys.
15 A number of physics tests involving temperature co-
16 efficients of reactivity, boron testing, and then he
17 does specific control rod work testing.

18 And that would basically carry him through
19 what we have traditionally referred to as low power
20 physics, low power testing. And in looking at these,
21 I would, I do not recognize any test that is something
22 that would have been done prior to fuel load.

23 MR. CASE: Or could have been done. Isn't
24 that fair, that these are...

25 MR. NOVAK: Yes. Jim O'Reilly, excuse me.

1 I would recognize these as standard...

2 MR. CASE: It's a standard start-up testing,
3 Jim.

4 MR. NOVAK: ...standard start-up testing.

5 MR. CASE: So none of these represent things
6 that might be attached to what you call phased licensing,
7 I believe?

8 UNIDENTIFIED SPEAKER: Well, see, it's...

9 MR. CASE: But there are more to come, but
10 none of these.

11 MR. EISENHUT: But this is basically the
12 total major set of work to be accomplished during this
13 period of time, except for a couple of items...

14 MR. NOVAK: And we'll get into
15 those.

16 MR. NOVAK: Given we set those aside, the
17 list I just gave you would be the... Now, I should
18 point out that we have said that typically a pressurized
19 water reactor from the time that you issue a low power
20 license is about ready to go above 5% power in about
21 two months, and we've seen people do better than that;
22 we've seen people who haven't come near that timetable.

23 This schedule gives you about three months.
24 So he has, in effect, conservatively provided for
25 some testing. If he were to move ahead, he could in

1 fact get ahead of this schedule.

2 But he would argue that, the licensee would
3 argue that there are, there is some room in here for
4 the unknowns at this time. And by comparison, the
5 McGuire Unit 1 Station had a much longer period of
6 time before they were capable of going above 5%.

7 McGuire Unit 2 came in under that thing. So
8 even the Duke's experience...

9 MR. CASE: Are you talking about the 66 days,
10 Tom?

11 MR. NOVAK: Yes. I'm talking about basically
12 the time to go above 5% power.

13 MR. O'REILLY: That's not untypical for two
14 unit sites...

15 MR. NOVAK: Right.

16 MR. CASE: Well, one of the questions of
17 interest, I think, is should we delay the fuel load
18 license. Is there a day-by-day slip in achieving low
19 power?

20 You can't answer that question because it
21 depends on how much difficulty they have. These are
22 conservative estimates of time to get from one place
23 to another.

24 Therefore, it's hard to say day-for-day,
25 but if you want to look at it conservatively, I think

1 that you would say day-by-day.

2 MR. O'REILLY: You have to expect some
3 problems that require repair or, you know, something
4 of that nature. It could be, you know, it could be
5 weeks or months.

6 MR. EISENHUT: We would argue that the problems
7 are going to be the problems regardless of what day
8 they start up, though. If they started up a week later,
9 they would have, you could argue they're going to
10 have the same mechanical problems they have today.

11 So it would equate generally to a day-to-day
12 on whatever the schedule really after the fact turns
13 out to be.

14 MR. NOVAK: The next slide I have takes
15 a, makes a comparison between the Catawba license,
16 as we would envision it, and the Grand Gulf license.
17 Now, the, the comparisons I made are there for
18 example.

19 The Grand Gulf applicant did not begin his
20 fuel load until about two weeks after he was issued
21 a license. The Duke people today are prepared to
22 begin fuel load immediately.

23 Again, the time for load fuel, you can see
24 was much more extended on the Grand Gulf application
25 that it would be for Catawba, again recognizing that

1 the Catawba column is a program schedule, where Grand
2 Gulf now is reality.

3 So I'm comparing a little bit of apples
4 and oranges when I compare them.

5 UNIDENTIFIED SPEAKER: Before you leave
6 that...

7 MR. CASE: And recognize these are just
8 numbers and the significance of the numbers you have
9 to look into.

10 MR. EISENHUT: There's another distinction
11 there. The ones at BWR, takes considerably longer
12 to load fuel in a PWR...

13 MR. NOVAK: And the physics test scratch out.

14 MR. EISENHUT: In the typical stop mission,
15 the PWR typically the schedule runs about two months
16 from fuel load to going above 5%. At BWR we estimate
17 it's about three months on the average. There's a
18 little difference there.

19 MR. NOVAK: Again, just going down through
20 the rest of the information I've provided, you can see
21 that the fuel load dates to initial criticality were
22 much shorter for Grand Gulf..

23 But then again, their low power testing
24 program was more exhaustive. And as I recall, I say
25 her within 15 months, but within the critical.

1 period of operation they were able to do it something
2 between 40 and 45 days, where a PWR is scheduled to
3 do it in about 10 to 15 days.

4 Now, if I look at the two licenses,
5 and again, we, unless we went down and compared each
6 condition, what I've done is looked at the license as
7 it's made up.

8 The low power license is generally made up
9 of those license conditions that the Office of Nuclear
10 Reactor Regulation requires, and then those conditions
11 are licensing prerequisites that come from the region
12 dealing mostly with construction and other...

13 MR. CASE: And also if any from the Board,
14 too.

15 MR. NOVAK: And from the Board. In this
16 case we, we have not, we have not included any Board-
17 required conditions to this comparison. I would not...

18 MR. CASE: Because they're not really
19 germane. If you look, maybe I shouldn't say this
20 on the Board conditions. I was going to describe them
21 in some detail, but perhaps not.

22 MR. NOVAK: There were more total license
23 conditions identified for Grand Gulf than Catawba.
24 As you see here, more of them, then, though, would be
25 satisfied prior to initial criticality in terms of

1 Catawba, and by the time you got to, ready to exceed
2 5%, you would have less than a half a dozen yet to
3 be accomplished on Catawba where you would have 22 at
4 least identified for Grand Gulf.

5 Now, in my view, I think the numbers have to
6 be viewed independently. I think unless you looked at
7 both licenses and went down the items and draw your
8 own conclusion as to what could be done, needs to be
9 done in terms of construction, these numbers could be
10 misleading.

11 I do think there were more long-term matters
12 set aside for Grand Gulf than Catawba. I think there
13 were a number of things. Again, it depends on the
14 threshold identified.

15 I would think Mr. O'Reilly would identify
16 a lower threshold on the Catawba license things to be
17 done. But now let me just take a minute and give you
18 two examples, I think, of what would, which I think
19 is not untypical of most reactors in terms of ongoing
20 construction.

21 As I said, this is an ice condensor
22 containment. Currently, what is happening at the site
23 is they are loading the fuel, the ice baskets, and
24 then they weigh them.

25 So in the annulus you bring in your ice, put

1 it in the baskets and then you weigh the baskets to
2 be sure that you have the required amount of ice in
3 each column of baskets From a installation point of
4 view, it is easier, I would imagine, to keep the
5 access into the annulus open so that you have easy
6 movement of people and complements.

7 Therefore, there are parts of the containment
8 annulus structure that is not yet complete, and in
9 Mr. O'Reilly's letter to us he identifies the fact
10 that there are some structural members of the ice
11 condensor containment still to be installed.

12 Now, they would be installed following the
13 loading of the ice and all of its weighing. So there-
14 fore, you back out your equipment and then you go back
15 and put in the structural members.

16 They've been fabricated, they've been
17 assembled to the point that they know they would fit
18 and then they're just set off on the side until the
19 final installation can be made.

20 MR. CASE: Tom, we are going to get an
21 estimate of how much manpower...

22 MR. NOVAK: Yes. What that requires right
23 now in terms of the activities going on in ice con-
24 densor, you have about 10 to 15 people working on each
25 shift and they're doing that around the clock and they

1 would expect that effort to be complete by about the
2 21st of July. Now, under...

3 MR. CASE: Can we add a little character-
4 ization to that? We think that's a relatively minor
5 construction activity.

6 UNIDENTIFIED SPEAKER: Yes.

7 MR. CASE: It would have no effect on safety
8 except from a diversion of the at tension standpoint,
9 and we don't think there is any significant diversion
10 of attention to get that done.

11 MR. NOVAK: And one other point. In terms
12 of the license, technical specifications, for example,
13 would not require that ice condensor annulus to be
14 operable until you reached a mode...

15 MR. CASE: Over 200 degrees, isn't it?

16 MR. NOVAK: Yeah, above 200 degrees, so we
17 would have to go into Mode-4, which, according to their
18 schedule then, they would have completed by that time.

19 So it's just another point I would mention.
20 Let me take another example. The applicant...

21 MR. CASE: Let me just add a, in using the,
22 our strict interpretation of your Shoreham decision,
23 we would take the position for this particular license
24 that that item was needed for full power operation of
25 your general design criteria, what number? It is 54 or

1 something like that, it is not done.

2 Therefore, an exemption would be required,
3 but the exemption would just have to cover the
4 operational mode intended, which would be sub-critical
5 and the loading of fuel.

6 MR. NOVAK: Well, the exemption is for the
7 license being asked for.

8 MR. EISENHUT: And that it would be at the
9 fuel loading zero power license, but you'd go through
10 that exemption. I think that's typical of a lot of
11 these independent...

12 MR. DIRCKS: It's fuel loading zero power.
13 This is not a license condition to, this is different.
14 You mentioned, again (inaudible)...

15 MR. CASE: Ordinarily we just do this by
16 license condition, but following the Shoreham, the
17 Shoreham example or order, we would call this an
18 exemption and go through the findings, all of the
19 findings required by the Shoreham decision, including
20 exigency and as-safe-as, as well as the normal 50.12
21 findings.

22 MR. EISENHUT: Right. And I think these
23 example given here are the kind where you'd normally
24 see prior to achieving initial criticality, you shall
25 do the following, whereas before we would just write

1 that in as a license condition, and that'll be treating
2 it under a different method.

3 COMMISSIONER ASSELSTINE: Well, you say how
4 many people would be involved in...

5 MR. EISENHUT: Ten to fifteen.

6 COMMISSIONER ASSELSTINE: Ten to fifteen
7 people?

8 MR. EISENHUT: Yeah.

9 MR. NOVAK: Per shift through about the 21st
10 of July. Let me give you one more example. They're
11 currently now loading filters with carbon. This is
12 part of the iodine retention system.

13 The history of this is, in fact, that earlier
14 in the construction these filters were loaded with a
15 certain carbon that was judged now not to pass the
16 standards that we require.

17 So the applicant, then, unloaded the char-
18 coal he had in place and is currently going back
19 through, and there are a number of filters in all
20 of the specific ventilation systems recharging those
21 filters.

22 Again, he's probably got 10 to 15 people
23 doing this per shift and he would expect this work
24 to be completed by the 27 of July. And again,
25 as Ed Case said, on a strict interpretation of the

1 Shoreham order, we would find that he would have to
2 file for an exemption to, in this case we would be
3 asking for an exemption to GDC-60 for the control of
4 radioactive effluents.

5 Under normal circumstances, again, it's
6 picked up in Mr. O'Reilly's letter to us. The fact
7 that these filters are being loaded was recognized
8 and we would have conditioned the license ordinarily,
9 that they would have to have been loaded prior to
10 initial criticality and we would have seen no safety
11 significance to that specific activity going on while
12 the core is being loaded.

13 MR. EISENHUT: Yeah, well, this is another
14 example of a different family, sort of a family of
15 generally maintenance (inaudible). As I understand
16 these, the filters were filled with charcoal.

17 The standard for the charcoal that's
18 accepted changed.

19 MR. CASE: It dealt with the lifetime,
20 more of the carbon.

21 MR. EISENHUT: And the utility took the
22 approach of taking out the carbon and putting it back
23 in. This is something that you would normally do
24 periodically during the plant life.

25 MR. CASE: In fact, it's required by the

1 tech specs.

2 MR. O'REILLY: A lot of plants don't like to
3 load the filters because they're damaged during con-
4 struction, so they are almost always a last minute type
5 of event.

6 MR. EISENHUT: But in this case, again, as
7 Tom said, we would have to grant an exemption under
8 the strict interpretation of the, of the Shoreham
9 order, and it raises the question of when you take
10 these things in and out of service periodically. It's
11 the same type of...

12 MR. NOVAK: I think I could sum up in terms
13 of activities this way. If we were to take
14 Mr. O'Reilly's letter on things yet to be done and
15 license conditions to be satisfied, plus the things
16 that we have identified as part of our license con-
17 dition, roughly, I think you could see about 50 people
18 per shift working on those activities.

19 The composite number of craftsmen or people
20 that some through the Unit 1 Station is about 450.
21 So aside from the 50 here that we're talking about to
22 complete this construction, the applicant sends another
23 400 in each day for things having to do with turbine
24 building maintenance and other activities they do.

25 MR. CASE: Things that once done have to be

1 repaired or replaced or what have you.

2 MR. NOVAK: There are walk-downs that take
3 place, very important walk-downs that they go back
4 through, and this is done by these people. There's
5 some "cosmetic grouting" that's done around a number
6 of things and this will take another 10 to 15 people
7 per shift.

8 UNIDENTIFIED SPEAKER: ...routine maintenance
9 of some...?

10 MR. NOVAK: I would expect so, yes. Some of
11 that 450 would make up routine maintenance, turbine
12 maintenance, generator maintenance. You've got a
13 dozen people per shift worrying about where
14 scaffolding should be or not be.

15 That's just a typical number of people that
16 cross over as riggers. One thing to note which I
17 thought might be interesting is that there's really
18 no change in the control room activities.

19 In other words, these activities that go on
20 would not be noticeable if you were to go into the
21 control room. The activities with fuel loading are
22 separate and I would not characterize the control room
23 as being more active than a normal fuel load outage.

24 I think those kind, that kind of sums up
25 how we would characterize the activities at this point

1 in time. As I said, the licensee is pursuing cleaning
2 up all of the open issues.

3 There are some, as I mentioned the examples
4 where you just can't go much faster. In fact, space
5 requirements wouldn't permit him to operate with more
6 than 10 or 12 people per shift in the annulus so he
7 really can't go much faster.

8 He's doing it on a three-shift basis. I
9 think that about, was all I was intending to say on
10 this point. Ed?

11 MR. CASE: Taking these kind of things into
12 account, other activities going on at the site, other
13 things that have to be done by certain stages of plant
14 operation, less than 5%, next refueling and those
15 sort of things, we have come to the conclusion we would
16 need about 10 exemptions for this plant using the
17 Shoreham order as our guidance.

18 They go from, I'll read you the GDC.
19 GDC-1, GDC-2, GDC-3, GDC-4, GDC-17, GDC-50, 54, 60,
20 64 and Appendix J to Part 50.

21 MR. O'REILLY: We're using that criteria.
22 There are other plants throughout our history that
23 would have been in a similar way. That's just the
24 approach we have to take.

25 MR. CASE: Right. Using the former approach,

1 we would certainly still need an exemption to
2 Appendix J. Probably that would be it.

3 MR. EISENHUT: Well, Appendix J plus the
4 question on GDC 17 because...

5 MR. CASE: Well, I'm excluding that.

6 MR. EISENHUT: But our former, our previous
7 approach would have been just Appendix J. In fact,
8 it's fair to say that that's the way we were writing
9 the license with the other handful of items being
10 written as...

11 MR. NOVAK: License conditions.

12 MR. EISENHUT: ... license conditions, all,
13 I think generally almost, I think everyone was prior
14 to initial criticality so they'd have been done in a
15 very short period of time.

16 MR. CASE: Well, there are two.

17 MR. EISENHUT: I'm sorry.

18 MR. CASE: GDC-1, which was...

19 MR. EISENHUT: A PORV.

20 MR. CASE: ... PORV's which was first
21 refueling, I believe, and Appendix J which was life
22 of the plant.

23 MR. DIRCKS: Now, this is, this is not just
24 a fuel load license. This is, this is assuming
25 the plant was operating at 100% power.

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MR. NOVAK: Oh, in looking for the exemptions,
yes, we looked at every possible condition that we would

1 entertain as a license condition, looking at it as full
2 powered and then deciding whether or not that condition
3 constituted an exemption.

4 Just to give a, sort of a pretty good illustra-
5 tion, even if a system clearly wasn't required 'til the
6 power operations that would be put in as we would deter-
7 mine an exemption was required at this point in time and
8 go through the exemption process.

9 One example I remember came up that we were
10 looking at, don't know whether it was on the list here
11 or not, was the spent fuel cooling system at Diablo.

12 Even though there certainly were no spent fuel
13 in the pool, the pool wasn't even filled at the time, you
14 would still have to go through and make the arguments.

15 MR. DIRCKS: So everything requires for full
16 power was either installed and ready to operate or an
17 exemption must be filed?

18 MR. NOVAK: Correct.

19 MR. CASE: That is correct. That's the way
20 we interpret Shoreham. Now, that goes to the number
21 of exemptions you need.

22 COMMISSIONER ASSELSTINE: Yes.

23 MR. CASE: A second problem with the Shoreham
24 approach is the standards which you have to apply
25 because it seems to us that applying the as-safe-as

1 standard, for example, Appendix J you can't make it.

2 And I don't know quite where that leads, but
3 that's more part of Friday's discussion than today's
4 discussion.

5 COMMISSIONER ASSELSTINE: Can we go back to
6 the two items that you mentioned, Tom? I gather that
7 there are a set of issues that for almost all the
8 plants are pretty much the same.

9 They may not have, Darrell, as you mentioned,
10 the spent fuel pool coolers or cooling system all in
11 place or operable, but I had the sense because of
12 this phased licensing approach that there were more
13 items for this plant than you might normally expect
14 to see at other similar PWR's.

15 Am I wrong about that and are the two items
16 that you mentioned really the major ones? The loading
17 the ice and the, and loading the filters with, with
18 carbon?

19 MR. O'REILLY: The number of items identified
20 for Catawba, as of today, is similar to that for other
21 plants receiving low power license, with the exceptions
22 of some of the GDC-17, those types of issues.

23 The plant is, I'd say is similar to Grand
24 Gulf, is similar to LaSalle and similar to Susquehana.

25 COMMISSIONER ASSELSTINE: Okay. There's one other

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1 problem I have with that is I talked to Harold about
2 Grand Gulf. Harold's view was Grand Gulf was the
3 least completed plant that had been licensed by th's
4 agency since TMI and that it contrasted most unfavorably,
5 in terms of completion, with Susquehana, for example.

6 MR. NOVAK: Two years ago or today or what
7 are you...

8 MR. O'REILLY: I mean Grand Gulf two years ago
9 based on the criteria we applied at that time. And I,
10 I don't, I was impressed when I heard Harold say that.
11 He listed a lot of items on there, but I'd like to say
12 that we identified a lot of items and a lot of items in
13 the secondary plant, things that we had identified
14 which were evaluated using the same type of criteria
15 and really which did not affect the plant.

16 The type of problems that existed at Grand
17 Gulf had nothing to do with their completion status
18 relative to licensing. They were people-oriented
19 problems.

20 MR. EISENHUT: Let me make a comment on that,
21 too. If you look at just the license in terms of, say,
22 conditions and the (inaudible) that we get from the
23 region, I asked this question of Tom about a month ago,
24 go back and look because my motivation is driven a little
25 different.

1 My motivation is driven by the 66 days I saw
2 in the list of, I was highly suspect that someone is
3 pulling another Grand Gulf, and that was the, it really
4 didn't have anything to do with the specifics.

5 In fact, when I got the license, the license
6 had very few conditions in it.

7 MR. CASE: Comparatively.

8 MR. EISENHUT: Comparatively speaking. To
9 not just Grand Gulf, but to other PWR's of the same
10 vintage, this had a lot less conditions, for example,
11 than Sequoyah and McGuire's.

12 And after looking into that, I was assured,
13 both from the Staff looking at it and the utility
14 looking at it, that here the utility just laid out a
15 more disciplined approach in terms of timing of how
16 he was going to do things.

17 When you look, you really can't find a
18 litany of, of items physically to be done in the
19 plant. You can't find the list of what I'll call
20 pre-op's or things like that that you had found on
21 Grand Gulf because, as I remember, there were a lot
22 of pre-op's that were deferred into the second mode,
23 not hardware, so to speak, but testing programs.

24 MR. O'REILLY: On the secondary system?

25 MR. EISENHUT: On the secondary systems.

1 They were listed, but there was still a large number
2 of the secondary site pre-op's listed. You don't really
3 find as many here, certainly not in the kinds of things
4 that elevate themselves to a license in terms of either
5 license conditions or the attachment.

6 So from looking at it, I don't think you see,
7 you certainly don't see as many as you've seen on a
8 lot of the plants. By no means does anything stand out
9 here.

10 And in looking at the schedules, you just
11 don't see it really as a phased license. I'll put
12 these two, I put, another way to put it is I put
13 Catawba and Grand Gulf totally in different bins.

14 And, in fact, as you see plants coming down
15 the road, they're typically getting cleaner and
16 cleaner and cleaner. I think Harold's comment, I
17 think I was there a couple times when he said it, we
18 just aren't going to, we're just going to be sure
19 we don't issue another license in that mode, that
20 they're going to be as clean as they can be that is
21 reasonable without, not unduly impacting them,
22 and secondly, going to try to be sure the people are
23 ready, which I think is what we found out on Grand
24 Gulf, the people weren't ready.

25 I don't know really, though, whether by them

1 going through more pre-op's and things like that,
2 whether you could, you know, any of that would
3 have exhibited itself, but it may have (Inaudible)

4 COMMISSIONER ASSELSTINE: How similar is
5 Catawba to McGuire?

6 UNIDENTIFIED SPEAKER: They're almost
7 identical.

8 MR. EISENHUT: Almost identical.

9 COMMISSIONER ASSELSTINE: How did McGuire handle,
10 said a couple of items that you mentioned?

11 UNIDENTIFIED SPEAKER: I don't recall.

12 COMMISSIONER ASSELSTINE: You know, loading
13 the ice and the filters?

14 MR. NOVAK: I would imagine that they
15 probably did it the same way. I think it would be
16 a construction practice that would be followed,
17 the filters might not apply. I think the ice
18 condenser might have been a typical way of installa-
19 tion that you set up your members, take them out of the
20 way, give yourself the maximum access into the annulus,
21 fill the ice beds and then back out and put the
22 structures back in.

23 MR. O'REILLY: I don't have a specific
24 answer, but in querying my staff on the general topics,
25 the organization for start-up has benefitted

1 tremendously from the experiences they had at McGuire.

2 So the issue is they have picked up a lot
3 from them and this is more detailed, they know a
4 great deal and more of the problems have been identi
5 fied by Duke on Catawba (inaudible)

6 So their list is more complete at Catawba
7 and, with the exception of some of the major issues
8 outstanding, they are more ready for a license than
9 McGuire.

10 COMMISSIONER ASSELSTINE: So from a qualitative
11 standpoint at least.

12 MR. O'REILLY: They're better.

13 COMMISSIONER ASSELSTINE: You'd say they're more
14 complete I guess in terms of the open items and the
15 amount of work still to be done than say was, the case
16 for McGuire 1 or 2?

17 MR. O'REILLY: And the procedures and
18 everything else ought to carry over from McGuire.

19 MR. ROBERTS: How many units at McGuire?

20 MR. O'REILLY: Two units operating at
21 McGuire, both operating at 100% power.

22 MR. ROBERTS: And three at Oconee.

23 MR. O'REILLY: And three at Oconee.

24 MR. ROBERTS: Is this Duke's sixth?

25 MR. O'REILLY: This is the 6th plant, yes.

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1 MR. ROBERTS: I don't think comparisons
2 between Catawba and Grand Gulf have any meaning
3 whatsoever. Different kind of reactors,
4 different organizations.

5 MR. NOVAK: Excuse me, I didn't mean to
6 interrupt. I was just going to point out there were
7 some lessons from McGuire that were carried over to
8 Catawba. I think that was the thing (inaudible) they
9 saw some problems then with the similar equipment.

10 I think they had a chance to get in there and
11 fix it ahead of time, the reactor coolant flow
12 problem, for example, which caused Duke no end of
13 agony in an area that should have been properly
14 designed.

15 They were very careful to make sure that
16 the trimming of the impellers on the reactor coolant
17 pump was done appropriately. So I think they have
18 an experience factor here that would suggest that
19 they anticipate less difficulty bringing this plant up.

20 MR. DIRCKS: I was going to mention there are
21 two issues I think we should keep in mind today.
22 One, Catawba and how nearly complete is it. Maybe
23 it's as complete as you can get something, but it's
24 not fully complete.

25 I think that's the area that we're setting the

1 stage for Friday. Darrell mentioned that the plants
2 are getting as clean as they can be, but there's still
3 going to be some issues dangling somewhere.

4 As we move into Friday's discussion, I think
5 what we, what we're trying to do is figure generic
6 decisions and criteria or some bounds for making
7 decisions and at the same time today see how many,
8 how few threads are dangling on this one.

9 But it's always that comparative issue
10 that is facing us because no matter what we do today
11 and face that other decision Friday, it's certainly
12 impacting the other plants.

13 COMMISSIONER ASSELSTINE: Yeah. I guess one
14 of the concerns I had doesn't seem to be to me much
15 of a concern. That was, my sense was that there were
16 an extraordinarily large number of items still open
17 for this plant and that that had dictated this phased
18 approach which was extraordinary when you compared it
19 to other, other plants that had been licensed since
20 TMI.

21 From what you seem to be saying, that
22 doesn't seem to be the case, that if anything, this is
23 either in the mainstream or, or lower in terms of
24 numbers of open items at the time of licensing in most
25 other plants.

1 MR. O'REILLY: That's true. You have to
2 look at the list. I mean we have spelled out all sorts
3 of, the threshold is very low and look at one item
4 where you talk about events like to finish the
5 secondary item testing.

6 We might give 15 or 20 items that are
7 identified there. I'd like to feel that we don't
8 penalize the plant by identifying all the items
9 that may be outstanding.

10 In Duke's case in Catawba it's the best that
11 I have ever seen on issues that are outstanding.
12 And the number and the effort that Duke Power
13 Company has put in in trying to meet this high
14 standard has been enormous, and they have been
15 working just to provide this up-to-date list, quite
16 extensively.

17 We have had all sorts of people up at
18 Catawba looking at them to be sure that any lessons
19 that we had learned with Grand Gulf and other units,
20 and region 2 has been, in fact, licensing most plants
21 that have been licensed since TMI.

22 So we feel comfortable that we've identified
23 them, and that's what you see here and is the
24 equivalent to other plants for a low power license.

25 COMMISSIONER ASSELSTINE: Could you just

1 run through, Tom, the list on the exemptions and
2 identify the specific item of concern?

3 MR. NOVAK: Yes, I can read you those.
4 Just happen to have it right here. Well, I have
5 Friday, okay, we can talk about it...

6 COMMISSIONER ASSELSTINE: One of them I know.

7 MR. NOVAK: Steam generator power operative
8 leak valves and pressurized power operative leak
9 valves. GDC-1: What we're requiring is that this,
10 these complements be upgraded to safety related.

11 They currently are not quite what we'd
12 call safety related. We would associate them with
13 being reliable components, but since they are used
14 to mitigate an accident, such as a steam generator
15 tube rupture, we've asked for this upgrade. So those
16 complements would be involved.

17 MR. ROBERTS: Now, could you explain to me
18 what's involved in the upgrade?

19 MR. NOVAK: Well, it may be one of going
20 back to the ...

21 MR. CASE: What we did in our review of the
22 application, we identified the applicant's analysis
23 which stated that opening of the PORV's was required
24 during steam generator tube accidents.

25 The purpose of using the PORV's that way

1 was to avoid Part 100 type exposure. Based on that
2 we told the licensee he should either justify the
3 reliability of those components as compared to what
4 would be required by safety grade or make them
5 safety grade.

6 In other words, we left him the option of
7 showing us that it had been designed, constructed and
8 operated in such a way we could rely on it, or the
9 alternative way was to follow the prescription and
10 make it safety grade.

11 He opted for making it safety grade, and,

12 MR. ROBERTS: Well, in this particular case
13 does that mean procuring another discreet piece of
14 equipment?

15 MR. CASE: No, not necessarily or it could.
16 It's up to the licensee. He can show that under the
17 procurement rules they followed, it's adequate from
18 a safety standpoint or do it under Appendix B, one
19 or the other. You don't specify how he should cure
20 the problem in this case.

21 MR. CASE: He chose which method.

22 COMMISSIONER ASSELSTINE: I gather that's
23 something, too, the Staff has been doing in a number
24 of cases with new plants?

25 MR. CASE: Yes, sir.

1 MR. CHESTNUT: Do most plants which rely on
2 steam generators and pilot operated relief valves have
3 safety grades, safety related (inaudible) valves.

4 MR. CASE: Operating plants, no.

5 UNIDENTIFIED SPEAKER: They're not safety
6 grade on operating plants.

7 MR. NOVAK: But most, most emergency
8 operating procedures call upon the use of the
9 pressurized power operated relief valve for pressure
10 control to depressurize and the...

11 MR. CHESTNUT: How about the quantity?

12 MR. NOVAK: The PORV's on the steamline
13 don't, both of these are called in in terms of
14 emergency operators.

15 MR. CHESTNUT: That's just McGuire called
16 in in procedures, whether other plants are not?

17 MR. NOVAK: No, no, no. Typically, most
18 PWR licensees utilize these components.

19 MR. CHESTNUT: And they're all safety grade
20 on those plants?

21 MR. NOVAK: No, we didn't say that.

22 MR. CUTCHIN: See, the question is are they
23 required to be there or are they just nice as a
24 back-up, and if they're required on this plant, it's
25 the first one I'm aware of where they are, they can't

1 do the depressurization job without the PORV's, other
2 than a combustion plant.

3 MR. NOVAK: The option we, what we asked
4 him to do is either show that you can meet Part 100
5 without utilizing them or upgrade them to safety related.

6 MR. CUTCHIN: And they opted to upgrade them
7 and they never attempted to to make the showing?

8 MR. CASE: That's correct.

9 MR. EISENHUT: Well, I think the question
10 that, as you said, they relied upon those in this
11 case.

12 MR. CUTCHIN: They kind of got (inaudible).

13 MR. NOVAK: In the area of...

14 MR. STELLO: Isn't the PORV upgrade at TMI a
15 backfit issue?

16 MR. NOVAK: No, I think...

17 MR. STELLO: That was part of the 737 items?

18 MR. NOVAK: Vic, I would think that the area
19 really came about after a close look at the Ginna
20 incident. I think our experience with how licensees
21 respond to the...

22 MR. STELLO: The reason that we sequestered
23 TMI, there is a...

24 MR. EISENHUT: There is a 0737 TMI item on
25 showing that PORV's will not stale in an unmode,

1 unsatisfactory mode.

2 MR. NOVAK: On the pressurized...

3 MR. EISENHUT: On the PORV's pressurizer.

4 MR. NOVAK: I think going into the secondary
5 side is the experience, what we learned from the...

6 MR. STELLO: These are both.

7 MR. NOVAK: These are both.

8 UNIDENTIFIED SPEAKER: The pressurizer PORV
9 I think is in 0737.

10 MR. NOVAK: Right. In fact...

11 UNIDENTIFIED SPEAKER: And the additional PORV
12 on the steam generator is (inaudible).

13 MR. NOVAK: Right.

14 MR. CASE: I'm not sure that's right.

15 MR. EISENHUT: There's more testing, I believe,
16 on the, 0737 is more of a testing which shows they can
17 take the flow conditions and still recede, etcetera,
18 I think. But it certainly was 0737.

19 COMMISSIONER ASSELSTINE: GDC-2. We better
20 move on. We do have a few, there are some, some equip-
21 ments that still require some seismic qualification.

22 MR. CASE: The release of more information
23 to show us that they are seismically qualified.

24 MR. NOVAK: Well, they deal with...

25 MR. CASE: That's the one, Tom, where the

1 licensee has submitted the information and it wasn't
2 quite clear last Friday whether our staff had finished
3 its review of the information.

4 MR. NOVAK: We may decide based on that that
5 there was no exemption required.

6 MR. CASE: It depends on the satisfaction of
7 the Staff whether there's an exemption needed or not.

8 MR. NOVAK: On GDC-3 on fire protection,
9 there were a number of items in fire protection. I'll
10 give you an example. For example, the present cork
11 ceiling that's used for fire protection does not meet
12 fire protection standards so they're going to have to
13 replace that ceiling, and they're in the process of
14 doing that.

15 MR. CASE: And that's to be done before
16 initial criticality.

17 MR. NOVAK: Correct.

18 MR. CASE: The first one is, is it first
19 refueling? Did you identify that?

20 MR. NOVAK: Yes. GDC-1 would be the first
21 refueling.

22 MR. CASE: And I think all of the rest save
23 that Appendix J are before initial criticality these
24 would be satisfied.

25 MR. NOVAK: I'll give you one more example

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1 on the GDC-3. A fire detector is missing in the
2 auxiliary feed water pump pit so it will be installed
3 prior to initial criticality.

4 MR. EISENHUT: So we don't leave the wrong
5 impression with these, though, Tom, these are the
6 kinds of items where we, when we went through the
7 safety review, we recognized that these items were
8 not complete.

9 We did the safety justification argument and
10 we recognized that it would be required...

11 MR. CASE: They put them in the license
12 condition...

13 MR. EISENHUT: We recognized that it
14 wasn't needed prior to something.

15 MR. CASE: And now they're converting
16 them to...

17 MR. EISENHUT: So the safety technical part
18 of the evaluations, by and large, were all written in
19 the normal way, but it's a question of going back,
20 for example, on the exemption route...

21 MR. CASE: Well, the way we got this list
22 was first as part of the formal procedure, the licensing
23 people pull out all of the things that are in the SER
24 that have to be done at some later date, make them
25 license conditions.

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1 That's normally where it stops. What we did
2 is look at the license conditions and say which one of
3 those under Shoreham could be interpreted to be required
4 an exemption. That's the process we went through.

5 MR. NOVAK: Okay. GDC-4, equipment in the
6 containment. We have a question today as to the
7 appropriate pressure temperature profiles that would
8 result from a steamline break in the lower containment.

9 This has to do with equipment qualifications.
10 The licensee believes that with additional discussions
11 between us and Westinghouse he can resolve this.
12 Currently, he has his equipment qualified to a certain
13 temperature.

14 We about a year ago asked him to go back and
15 look at that because we saw some behavior in a steam-
16 line break which could result in higher ambient
17 temperatures.

18 At that point in time Westinghouse and the
19 Staff looked at it and it looked like through additional
20 analysis the issue could be resolved, so we considered
21 it to be a confirmatory issue awaiting additional
22 analysis.

23 That analysis came in just a matter of a few
24 weeks ago. We looked at it and we're not convinced that
25 the analysis would stand up to our test, so we're going

1 to have additional discussions with Westinghouse and for
2 this point in time we're not prepared to say the equip-
3 ment is qualified.

4 MR. CASE: This is a somewhat interesting
5 one. The EQ rule says either be qualified or have a
6 justification for continued operation. Assuming full
7 power, I would interpret Shoreham to say that this
8 justification also has to be at full power.

9 Therefore, an exemption is needed and they
10 will submit an exemption and show that this equipment
11 is not needed for criticality or low power, low
12 criticality-low power testing, and that would be the
13 basis of our approval of this exemption from a safety
14 standpoint.

15 MR. NOVAK: The next one would be GD, the
16 next one would be GDC-17 and I can go on with that one.

17 COMMISSIONER ASSELSTINE: That's enough.

18 MR. NOVAK: Okay. Moving on, the next one
19 is again GDC-50 which has to do with the ice condensor
20 structural members. We've talked about that one. Can
21 we move, what that involves is the fact that the
22 members are not...

23 MR. ROBERTS: The bolted members? Is it
24 structural? What is it?

25 MR. O'REILLY: I'm not sure of that. I think

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1 they bolt it, but if you'd like I could check.

2 MR. CASE: The licensee's across the hall
3 where you can get details.

4 MR. NOVAK: I don't know, to be honest.

5 MR. DIRCKS: You can find out very quickly.

6 MR. NOVAK: Right. The next one is GDC-54.

7 MR. ROBERTS: I'm more worried about that fire
8 detector in the feed pump pit.

9 MR. NOVAK: There is a purge valve that is
10 used to...

11 MR. CASE: And that's a great big valve.

12 MR. NOVAK: It's a four-inch line, but our
13 criteria is if a line is four inches or greater, it
14 must have qualifications. So this is a question now
15 of getting the qualifications on the valve to show
16 that it's qualified for that service.

17 MR. CASE: To show that it'll work under
18 accident conditions. That's the qualification, not
19 environmental. That's sort of environmental.

20 MR. NOVAK: The licensee doesn't see any
21 problem and he's going to give us the information, but
22 at this point in time we believe that it's still
23 outstanding. The next one was GDC-60. That had to
24 do with the carbon filters.

25 It goes through about a half a dozen

1 ventilation systems. GDC-64, irradiation monitor, there
2 is a sampling line in the monitor as part of the
3 containment atmosphere that had to be relocated.

4 There were just too many curves in the
5 piping system and they weren't getting the flow that
6 they needed, so the system is not "operable" at this
7 time.

8 MR. CASE: They weren't getting an adequate
9 sample because of the twists and turns.

10 MR. NOVAK: Until that system is refabricated,
11 it would constitute an exemption to GDC-64.

12 MR. ROBERTS: That's a small piece of work.

13 MR. NOVAK: It's a small piece of work and
14 it may be finished by today for all I know. The
15 other one was Appendix J, which we've...which we
16 could talk about.

17 It talks about the request for doing some...
18 well, Appendix J is a...speaks to primary reactor
19 containment leakage testing for water cooled reactors.
20 These requests are kind of standard.

21 Most applications come by and ask for these.
22 That is, to use a limited test in lieu of a full test
23 for some valves. He requests an exemption to certain
24 containment airlock surveillance testing, and he's
25 asking for some relief on how he should test mechanical

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1 bellows, which are...surround certain piping penetrations.

2 All of there are what I would call standard
3 requests that we see by licensees.

4 MR. CASE: And that we have routinely granted
5 in the past, making the findings of 50.12.

6 MR. DIRKS: For which I think we're processing
7 (INAUDIBLE).

8 MR. NOVAK: I guess I could...I'll give you
9 an example of what the exemption would require. You
10 would have...for example, Appendix J would require...if
11 you were going to do a containment isolation test
12 against a certain piping system, if, in fact, there was
13 a portion of that system that was filled, the concern
14 would be you would not get the same leakage character-
15 istic unless you drained that line and then performed
16 the test.

17 The Applicant would propose rather than to
18 use the individual test of that valve, sometime earlier
19 in the drain condition he ran a test on that line
20 and measured the leakage.

21 He would propose then to add that same
22 value on to the containment testing and just absorb that
23 amount rather than draining the line and performing
24 that test.

25 Now, we have generally granted that type of

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1 an exemption. We don't...we find it an acceptable way.
2 There is a burden in draining all of these lines and
3 then filling them again to go back in operation.

4 So the licensee would take a conservative
5 approach and just say, "I'll take credit. I'll add
6 the same leakage on that I measured individually
7 to my totals." Now, those were the ones...

8 MR. CASE: Well, let me use that as an
9 example of where we're going to have difficulty with the
10 as-safe-as test that Shoreham would make us apply to
11 these kind of exemptions.

12 It's acceptable from a safety standpoint
13 but probably not as safe as the regulation...specifically
14 in the regulation, as written, would require.

15 MR. EISENHUT: You have to really look at
16 it very hard but it's the same...it's very difficult
17 to write the argument, remembering...demonstrating
18 that it is as safe to test the line empty and the
19 surroundings empty and adding them together as opposed
20 to testing the whole thing at one time. It's just
21 hard to make that argument in a great (INAUDIBLE) way.
22 But those are the kinds of things you run into with the
23 as-safe-as.

24 It might be a diminishing difference to
25 make the argument that one is identically as good as

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1 the other and it's very difficult.

2 MR. CASE: Isn't that the list, Tom?

3 MR. NOVAK: Yes, that would constitute the
4 list as we have it doay.

5 MR. AUSTIN: I'm going to ask since he uses
6 100% power standard, does that mean that once these
7 items are complete...they only need to complete these
8 items and nothing else and that plant could operate at
9 100% power, that all safety systems would be declared
10 operable except maybe diesel generators?

11 MR. CASE: Except for pre-op tests that also
12 have to be done.

13 MR. AUSTIN: And pre-op tests.

14 MR. CASE: But from an equipment standpoint,
15 it would all be there.

16 MR. AUSTIN: And why isn't the pre-op testing
17 done before even issuing a license?

18 MR. CASE: I think everything you can practi-
19 cally do has been...

20 UNIDENTIFIED SPEAKER: Other than the ones
21 we identified?

22 MR. EISENHUT: There are things you can't do
23 until your temperature and pressure...

24 MR. AUSTIN: Okay.

25 UNIDENTIFIED SPEAKER: But I think you're

1 UNIDENTIFIED SPEAKER: Other than the ones we
2 identified.

3 MR. EISENHUT: There are things you can't
4 do until your temperature and pressure...

5 MR. AUSTIN: Okay.

6 UNIDENTIFIED SPEAKER: But I think you're
7 absolutely right otherwise.

8 MR. CASE: Let me make it clear I haven't
9 chose to interpret Shoreham to say if everything was
10 done and installed but a pre-op test has not yet been
11 done to require an exemption.

12 One possibly could read Shoreham that way.
13 I chose to read it more reasonably than that.

14 MR. AUSTIN: Let's see, and you're deferring
15 pre-op testing until fuel load, probably because
16 of like the problem Palo Verde had where they started
17 doing things without the fuel and their pump went.

18 MR. CASE: In other words, why doesn't it
19 make sense to run the pre-op's without the fuel?

20 MR. AUSTIN: You can get up to temperature.

21 MR. CASE: Right, but you're missing one of
22 the ingredients that can affect the pre-operational
23 test.

24 MR. O'REILLY: I think I'm making a state-
25 ment. It may be...may be a few exceptions

1 to it, none that come to mind. But they have met all
2 the requirements of the FSAR, including testing, less
3 what we have identified today or in the letter.

4 UNIDENTIFIED SPEAKER: Has the attachment
5 listed the licensee?

6 MR. O'REILLY: Yes. Everything has been done
7 and certified.

8 MR. CASE: But if I haven't taken all on
9 your list, Jim, of...

10 MR. O'REILLY: Oh, yeah, but some of the op
11 tests...

12 MR. CASE: ...the pre-op tests yet to be done...

13 MR. O'REILLY: ...wouldn't fit that category.
14 These are things that are programmed to be done.

15 MR. NOVAK: Two weeks ago there were a half a
16 dozen pre-op tests that were to be done. A week ago
17 all pre-op tests, all tests that would be done prior
18 to fuel load were accomplished. Duke Power will tell
19 you there were zero pre-op tests (inaudible).

20 MR. CASE: That's using the mode of operation
21 as a basis for saying it's all right as distinguished
22 from full power operation.

23 MR. NOVAK: Bdt to answer John's question,
24 "the pre-op test that would be done prior to loading
25 have been accomplished."

1 MR. CASE: Yes, but I don't believe that was
2 his question.

3 COMMISSIONER ASSELSTINE: The only thing
4 that's left over are the things that...

5 MR. NOVAK: Go with the startup program.

6 COMMISSIONER ASSELSTINE: The startup program.

7 MR. NOVAK: That's correct.

8 MR. O'REILLY: Or relate to things like
9 your diesel power, you know, those types of things
10 which have been laid on the table.

11 COMMISSIONER ASSELSTINE: I gather, Ed,
12 that the approach you're taking is that a license,
13 even the zero criticality license, would not be issued
14 until the Staff had reviewed the basis for and issued
15 an exemption for each of these...the items that we
16 just went over.

17 MR. CASE: That would be a conservative
18 interpretation of what the Commission and the Chair-
19 man...that's what we would propose to do at least in
20 this case, and provide further time for the Commission
21 to consider the generic issue.

22 MR. EISENHUT: And I think it's fair to say
23 that's what we've been doing for the last week.

24 MR. CASE: Just because we got this one by
25 that hurdle doesn't mean that there aren't a

1 .lot of problems...

2 MR. DIRKS: What are you saying? That you...
3 you processed all the exemption...

4 MR. CASE: No, I would...I would process them.

5 MR. NOVAK: We are in the process of resolving
6 the...

7 MR. DIRKS: You're in the process of process-
8 ing. When would you be finished with it?

9 MR. CASE: Either late today or tomorrow.

10 MR. NOVAK: With the issuance of the license,
11 we would grant the exemptions.

12 MR. DIRKS: So you'd take this exemption
13 route for this case?

14 MR. O'REILLY: But to a standard that we
15 discussed today, which might be different than another
16 standard.

17 MR. EISENHUT: Right. Well, I think our
18 generic discussion on Friday would lay out these
19 facts, but we're on a track right now, and we have
20 been, I think it's fair to say, for about a week
21 developing the bases to grant these 10 exemptions...

22 MR. CASE: Using the Shoreham standards.

23 MR. EISENHUT: ...using the Shoreham standard
24 for this plant which we would expect then to issue
25 the fuel load zero power license.

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1 MR. DIRKS: You can do this for Appendix J?

2 MR. EISENHUT: We can do this for Appendix J
3 for the zero power...

4 MR. CASE: For the zero power mode at issue
5 for this license, but not for full power.

6 COMMISSIONER ASSELSTINE: And since this is only
7 a zero power license, you don't have to cross that bridge.

8 MR. EISENHUT: And the way I get around it
9 on Appendix J is simple, that I don't need the con-
10 tainment. The containment can, in fact, be open
11 during zero power operation. Therefore, it is
12 clearly as safe whether I have a penetration that
13 leaks or doesn't leak, but once you get above into
14 the powers the argument becomes a lot harder...

15 MR. CASE: If not impossible.

16 MR. EISENHUT: ...if not impossible. That's
17 why this standard, while we can apply it to this
18 license at this time, that's obviously why we want
19 to discuss it generically.

20 COMMISSIONER ASSELSTINE: I think I'm satisfied.

21 MR. DIRKS: You're satisfied as to what?

22 COMMISSIONER ASSELSTINE: As far as the
23 question that I asked in my memo about what this
24 phased licensing approach meant for Catawba and
25 whether this was a case where there were a large

1 number of open items still outstanding and how it
2 was being handled by the Staff in terms of the issu-
3 ance of at least the initial license. I guess the
4 concerns I had are resolved. Now, as far as...

5 MR. ROBERTS: Well, where do we stand as
6 far as Catawba is concerned?

7 COMMISSIONER ASSELSTINE: As far as Catawba's
8 concerned...

9 MR. CASE: I don't have to regard your memo
10 as any bar to the initial licensing of Catawba.

11 MR. ROBERTS: Does it take any Commission
12 action?

13 COMMISSIONER ASSELSTINE: No, the Staff has
14 the authority to issue the exemptions and to issue the
15 zero criticality license. And as far as what I've
16 indicated in my memo, again, all I wanted was a brief...

17 MR. ROBERTS: Right. But there's no...the
18 Staff can do as it thinks is proper?

19 COMMISSIONER ASSELSTINE: That's right.

20 MR. DIRKS: That's why all these exemptions
21 in this case are written.

22 MR. ROBERTS: Then can you outline to us
23 how you're going to proceed and give us some time-
24 table so Warren Owens can stop hemorrhaging outside
25 the door? I guess he's here, isn't he?

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MR. CASE: We'll do the best we can and in all likelihood unless something else develops that we don't know now, it would be sometime early tomorrow. Sometime tomorrow, let me put it that way.

MR. ROBERTS: Would you convey that to the licensee, please? Is that proper?

COMMISSIONER ASSELSTINE: Sure, for the Staff to do it.

MR. DIRKS: Now, Friday we're going to pick up on (inaudible) I don't think you're saying that you think that this is the route you want to go on every...every license from here on in.

This is only to get us over this hurdle and we'll be back discussing where we...how we...what sort of criteria we should use for a process (inaudible).

COMMISSIONER ASSELSTINE: That's a discussion we can have on Friday.

MR. CUNNINGHAM: And for Friday's meeting we will have a paper which is in the final stages of preparation now so you should get it tomorrow.

COMMISSIONER ASSELSTINE: Thank you all very much. I appreciate it.

(Whereupon, the meeting ended at 2:20 p.m.)

