

NUCLEAR REGULATORY COMMISSION



In the Matter of: PUBLIC MEETING WITH CAROLINA POWER & LIGHT
CONCERNING THE NRC ENVIRONMENTAL REVIEW
OF THE SHARON HARRIS NUCLEAR POWER PLANT
UNITS 1 AND 2

50-400

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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PUBLIC MEETING WITH CAROLINA POWER & LIGHT
CONCERNING THE NRC ENVIRONMENTAL REVIEW
OF THE SHARON HARRIS NUCLEAR POWER PLANT
UNITS 1 and 2

- - -

Sharon Harris Visitor Energy
and Environmental Center
New Hill, North Carolina
Wednesday, April 7, 1982

The meeting was convened, pursuant to notice,
at 9:05 a.m., when were present:

- PRESENT FOR THE NRC:
- FRANK MIRALGIA
- TIM MO
- MARJORIE ROTHSCHILD
- JOHN LEHR
- CHARLES BILLUPS

1 PRESENT FOR THE NRC (continued):

2 ED PENTACOST
3 DANIEL MONTGOMERY
4 PHIL STOHR
5 PHIL CHENDEMI
6 FRANK LONG
7 CHARLES BURGER
8 GEORGE MAXWELL

9 PRESENT FOR CAROLINA POWER & LIGHT COMPANY

10 PAT HOWE
11 SHERWOOD ZIMMERMAN
12 JOE SHEPPARD
13 BILL HOGARTH
14 GEORGE WARRINER
15 STEVE CASHELL
16 TOM LIPA
17 BILL HINDMAN
18 ROLAND PARSONS
19 AARON PADGETT
20 RICHARD JONES, ESQ.

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- 1 PRESENT FOR THE NORTH CAROLINA WILDLIFE
- 2 RESOURCES COMMISSION:
- 3 ROGER PIRIAH
- 4 MIKE SCRUGGS
- 5 PRESENT FOR THE NORTH CAROLINA EASTERN MUNICIPAL
- 6 POWER AGENCY:
- 7 JIM SALLY
- 8 PRESENT FOR THE ENVIRONMENTAL PROTECTION AGENCY:
- 9 CHUCK WAKOMA
- 10 PRESENT PRO SE:
- 11 RICHARD WILSON, M.D.
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1 and Chief of one of the two operating plants.

2 MR. BURGER: Charles Burger, Region II, NRC,
3 Chief of the Reactor Projects Section.

4 MR. MAXWELL: George Maxwell, U.S. NRC
5 Resident Inspector at the Harris site.

6 MR. SCRUGGS: Mike Scruggs, Game Biologist for
7 the N.C. Wildlife Commission.

8 MR. PIRIAH: Roger Piriah, Fish Biologist,
9 N.C. Wildlife Resource Commission.

10 MR. SALLY: Jim Jally, Site Representative of
11 the North Carolina Eastern Municipal Power Agency.

12 MR. WAKOMA: Chuck Wakoma, EPA, Atlanta, Chief
13 of Nuclear Facilities Evaluation.

14 MR. CHENDEMI: Phil Chendemi, Region II,
15 Atlanta, Administrative Officer.

16 MR. STOHR: Phil Stohr, NRC Region II,
17 Director of Emergency Preparedness, Operations Support
18 Division.

19 MR. MONTGOMERY: Daniel Montgomery, U.S. NRC
20 Region II, Chief of Independent Measurements and
21 Environmental Protection Section.

22 MR. PENTACOST: Ed Pentacost, NRC
23 headquarters, Terrestrial Ecologist in the Environmental
24 Engineering Group.

25 MR. BILLUPS: Charles Billups, Life Scientist

1 with the Environmental Engineering Branch of the NRC.

2 MR. LEHR: John Lehr, NRC Environmental
3 Engineer.

4 MS. ROTHSCHILD: Marjorie Rothschild, NRC
5 headquarters attorney.

6 MR. MIRAGLIA: Frank Miraglia, NRC Division of
7 Licensing, headquarters.

8 MR. MO: Tim Mo, Environmental Scientist with
9 the Radiological Assessment Branch, NRC.

10 DR. WILSON: Richard Wilson. I am a citizen
11 from Apex.

12 MR. PADGETT: Aaron Padgett, Carolina Power &
13 Light Company, ASME Environmental Staff.

14 MR. HOWE: Pat Howe, Vice President, Technical
15 Services, CP&L.

16 MR. PARSONS: Roland Parsons, Project General
17 Manager on the construction site.

18 MR. JONES: Richard Jones, Associate General
19 Counsel, CP&L.

20 MR. ZIMMERMAN: I think that's everyone. We
21 have one member from the press, the News and Observer,
22 that didn't get an opportunity to introduce herself.

23 Frank really is kind of leading the NRC
24 group. I would just like to turn it over to him to kind
25 of explain the purpose of why we are here this morning.

1 MR. MIRAGLIA: The purpose of the meetings of
2 the past few days has been being done in the context of
3 the environmental review that is required to support the
4 application for operating license. The environmental
5 assessment for the Sharon Harris project was done by the
6 NRC staff prior to the issuances of the construction
7 permits for the Harris project back in 1978.

8 We have an application from CP&L for operating
9 license for the Harris project. This is the initiation
10 of our environmental review in this OL stage. As part
11 of the tendering of the application for the operating
12 license, an acceptance review was conducted and a number
13 of questions were sent to CP&L regarding the
14 environmental report.

15 The Staff has received the responses from
16 CP&L, and the purpose of the meeting today is to discuss
17 with CP&L some additional questions that the Staff may
18 have to clarify some of the questions that we asked at
19 the acceptance review, and also to provide some
20 additional information for the staff relative to the
21 environmental review.

22 Some questions had been sent to you
23 informally. The purpose of the meeting today is to make
24 sure you understand what our questions are, for you to
25 perhaps provide some preliminary responses to those

1 questions. Subsequent to these meetings, the questions
2 will be formally transmitted to CP&L and formal
3 responses will be provided for the docket.

4 A number of our people here today have
5 meetings this afternoon with state officials, and John
6 Lehr and Charlie Billups may have to leave a little
7 early in order to make their appointments in Raleigh.
8 What I would propose to do is to have Charlie Billups
9 and John Lehr perhaps go through some of the questions
10 that they had in the aquatic area, and then we would
11 proceed with the other members of the NRC staff in sort
12 of a roundtable top discussion on environmental issues.

13 MR. ZIMMERMAN: Frank, one of our members,
14 Roland Parsons, which you all did not get a chance to
15 meet yesterday, manages our construction at the Harris
16 plant. He will have to leave early. If there are any
17 questions which you all would like to direct to him in
18 the beginning, that might be well, too.

19 MR. MIRAGLIA: Charlie?

20 MR. ZIMMERMAN: Bill Hindman will be here.
21 Bill, you have someone else with you today, too, don't
22 you?

23 MR. HINDMAN: No.

24 MR. ZIMMERMAN: Bill will be here to also
25 speak.

1 MR. MIRAGLIA: Do you want to start, John, or
2 Charlie?

3 MR. BILLUPS: I will start off with the list
4 that we have of questions. We do not have a full list
5 here, only those on aquatic and terrestrial resources.
6 Listed as miscellaneous question 100.1 -- CP&L has a
7 copy of that -- I think that came out of group and our
8 concern raised in some of the more recent reviews at the
9 OL stage. We wanted a summarization of those changes
10 that had occurred in the tabular form, and in our
11 discussions yesterday it's rather obvious now that there
12 will be a need for updating the ER concerning going from
13 four units to the two units.

14 So that question may become quite important,
15 in at least using that as a reference to changes that
16 have been made in the supplements in the ER. So I think
17 we should give special concern to that question.

18 MR. MIRAGLIA: Our understanding is that you
19 have such an amendment in progress.

20 MR. ZIMMERMAN: That's right. As we said
21 yesterday, we will submit in June an amendment that will
22 correct the deletion 3 and 4 from the document. But I
23 think, in talking it over, we feel like there is no need
24 to delay any review until you get that amendment in
25 June, because really, for environmental review purposes

1 I think the deletion of those units environmentally is
2 more or less enveloped.

3 I would hope we would not wait until June
4 before we continued the review.

5 MR. MIRAGLIA: I think what Charlie was
6 suggesting that perhaps if in advance of that amendment
7 you could provide us with a summary of what the design
8 changes are and what sections of the environmental
9 report would necessarily be modified, perhaps not with
10 all the detail, that that would at least provide us with
11 the framework to initiate our review. I think that was
12 the thrust of Charlie's question.

13 MR. BILLUPS: That would be quite helpful, I
14 believe.

15 MR. ZIMMERMAN: Okay.

16 MR. LEHR: We want to point out, too, that the
17 question asked not only for you to give us an update
18 essentially on the impact assessment sections, but also
19 on the descriptive information in the ER. In fact, with
20 a number of recent OL cases the descriptive information
21 has the greatest amount of change in the environmental
22 report.

23 It is very important that we get that clear,
24 because many of the people that are familiar with the
25 projects would be concerned with whatever proceedings we

1 have at the OL stage, and they really want to understand
2 how the plant design is changing. There is a
3 significant change here at the Sharon Harris plant. So
4 it is important that those things get in there.

5 MR. HOGARTH: But in making an environmental
6 review from the aquatic standpoint, by dropping 3 and 4
7 the main thing you're doing is taking less makeup
8 water. We also are not building the makeup structure.
9 And we have already -- and you all have concurred --
10 that there is no environmental impact as such to the
11 Harris site.

12 So the only thing we have done is lessen
13 anything that was there by dropping 3 and 4. So I do
14 not know why we would have to hold up any environmental
15 review.

16 MR. ZIMMERMAN: You are just talking about
17 accuracy of information, to update the accuracy.

18 MR. HOGARTH: Yes, yes. Because it is
19 accepted that --

20 MR. MIRAGLIA: I do not think we are
21 proposing, Zimm or Bill, that we not initiate the
22 review. But in order for us to make sure the scope of
23 the review is reflecting the design that the Harris
24 facility is going to ultimately take, that certainly has
25 to be done; and certainly a summary up front with a sort

1 of a roadmap as to where the changes are going to occur,
2 to make sure that we understand where they are going to
3 occur, that we can appropriately focus on those areas.

4 MR. ZIMMERMAN: We will provide that.

5 MR. BILLUPS: Okay. Under Section 291, which
6 is covering the aquatic resources question, as you might
7 note on this last thing that came to you, it started
8 with 291.7. The original acceptance review questions, I
9 think there were six of those on aquatic resources that
10 had come from my review, my acceptance review.

11 The responses all being acceptable, primarily
12 it was a request for some of the reports on the
13 construction effects monitoring program. The one
14 question that we did ask and probably do not have a
15 complete answer on is -- that is our reason for meeting
16 with the state and county officials -- concerns the
17 accident evaluation scenario which is being done now in
18 each of the OL reviews.

19 It concerns the fish harvest estimates. I
20 think in that question we requested an estimate of the
21 recreational and commercial harvest. And essentially
22 your answer was that there is no commercial harvest from
23 Cape Fear until you get down into the estuarian section;
24 and that it is more of the estuarian type commercial
25 catch.

1 And your answer in terms of the recreational
2 harvest was that there are no data accumulated by the
3 state for that purpose.

4 I guess now I would like to ask you if that is
5 still the position? And then I plan to talk to the
6 state and see if we cannot come up with some better
7 definition of the value of this area in terms of fish
8 harvest.

9 MR. HOGARTH: There is some limited data the
10 state has developed on sport catch, you know, harvest
11 per hour. We have in the meantime done a creel survey
12 on one of our own lakes. Of course, it's an entirely
13 different lake from what Harris would be. It is the
14 Robinson plant. But we did a complete survey there, a
15 creel survey, the number of fishing hours, the number of
16 fish removed, and this type of thing.

17 There is also some later work done by the
18 Southeastern Reservoir Committee that you could
19 extrapolate to. But as far as anything in this region
20 and the impact of the two new reservoirs that are being
21 built and what the fishing pressure would be, we would
22 have to take that into consideration. But there is some
23 data that we can provide.

24 MR. BILLUPS: The obvious follow-up question
25 is the plans that you have in terms of developing the

1 recreational fishing in the lakes. There was some
2 mention yesterday of plans to do that possibly, but with
3 no detailed discussion at this point in time with the
4 state.

5 MR. HOGARTH: We have already started some
6 management programs, if you want to refer to it as
7 that. We, during the initial construction before the
8 lake starts filling, have already started putting in
9 artificial reefs. We went to the site and got the
10 earthmovers' big tires from there and we chained all
11 these together and put them in several areas of the
12 lake.

13 From that standpoint, we have plans to talk to
14 the state. Most of the -- you know, the lake will be
15 open for fishing. It's part of the land policy and in
16 conjunction with -- as long as it doesn't interfere with
17 the operation of the plant, there will be recreational
18 fishers and there will be boat ramps.

19 This will be worked out with the State of
20 North Carolina. We are not at that stage yet. We
21 probably will be pretty quick to go to them and work out
22 these plans. But we have done some development in-house
23 of what we feel is a reasonable approach for the lake,
24 and we will give it to the State.

25 MR. BILLUPS: Your plan would be, Bill, to

1 manage it with your own people, rather than to turn it
2 over to the State?

3 MR. HOGARTH: That has to be determined. We
4 are talking to the State as to what involvement they
5 want with CP&L. I think we have the expertise to do it
6 and we have learned from other lakes, but it depends on
7 the involvement the state would like to have. It will
8 probably be a cooperative type program with them, both
9 of us working together. That's the way we would like
10 for it to be.

11 MR. BILLUPS: What would you see the timing or
12 -- do you have a feeling now for the timing on when this
13 would be opened to the public?

14 MR. HOGARTH: I think basically we would have
15 to wait until we get to construction, to make sure the
16 construction is over and we got our banks stabilized and
17 this type of stuff, the seeding and the stabilization
18 program done, and then we would move towards the
19 recreation. I think it would probably be about the same
20 time the plant would open, like within the next couple
21 years.

22 MR. BILLUPS: The main reservoir dam is not a
23 class one structure? Is that right?

24 MR. HOWE: What was that?

25 MR. BILLUPS: The main reservoir dam is not

1 considered a class one?

2 MR. HOWE: It is designed to class one
3 criteria. We would not, however, take credit for a
4 class one design in the filing, although it could be
5 classified as class one.

6 MR. BILLUPS: Any accidental release of
7 radioactivity or any other chemical release of
8 non-radioactive material, if it were to enter the
9 surface water, where would it go? This is a spill at
10 the plant itself. Would it go to the main reservoir?

11 MR. ZIMMERMAN: It would go to the main
12 reservoir, correct.

13 MR. BILLUPS: And the containment of that
14 would be possible within the main reservoir? There
15 would be no situation where it could enter the Cape Fear
16 as a discharge?

17 MR. ZIMMERMAN: We have done that accident
18 analysis of what the worst case spill would be into the
19 main reservoir, and then if it was mixed and diluted
20 within the reservoir what the effect would be. That is
21 in the FSAR.

22 MR. BILLUPS: Okay. I think we can go on.

23 MR. LEHR: The remaining aquatic resources
24 questions mainly came from me. I had some questions
25 concerning the station water use tables and some of the

1 chemical treatments and discharges. They're not any big
2 deal, but I just want to be able to understand a little
3 bit better.

4 In your water use table here, table 3.3-1 in
5 the ER, you give flows in "million gallons per month."
6 I am just curious as to exactly what that means. Is
7 that really continuous flows for as many minutes as
8 there are in a month? I forget the number of minutes in
9 a month. There are quite a number.

10 What does that mean? The figure is typically
11 given in cfs or gallons per minute.

12 MR. ZIMMERMAN: What is the right place again
13 on the table?

14 MR. LEHR: I'm sorry. 3.3-1, any of the ones
15 that are indicated under flow at maximum power operation
16 or flow at minimum anticipated power operation, where
17 you have mgm, million gallons per month: waste streams
18 2, 3, 4, 5, 23, 24.

19 MR. ZIMMERMAN: And what is the question?

20 MR. LEHR: The question is: Just define the
21 term "million gallons per month." Is that a continuous
22 flow, so you can come out with a daily flow rate or a
23 flow rate in terms of gallons per minute by simply
24 dividing by the number of minutes per month, in a month,
25 or what? I don't recall how the figures were given in

1 the FESCP. I would imagine they were not given in those
2 same terms.

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1 MR. ZIMMERMAN: I guess we will have to get
2 back and make sure we know what the basis of that
3 calculation is.

4 MR. LEHR: Typically, in the descriptive
5 sections in a statement for the operating license stage,
6 try and present comparisons with the construction permit
7 phase so that the reader can get a feel for whether we
8 are talking about a large increase, a large decrease, or
9 something about the same. And with the number of
10 changes in the Harris plant, I think that would be
11 particularly important in this case.

12 I also wanted to understand exactly what the
13 terms "maximum power operation" and "minimum anticipated
14 power operation" are in terms of the headings given in
15 that table.

16 (Pause.)

17 MR. ZIMMERMAN: Steve, one of those answers
18 gave what we used for the thermal power level, right?

19 MR. HOGARTH: 2785 megawatts thermal equal to
20 100 percent capacity was what was used for the maximum
21 power.

22 MR. SHEPPARD: We will have to go back again
23 and see what the basis for the minimum anticipated loads
24 are.

25 MR. LEHR: But you're saying that the maximum

1 power operation --

2 MR. ZIMMERMAN: 100 percent capacity is 2785
3 megawatts thermal. That is what we used as 100 percent
4 capacity.

5 MR. LEHR: Okay. And that's your 100 percent
6 capacity number that was given in Section 3.4, which is
7 the heat dissipation rate?

8 MR. ZIMMERMAN: Right.

9 MR. LEHR: Get back to me and tell me what the
10 anticipated power operation/maximum power operation
11 numbers are. I'll probably revise the question 291.8 to
12 just reflect that, so that you will have it.

13 MR. ZIMMERMAN: Okay.

14 MR. LEHR: I asked a question on the cooling
15 towers, the grade level and the height of air inlet and
16 the height of the towers. I assume there have been some
17 minor changes from what is presented in the ER. I think
18 yesterday you were talking 526 feet above grade and I
19 think the ER says 520. There are some small changes.

20 MR. HOGARTH: Yes. The air inlet from the
21 towers is 263 to 292 feet above mean sealevel, the air
22 inlet section.

23 MR. LEHR: 263 to --

24 MR. HOGARTH: 292. The final grade for 1 and
25 2 cooling towers is 260 feet above mean sea level.

1 MR. LEHR: I'm sorry, I passed over another
2 question I had for table 3.3-1. What proportion of the
3 time under normal operating conditions would you expect
4 flow to be -- or operation to be this maximum power
5 number? Is that -- you're getting into I guess maybe a
6 capacity factor type thing here. But are we talking
7 about 70 percent of the time, 90 percent of the time?

8 MR. HOGARTH: I think it's 80 percent.

9 MR. LEHR: Is that given in the ER?

10 MR. HOGARTH: No, we are going to have to
11 check that, but I think it --

12 MR. SHEPPARD: That's the capacity factor we
13 normally see, 80 percent..

14 MR. ZIMMERMAN: That's normal design.

15 MR. LEHR: Okay. So that would be the
16 proportion of the time that you would be operating under
17 the flows given in the first column there in 3.3-1?

18 MR. ZIMMERMAN: That's correct; yes.

19 MR. LEHR: Okay. What is "minimum anticipated
20 power operation"? What power level is that, or what
21 does that term mean?

22 MR. SHEPPARD: We're not sure. We have to go
23 back and see what the basis for that calculation was.

24 MR. LEHR: In the statement we will try and
25 give the normally anticipated power levels, provide

1 descriptions on that basis, and impact assessments on
2 that. In some situations we prepare the impact
3 assessments for maximum conditions if they are
4 reasonable, or at any kind of a substantial time period
5 you're operating under, conditions that would maximize
6 any kind of impacts.

7 I don't anticipate that would be a problem in
8 this case, but that is what we are trying to do.

9 I had asked a number of questions on biocide
10 application. I would imagine that since talking with
11 the state early this week -- and they have hammered out
12 an agreement with you apparently on the draft NPDES
13 permit -- that that information I guess is available in
14 there or in your application for the NPDES.

15 Just as a way of information to me, do you
16 anticipate chlorinating all year round?

17 MR. HOGARTH: Service water, yes, we feel like
18 we probably will just to make sure that we keep the
19 system clean. The circulating water system though will
20 be based pretty much on operating experience. We don't
21 anticipate having to chlorinate that much, but we're
22 probably just going to have to go by experience. We
23 plan to monitor it and see what the system looks like
24 and then go from there.

25 MR. LEHR: Do you have a requirement in the

1 NPDES for a chlorine minimization program?

2 MR. HOGARTH: No. The reason is we agreed to
3 the minimum, the new standards, at Harris.

4 MR. LEHR: I see; okay. That will be a real
5 trick to monitor it at that low level. But with your
6 facilities here, you're equipped to do it if anybody
7 is.

8 Are Asiatic clams in the reservoir or expected
9 to be?

10 MR. HOGARTH: Asiatic clams are not in the
11 reservoir. They are in the Cape Fear River. So that's
12 one reason we have the capabilities for the service
13 water to chlorinate continuously, to make sure that we
14 do not have problems with the service water itself. But
15 so far we have not seen them on the site, in any streams
16 or creeks that we have impounded.

17 MR. LEHR: They are not reported from any of
18 the impoundment?

19 MR. HOGARTH: No. But they are in the Cape
20 Fear River.

21 MR. LEHR: This far up?

22 MR. HOGARTH: Yes.

23 MR. BILLUPS: Have Asiatic clams been a
24 concern at the Cape Fear steam plant?

25 MR. HOGARTH: No. We have had a few in the

1 Sudden plant earlier. We saw a few in that lake. But
2 that unit is on the northeast of Cape Fear where it is
3 sort of brackish, and I think it probably just cut them
4 down; if we got fresh enough, we saw a few; but we have
5 not had any problem at the Cape Fear plant.

6 MR. LEHR: I guess it wouldn't be a bit
7 surprising if you did wind up with them?

8 MR. HOGARTH: When you open it to fishing, you
9 get boats that come from here to there and everywhere,
10 plus the birds. It would not surprise me, no.

11 MR. SHEPPARD: I think we addressed that, too,
12 when we responded to the bulletin on Asiatic clams.

13 MR. LEHR: Okay. I haven't reviewed your
14 bulletin response on Asiatic clams.

15 MR. HOGARTH: I think we've taken all the
16 precautions we can to make sure the plant is protected,
17 and we do not expect a problem at all.

18 MR. LEHR: I guess the continuous low level
19 chlorination is probably about the only answer, unless
20 you want to be scraping out the water boxes and stuff
21 like that.

22 MR. HOGARTH: That's probably what we would
23 look at.

24 MR. LEHR: You indicated earlier you had
25 agreed to the lowest level. Is the .14 total residual

1 chlorine?

2 MR. HOGARTH: Yes.

3 MR. LEHR: That would be in the cooling tower
4 basin? You obviously can't measure at the diffuser
5 limits.

6 MR. HOGARTH: I don't have that with me, where
7 they had it written in the permit. We can get it and
8 explain it to you, but I think it is at a point in the
9 lake, we have to measure it -- we have to mix it with
10 the lake. There is sort of a mixing zone there that we
11 measure. But I will check that out at a break and
12 answer that. We have the permit downstairs.

13 MR. LEHR: I asked a question here, the basis
14 for a five-acre impacted area as an area you indicate in
15 the ER as far as chlorine discahrges. I guess that has
16 changed somewhat since you got a different discharge
17 location.

18 MR. HOGARTH: That was based on .2 milligrams
19 per liter discharge, and we didn't take into account any
20 chlorine demand on the water body itself. We just got
21 the time it would take the amount of water passing by to
22 get diluted. It comes to a little less than five
23 acres. But now, that was with a four-unit operation and
24 we have not recalculated. But we will do that.

25 MR. LEHR: I would imagine your whole section,

1 what is it, 5.3, would be revised in the ER because of
2 the change down to two units and the change in location
3 on the discharge structures.

4 MR. HOGARTH: Right.

5 MR. ZIMMERMAN: This mixing zone will be
6 reflected in our NPDES, which we expecting here
7 shortly.

8 MR. LEHR: That question 291.11 will go away
9 then.

10 MR. HOGARTH: Yes, because the cooling towers,
11 we had planned on chlorinating them one hour each per
12 day, and the discharge would be separate; they would not
13 be chlorinated at the same time. One would be
14 chlorinated, then the other, for one hour per day.

15 MR. LEHR: Do your calculations indicate that
16 you are likely to have a detectible residual presence,
17 then, all the time, or is your system parameter such --

18 MR. HOGARTH: Based on the experience now, we
19 probably will not see a residual.

20 MR. LEHR: Pardon me?

21 MR. HOGARTH: Based on the experience at our
22 other plants and the way we chlorinate, we do not see
23 much of a residual at all once you get at the point of
24 discharge.

25 MR. LEHR: You mean at the point of discharge,

1 or in the edge of your mixing zones?

2 MR. HOGARTH: The edge of the mixing zone,
3 which is outside the five acres really that we're
4 talking about.

5 MR. LEHR: Yes, I wouldn't think so.

6 MR. HOGARTH: Cape Fear water in this area has
7 a pretty high chlorine demand.

8 MR. LEHR: When we were on site yesterday, I
9 did not see it and I did not understand in the
10 description of the ER what the function was of this
11 cooling tower blowdown holding pond, the holding pond.
12 Is that still in the system design?

13 MR. HOGARTH: No.

14 MR. ZIMMERMAN: It is not in the design. Once
15 3 and 4 were eliminated, there was no longer a need for
16 that. So we're not going to have that.

17 MR. LEHR: What was the purpose of that thing
18 before? I don't quite understand. It's not really
19 relevant, but --

20 MR. ZIMMERMAN: Are you familiar with that
21 design?

22 MR. HOGARTH: Not really. It was to do with
23 the gravity flow. We had to hold it to get flow out.

24 MR. LEHR: To just build up head?

25 MR. HOGARTH: Right, to build up the head;

1 right.

2 MR. LEHR: Okay. So that question will go
3 away, too, as will the next one that was an unnumbered
4 question. I'm assume -- and I am talking about question
5 291.12 and the unnumbered question which followed. I
6 assume the letter you got had the same number.

7 Okay. I had asked for some copies of
8 references. I think they're pretty straightforward.

9 MR. HOGARTH: We will provide those to you
10 today right here. I think we have all of them except
11 one we had to order from EPA and we have not received it
12 yet. But the rest of them we will give you.

13 MR. LEHR: I think it would only be necessary
14 if you provide us a copy, that we need one for the local
15 document room or one downtown and maybe one for the
16 file. That's it. The purpose was not to have you
17 submit 200 copies or however many you needed.

18 MR. ZIMMERMAN: We'll submit those by separate
19 letter.

20 MR. LEHR: It was not clear to me yesterday on
21 the site visit, either, whether we expect discharges
22 from your main dam to exist continuously, or at all, or
23 what.

24 MR. HOGARTH: No. It will probably be
25 seasonal. If at all, it will be seasonal during the

1 spring. But we do not expect discharge from the main
2 dam. We have no requirements for maintaining any flow
3 below the main dam and we probably only expect it during
4 the wet season.

5 MR. ZIMMERMAN: This was reviewed back at the
6 construction permit phase. The assumption was that that
7 whole Buckhorn Creek was not going to be maintained as a
8 continuous stream.

9 MR. HOGARTH: There will still be two feeder
10 creeks that come into Buckhorn Creek a little lower that
11 will maintain some flow, but it was sort of an
12 intermittent creek anyway, Beaver and Buckhorn.

13 MR. LEHR: Okay.

14 MR. ZIMMERMAN: Normal dam seepage will still
15 probably have some flow in there, but there's no
16 requirement.

17 MR. LEHR: I don't know that I had any
18 particular concern whether there was going to be flow
19 there or not. I just wanted to know under what
20 conditions there would be. This I take it then would
21 only be flow over the main spillway?

22 MR. HOGARTH: Yes.

23 MR. LEHR: So you do not have capacity there
24 for multi-level discharges or anything?

25 MR. ZIMMERMAN: No.

1 MR. LEHR: Do you have the capability of--
2 Will you have subsurface gates or anything in the dam?
3 There seem to be some ports on the sides of the dam
4 there, but I didn't understand what they were.

5 MR. ZIMMERMAN: Do you know how that is
6 arranged?

7 MR. HOWE: One of the valves -- there are two
8 different elevations, so there is not total reliance on
9 discharge over the spillway to control the water levels
10 in the region of the reservoir.

11 THE REPORTER: I cannot hear you.

12 MR. HOWE: There are two valves, submerged
13 valves, from which releases from the reservoir can be
14 made. So we are not totally dependent on discharges
15 over the main spillway.

16 MR. BILLUPS: And one of those was what was
17 leaking, one of those two valves that are there?

18 MR. HOWE: That's correct.

19 MR. LEHR: But you will have the capability to
20 stop all releases except for any kind of seepage, but
21 stop all releases from the dam?

22 MR. HOGARTH: Yes.

23 MR. LEHR: The only other question I had, we
24 will probably formulate a formal question with respect
25 to the dam releases just to document it if it hasn't

1 been already. I don't think it has.

2 My final question relates back to the first
3 question we had, the miscellaneous question that would
4 be covered under that in asking for design changes. But
5 are your main structures, such as the inlet structure
6 design -- the cooling tower makeup structure, is that
7 built as described in the ER? It seemed to have more
8 ports than the drawing indicated. I didn't understand.
9 The drawings indicate 10 intake ports and I counted 14.

10 MR. PARSONS: The main intake structure for
11 the intake water to the cooling tower? Is that what
12 you're referring to?

13 MR. LEHR: Yes, not the emergency--

14 MR. PARSONS: We're constructing it as shown
15 on the drawings. We're also looking at some redesign
16 that may peel off part of the concrete involved with
17 that, but we control it for Unit 3 and 4. The Unit 1
18 and 2 side of the intake structure will be built as
19 shown, with possibly some modifications on the 3 and 4
20 side.

21 MR. LEHR: It just appeared to me to be larger
22 already than the drawing had indicated. The drawing
23 here on figure 3.4.2-7 says "reservoir makeup water
24 system intake structure." This is not the one that was
25 planned from the Cape Fear? -

1 MR. PARSONS: This is the one that was planned
2 from Cape Fear.

3 (Mr. Parsons indicates a document.)

4 MR. LEHR: Oh, all right. Fine. The other
5 one here -- This one here? All right. Yes. That will
6 show 14 intakes.

7 MR. PARSONS: Yes. We are building it as
8 shown there, with some possible modification on the 3
9 and 4 side.

10 MR. ZIMMERMAN: That's the Cape Fear?

11 MR. LEHR: Yes. You are right. I was looking
12 at -- Well, there are as many bays there as indicated.
13 Very good.

14 (Laughter.)

15 MR. LEHR: I don't think I have any further
16 questions right now -- oh, I wanted to ask you all one
17 more. Do you expect any need for acid addition for
18 scale control in the cooling tower system?

19 MR. HOGARTH: Not at the present time, we do
20 not.

21 MR. LEHR: Okay. I do not recall your
22 concentration factor, whether it was going to give you
23 any problems with that. But you do not anticipate
24 having to add any acid?

25 MR. HOGARTH: No.

1 MR. LEHR: Do you anticipate a change in the
2 concentration factors that would be indicated from the
3 water use diagrams in the plant in the ER? Do you plan
4 on operating as described?

5 MR. HOGARTH: As far as I know now.

6 (Pause.)

7 MR. LEHR: I think that pretty much does it
8 for me. I will formulate some formal requests for these
9 questions we have here so we can get the information
10 docketed. So that will be coming in a formal package
11 from Frank.

12 MR. BILLUPS: Frank, Ed Pentacost is also
13 going with us to talk to the state.

14 MR. MIRAGLIA: Okay. We'll go to Ed's
15 questioning in the terrestrial area.

16 John, you also had some discussions with Brian
17 Richter relative to his questions. Perhaps after Ed is
18 finished you can summarize those. Brian Richter did
19 discuss his questions and the responses with you
20 yesterday. But John can perhaps summarize a little bit
21 about those questions, so that the people here can
22 understand what the questions in that area were.

23 MR. LEHR: Okay.

24 MR. PENTACOST: Why don't I start, Frank, with
25 the two or three questions I have in addition to what I

1 have sent to you. One has to do with the drawdown of
2 the reservoir. Under ten-year low rainfall conditions,
3 as you stated earlier, the mean sealevel of the
4 reservoir wou'd go from 220 to 215. I assume that is
5 assuming all four units would be operating.

6 Now, is it something less than that, is that
7 correct, for only two units?

8 MR. HOGARTH: It probably would, yes. I don't
9 know that it would affect it too much; probably three or
10 four feet, but we have not gone back and evaluated
11 that.

12 MR. ZIMMERMAN: We will update that.

13 MR. HOGARTH: Yes. We will have to update
14 that.

15 MR. PENTACOST: Sort of along that same line,
16 I will be looking at probably wetland vegetation that
17 may be affected with the drawdown. Your figure 2.4.2-24
18 shows the shoreline in the bottom configuration with
19 isopleths. I'm just wondering if you have an enlarged
20 map from which this map was derived. It's a little
21 difficult to see contour lines here and to sort of
22 predict which arm of the reservoir --

23 MR. SHEPPARD: Which figure was that?
24 2.4.2-24?

25 MR. PENTACOST: Yes, sir.

1 MR. ZIMMERMAN: What you would like is an
2 enlarged?

3 MR. PENTACOST: Something that would show the
4 isopleths a little better, and I assume the map could be
5 enlarged.

6 MR. MIRAGLIA: Zimm, something like that, if
7 you do have it, could be provided under separate
8 cover. All it is, it's difficult to look at the
9 reduced drawing. So if you could provide at least one
10 copy for Ed, that would be sufficient.

11 MR. PENTACOST: We need that for the
12 calculations of exposed acreage during drawdown.

13 MR. ZIMMERMAN: We'll put that on our list for
14 a larger size.

15 MR. SHEPPARD: I think we can go back to the
16 drawing that the figure was made from.

17 MR. PENTACOST: We talked briefly yesterday
18 about the second question we had on the fish and
19 wildlife management plan. As I understand it at this
20 point, you have not prepared the plan and have some
21 general idea of what the components of the plan would
22 be. I think we would want to see that. If you do have
23 any preliminary information on what you were thinking of
24 as far as what species you might want to manage for, I
25 would appreciate it.

1 MR. HOGARTH: We will submit that.

2 MR. PENTACOST: I understand there has been a
3 change in the plan on the transmission line. I
4 understand the Harris-Harnett line is no longer needed.

5 MR. HOGARTH: It has been cancelled.

6 MR. PENTACOST: I believe in your discussion
7 of transmission line maintenance you mentioned an
8 erosion control plan would be filed with the State of
9 North Carolina prior to initial activities in
10 maintaining this line. Is this something that you would
11 have a copy of that we might be able to see? Have you
12 developed a plan?

13 MR. ZIMMERMAN: We can provide you a copy of
14 our soil erosion control plan.

15 MR. HOGARTH: I think you saw evidence of that
16 yesterday, the reseeding that is taking place. That is
17 part of that.

18 MR. PENTACOST: I wanted to kind of follow up
19 on that yesterday, too. As I understand, fescue is one
20 species used in your seed mix for the construction site,
21 one of the main grass species? Is that correct?

22 MR. HINDMAN: That's correct. We use a mix
23 that does include fescue.

24 MR. PENTACOST: Any information you might have
25 there. Will you have a map of all the areas that will

1 finally be reseeded or reforested once construction is
2 completed? Do you have those areas identified.

3 MR. PARSONS: Those can be identified. We can
4 put them on a map and show that. They will be
5 recorded.

6 MR. MIRAGLIA: I believe the Reporter is
7 having problems hearing some of the individuals. So if
8 you would speak up.

9 MR. PARSONS: You have to understand that
10 anything that gets disturbed out there just kind of in
11 the normal progress of construction is reseeded, and
12 sometimes it is not the real permanent reseeded, or
13 whatever. We continuously tear it up, or we have to
14 tear it up periodically. But the total final plan will
15 be documented.

16 MR. HOGARTH: If you are interested, I have a
17 map here I can show you of somewhat what we've done
18 already, the marked areas that we put in pines, and
19 barriers, and rows are planted, and that type of
20 stuff. We have that documented here that we'd be glad
21 to show you.

22 MR. PENTACOST: Okay. That's essentially all
23 that I have, other than the questions that I will start
24 through now that I have here. Any additional
25 information you may have on sightings of two endangered

1 species that were mentioned in the ER, the woodpecker
2 and bald eagle. You make reference to these. You
3 indicated that you did not believe the site provided a
4 habitat for these species.

5 MR. HOGARTH: There have been two additional
6 sightings of bald eagles. One was made in 1981 in April
7 and the other one was in August. So there have been a
8 total of five eagle sightings since 1972. Four were
9 observed near the Cape Fear River and one utilizing the
10 new reservoir, the Harris reservoir, at the facility.

11 MR. PENTACOST: Utilizing what? I did not
12 hear the last --

13 MR. HOGARTH: Utilizing the Harris Reservoir.
14 Four of the sitings, one was on Cape Fear River, and one
15 was on the reservoir itself, utilizing the reservoir.

16 MR. PENTACOST: Was that a winter siting?

17 MR. HOGARTH: That was the August sighting.

18 MR. PENTACOST: How about the woodpecker?

19 MR. HOGARTH: The one woodpecker cavity tree
20 was located in New Hill along SR Route 1411, which is
21 within about five miles of the plant. The North
22 Carolina State University students who are biologists
23 were undertaking a statewide survey, and they reported
24 they had seen one additional woodpecker during the
25 winter of 1979 near the Chatham-Harnett County line.

1 But there's no evidence -- we haven't found
2 any evidence of it on the site at all still to date. In
3 fact, there's a little habitat for it on the site.

4 MR. PENTACOST: My Question 29.2 of providing
5 concentration of isopleths resolves the deposition from
6 the cooling tower at Harris, and our impact statement at
7 the CP stage, there was a figure I believe that you
8 provided us with with of a 100 pounds per acre per year,
9 which at the time was state of the art modeling, and
10 that is much lower now, I understand. And with your
11 change in cutting back from four units to two units,
12 these figures will undoubtedly be lower.

13 Do you have a map showing this, and are there
14 any projections for during the summer months, the active
15 part of the growing season?

16 MR. HOGARTH: We have it still only on four
17 units, based on four units. Most of it is still --
18 well, just about all of it is still on the Harris site
19 itself. We predict about 70 percent of it will fall to
20 the ground within about 500 feet of the towers. Since
21 we have about 7,000 in the exclusion area, we expect all
22 of it really to be on the site.

23 Predominantly, if you look at it, it would
24 probably go towards U.S. 1. There's really no
25 agricultural there; it is mostly the reservoir.

1 MR. ZIMMERMAN: And the deposition rate is
2 decreasing.

3 MR. HOGARTH: Oh, yes; it is .8 pounds.

4 MR. ZIMMERMAN: It's gone from 100 pounds to
5 .8 pounds, 0.8.

6 MR. PENTACOST: And that again is based on
7 four units.

8 MR. HOGARTH: That is for four units.

9 MR. PENTACOST: So it would be something less
10 than that.

11 MR. HOGARTH: That's correct.

12 MR. ZIMMERMAN: That's pounds per acre per
13 year.

14 MR. HOGARTH: Pounds per acre per year for a
15 four-unit operation.

16 MR. PENTACOST: Question 290.3, provide aerial
17 photographs of the site area within a one-mile radius of
18 the cooling towers. If you have that, I think that
19 would be valuable to the whole branch.

20 MR. HOGARTH: We have these that were just
21 flown, so they are up to date.

22 MR. MIRAGLIA: I think in your responses,
23 Zimm, if you can indicate that you provided those
24 photographs at the meeting today that would be
25 sufficient.

1 MR. ZIMMERMAN: We will document that one.

2 MR. MIRAGLIA: Yes.

3 MR. PENTACOST: Question 290.4. I think we
4 can dispense with that. I think we have covered that
5 here, identification of construction areas to be
6 reforested and reseeded once construction has been
7 completed. If you do have a map, Bill, of those areas,
8 that would help.

9 MR. HOGARTH: We have it in a listing on the
10 map.

11 MR. PENTACOST: My final question, 290.5, just
12 a clarification of what you meant by "other attenuation
13 factors" in section 5.6.2, which I believe is dealing
14 with noise levels from the cooling towers.

15 MR. HOGARTH: We are talking to our safety
16 people about this and we will have to give you a written
17 response to that. We have gone to them to get this
18 clarified.

19 MR. PENTACOST: That's essentially all I had.

20 MR. MIRAGLIA: Thank you, Ed.

21 John, do you want to go over briefly the
22 questions that Brian had?

23 MR. LEHR: Okay. Brian Richter in the Siting
24 Analysis Branch had a number of questions in the
25 socioeconomic area. That is his area of responsibility

1 for the plant. That encompasses such things as cultural
2 resources, recreational facilities' descriptions,
3 impacts on the local economy, which primarily are
4 composed of tax benefits and payroll amount indications,
5 and description of purchased goods from the local area
6 and what kind of effect that will have on the local
7 economy.

8 And also, he is interested in changes to
9 transportation facilities, transmission lines, et
10 cetera, in the area, to further clarify any
11 socioeconomic impacts from the plant design, changes in
12 plant design and operation.

13 Let me just tell you off the top, question
14 310.3, asking for a revision of demographic data and
15 projections, has been deleted based on his discussions
16 with your people yesterday. Question 310.9, which
17 addressed average annual number of workers required for
18 operation of Units 1 and 2; that's also been deleted
19 based on his discussions. And question 310.10, which
20 inquires about the projected areas where operating
21 workers will reside, I assume that he just either got
22 his information, it was pointed out to him probably--

23 MR. MIRAGLIA: That was responded to in the
24 acceptance review questions, and when he went over those
25 responses he found those to be adequate. They are

1 already on the docket.

2 MR. LEHR: Yes. I was just going to point out
3 if they weren't that the question would have to stay.

4 I don't know if there's a whole lot of point
5 in going through the questions one at a time.

6 MR. MIRAGLIA: I don't think that's
7 necessary. I think that Brian had his discussions
8 yesterday.

9 We might also indicate to the folks here that
10 we had a meteorologist on the tour yesterday, a staff
11 meteorologist, and he also had some discussions with
12 your folks on Monday. I think all the questions in his
13 area of the information, I think you clearly understand
14 his questions and the information that is required
15 there. Those discussions were held Monday afternoon and
16 yesterday.

17 MR. ZIMMERMAN: I might point out for the
18 benefit of everyone that we do have tours for the
19 public. While yesterday we were constrained to the size
20 of the bus to tour around the group that we toured, if
21 anyone else knows of someone who wants to tour the site,
22 we have through our Visitors Center here -- you can
23 arrive a time and date to tour. So tours are
24 available.

25 MR. SHEPPARD: There was one thing that Brian

1 yesterday was asking about that we were not able to
2 respond right then. We provided him with some figures
3 on how much taxes we had paid, property taxes, to Wake
4 County for the site. He asked about how that stacked up
5 against the total revenues for Wake County.

6 The information that I got yesterday was that
7 the total tax levy for 1981 in Wake County was \$55.610
8 million. So he can compare that with ; taxes that we
9 paid.

10 MR. LEHR: Okay. I mentioned cultural
11 resources. For those of you who might be unfamiliar
12 with that term, that primarily has to do with
13 archeological artifacts and homes or other structures
14 that are either on or could be on the National Register
15 of Historic Places, and tried to get an indication of to
16 what extent, if any, these structures would be affected
17 by operation of the facility.

18 Brian had referred to a letter from the state
19 historian and there were three structures listed on it:
20 the Burke House, the Reagan House, and the old Dupris
21 House. Brian had inquired about the present status of
22 these present structures.

23 MR. HOGARTH: Would you like to have that? We
24 could give it to you now.

25 MR. MIRAGLIA: Brian received the responses to

1 those. You will get a formal question on that. And
2 again, that response can be documented.

3 MR. HOGARTH: I have one question. In one of
4 his questions he asked for some references, 2.6-4,
5 2.6-5, and 2.6-7, which all pertain to the
6 Harris-Harnett line. Since that has been cancelled, I
7 guess we can cancel the references also?

8 MR. MIRAGLIA: Yes, I think a response that
9 would indicate that that line is no longer associated or
10 contemplated for the project would be sufficient.

11 MR. LEHR: Based on looking at the question,
12 right.

13 MR. BILLUPS: I have one more question, Bill,
14 concerning a discussion I had with the state people on
15 Monday. What is your understanding in terms of an
16 operational 316(b) demonstration, the requirements there
17 for any information?

18 MR. HOGARTH: The NPDES permit does not
19 require it. I think the reason for that is the design.
20 You know, we went through EPA earlier and then you all
21 and all of it was taken into consideration of the
22 design. I think from an environmental standpoint it
23 could not be designed any better than it's been
24 designed. I think that we've minimized the impact.

25 MR. BILLUPS: The reason the question came to

1 mind was the point made that there may be some changes
2 since 2 and 4 intake will not be required. So would you
3 expect that you would have to go through that again in
4 terms of an intake?

5 MR. HOGARTH: I wouldn't think so, especially
6 since we have cancelled the makeup from Cape Fear, which
7 was one of the big concerns; and we have even reduced
8 the flow for two units through the makeup, and we
9 already designed it for .5 feet per second or less,
10 which is the EPA criteria. It will be that, or less.

11 MR. BILLUPS: So it would still meet that or
12 better that?

13 MR. HOGARTH: Yes.

14 MR. LEHR: Where is your .5 foot per second
15 designed for? Is that in front of the racks or in front
16 of the screens?

17 MR. HOGARTH: Through the screens.

18 MR. LEHR: Do you know what the design
19 velocity is in front of the trap house?

20 MR. HOGARTH: I really don't, no.

21

22

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25

1 MR. MIRAGLIA: Charlie, John, are you
2 finished? We will take a 15-minute break here before we
3 get into the next series of questions.

4 (Recess.)

5 MR. MIRAGLIA: Can we get started?

6 I guess we can continue with our discussion.
7 The next area will be in the radiological environmental
8 monitoring area, and Tim Mo from the Radiological
9 Assessment Branch of our Staff has a number of questions
10 he would like to discuss with CP&L. Tim?

11 MR. MO: I think the first six or seven
12 questions are mostly editorial in nature, and unless you
13 have a need to clarify these questions I would like to
14 go on.

15 MR. WARRINER: I think the only one, Tim, that
16 I would like to clarify --

17 MR. MIRAGLIA: Could I remind everyone to
18 speak loudly.

19 MR. WARRINER: The only one I may want to
20 clarify for you now, Tim, is on the question regarding
21 table 5.2.2-2, why cobalt-60 is reported twice. Yes,
22 that is a typographical error. The first value should
23 be associated with cobalt-58, then followed by
24 cobalt-60. The rest are self-explanatory types of
25 related areas.

1 MR. SHEPPARD: I might clarify one thing,
2 also. We responded by letter to the acceptance review
3 questions. The acceptance review questions, however,
4 were not folded into the document in amendment one.
5 They have been folded into the document in amendment
6 two, which was submitted March 31st. So I think that
7 while we understand your questions here, I think that we
8 have already taken care of them when you get a chance to
9 review that amendment.

10 MR. MO: We can go on to the next question,
11 which is 470.17, I think. This has to do -- the first
12 one has to do with the updatings of some tables on some
13 site-specific information.

14 MR. WARRINER: I believe you have the most
15 recent information. The populations have been updated.
16 The latest one I'm aware of is 1980, which I believe you
17 already have in our latest revision.

18 MR. SHEPPARD: We included the 1980 census
19 data in our latest amendment.

20 MR. WARRINER: This year we will be updating
21 the land use census, which will of course include the
22 critical receptor locations.

23 MR. MIRAGLIA: When can we expect that
24 update?

25 MR. WARRINER: Part of it we're planning to

1 hold, to delay it somewhat to make sure that any gardens
2 that are going to be grown in the area will be
3 sufficiently developed to be identified.

4 MR. HOGARTH: I'm not sure what the schedule
5 is on that. We are doing several plants and I'm not
6 sure about the schedule for Harris right now.

7 MR. MIRAGLIA: The current schedule calls for
8 the staff to prepare a draft environmental statement at
9 the operating license stage, and we would need that
10 information before that date fo the staff to run its
11 independent analysis with respect to radiological
12 impacts.

13 MR. HOGARTH: We'll have all of them by
14 September, but I'm not sure how Harris fits in.

15 MR. ZIMMERMAN: If you need it for the draft,
16 we'll do it as expeditiously as we can.

17 MR. HOGARTH: We'll make sure that's the first
18 one we're doing.

19 MR. MO: So in other words, you may not have
20 it ready for the DES input, for our DES input?

21 MR. ZIMMERMAN: It might be in to you, but I
22 don't know how much time you would need to review it
23 before you write your draft.

24 MR. MO: At least two months. We have to
25 submit this to the geologists.

1 MR. ZIMMERMAN: We can work out a schedule.

2 MR. SHEPPARD: So you are saying you would
3 probably need it by August.

4 MR. MIRAGLIA: Probably the end of July would
5 be the outside date in order for us to consider it.

6 MR. SHEPPARD: We'll go back and look at it.
7 I think we can be responsive to you.

8 MR. MIRAGLIA: That census would cover all the
9 items in the questions that Ken has with respect to
10 location of dairy herds, milk cows, gardens?

11 MR. WARRINER: Yes.

12 MR. MO: I think under the same question,
13 question number 4, this morning I think Charlie also
14 asked about the fish catch, the commercial operations.

15 MR. HOGARTH: It is all recreational, but we
16 will have to come up with some estimate. There is no
17 commercial.

18 MR. MO: Question number 470.18. It's no real
19 big deal, but I would just like to make sure by "gaseous
20 effluents" that means there is no particular involved
21 air. I thought perhaps airborne effluents --

22 MR. WARRINER: Yes, I believe you're right.
23 That should be "airborne effluents."

24 MR. MO: 470.19 is also an editorial type
25 thing. It should be, the D over Q should be in units of

-2

1 M .

2 MR. WARRINER: Yes, that's correct.

3 MR. MO: That would also reflect the most up
4 to date meteorological data?

5 MR. SHEPPARD: I believe we have provided that
6 with the acceptance review, the most up to date.

7 MR. ZIMMERMAN: We've already filed that in
8 the amendments already.

9 MR. MO: I think I read in the ER that you
10 have used the 1.19 Reg Guide to do your dose
11 calculations?

12 MR. WARRINER: That's correct.

13 MR. MO: What I'm asking in 470.20 is to get a
14 detailed listing of all the input parameters that you
15 used.

16 MR. WARRINER: For the maximum -- for the
17 calculation for the maximum exposed individual for the
18 gaseous, we used the radionuclide releases as indicated
19 in the ER OL table 3.5.3-3 .

20 MR. MO: 3.5.3-3?

21 MR. WARRINER: The critical receptors and the
22 site meteorology. Critical receptor locations was
23 provided in table 2.1.3-1 of the OL.

24 MR. MO: Okay.

25 MR. WARRINER: For the liquids for the maximum

1 exposed individual, radionuclide releases is provided in
2 table 3.5.2-4 and -5.

3 MR. MO: 3.5-what?

4 MR. WARRINER: 2-4 and -5.

5 The reservoir volume is provided in
6 2.4.2.3.2.1. We assume 80 percent mixing and that is
7 provided in that section. The reservoir letdown rate,
8 which is an annualized average value of 35 cubic feet
9 per second, is provided in section 2.4.2.3.2.

10 MR. MO: Would you repeat that again?

11 MR. WARRINER: Section 2.4.2.3.2.

12 For the population exposures, the gaseous
13 radionuclide releases are in the same table I've just
14 provided you for the maximum individual, table 3.5.3-3.
15 We have used the populations projected for the year 2000
16 as provided in the tables 2.1.2-1, which is zero to ten
17 miles, and in table 2.1.2-3, zero to 50 miles.

18 Livestock and milk and meat are provided in
19 table 2.1.3-3. As far as the food production, the
20 values we have used are 4,827 liters of milk per cow per
21 year; for meat production, the value used was 220
22 kilograms per cow per year. The references for those
23 values were obtained from the North Carolina crop and
24 livestock reporting service, the North Carolina
25 Department of Agriculture.

1 We have also made the conservative assumption
2 for the meat production that all the cows provided in
3 the tables are slaughtered that year, which is obviously
4 conservative.

5 MR. WAKOMA: Repeat that, please?

6 MR. WARRINER: Meat production was 220
7 kilograms per cow per year.

8 MR. MO: And milk production?

9 MR. WARRINER: 4,827 liters per cow.

10 MR. MO: Four thousand seven hundred and?

11 MR. WARRINER: 4,827.

12 MR. ZIMMERMAN: Is that it?

13 MR. WARRINER: Yes, for that question.

14 MR. ZIMMERMAN: Okay.

15 MR. MO: And question number 470.21. I notice
16 that that was --

17 MR. WARRINER: I'm sorry?

18 MR. SHEPPARD: Let me ask one question. Could
19 you explain why you want it only for reactor number
20 one?

21 MR. MIRAGLIA: It's a two-unit application.
22 We do want it for unit two.

23 MR. SHEPPARD: We can provide those. We would
24 like to make sure that the request was for both units.

25 MR. MO: Yes.

1 The next question has to do with the
2 radiological monitoring. What I wanted to know is, why
3 was -- there were two upgradients at 7,000 feet. Why
4 was that not included as a sampling station?

5 MR. WARRINER: It was not included, and we
6 will certainly reconsider again including it, but our
7 basis was that we will be sampling the ground water
8 right at the plant site. It's a common header
9 arrangement.

10 We feel we can get a good representative
11 sample from studies of the site. We know that the
12 percolation for the soil is very poor, and also the
13 hydraulic gradient for ground water is very slow. And
14 we feel the most sensitive measurement will be at the
15 plant site well. And of course, if we did detect any
16 activity we would expand our program.

17 MR. ZIMMERMAN: It flows generally to the
18 reservoir.

19 MR. MO: The next question has to do with the
20 control station.

21 MR. SHEPPARD: Part B there?

22 MR. MO: Yes.

23 MR. WARRINER: Your question in part B,
24 specify the source of milk. The source will be from a
25 commercial dairy and will be contained such that it's

1 non-treated or raw milk collection. The reason we have
2 selected Pittsboro as a control station is that it is
3 greater than ten miles from the plant site. It's, more
4 accurately, closer to 13 miles in the northwest sector,
5 which is one of the lower D over Q sectors, that we feel
6 will be unaffected by plant operation, is the primary
7 reason we have selected that.

8 It is also a good source for like samples for
9 comparison with other indicator stations as well. And
10 it's also convenient to travel to obtain samples from
11 that area. So that is the reason we've selected
12 Pittsboro for that control station.

13 MR. MO: I think the last question, C, has to
14 do with the -- that is updating -- the way I read it in
15 there, it is for four reactors, right?

16 MR. WARRINER: I believe those tables relate
17 to meteorological data and land use census. So they
18 will be updated.

19 MR. MO: I think that's all I have.

20 MR. MIRAGLIA: I think that concludes the
21 discussion of the questions that the staff has had since
22 the acceptance review. As I indicated, we would
23 formally transmit these questions to CP&L and CP&L would
24 be expected to formally respond to the questions on the
25 docket.

1 We have a number of other individuals present
2 in the room. I would like to afford an opportunity for
3 any comments by any of our regional people or any
4 comments that the region would like to make or questions
5 the region might have. Don?

6 (No response.)

7 MR. MIRAGLIA: Does EPA have any comments or
8 questions they would like to make?

9 MR. WAKAMO: I think Chuck Billups and John
10 Lehr covered all the questions we have. I understand
11 the NPDS permit update is possibly to be provided this
12 week, so that takes care of that area.

13 The one question I would like to just make
14 sure on, is where is the nearest down-water, downstream
15 drinking supply?

16 MR. WARRINER: Off the Cape Fear River,
17 approximately 12 miles downstream.

18 MR. WAKAMO: That's all the questions I had.

19 MR. MIRAGLIA: Dr. Wilson, would you care to
20 make any comment? Do you have any questions?

21 MR. WILSON: I just had one question for Mr.
22 Warriner about milk sampling. Most of the prevailing
23 winds are to, I guess, the northeast?

24 MR. WARRINER: That's correct.

25 MR. WILSON: Pittsboro is to the northwest of

1 the plant. I wonder if you took that into
2 consideration.

3 MR. WARRINER: Definitely. That was one of
4 the key bases for selecting Pittsboro, because Pittsboro
5 is a control station that we are trying to sample, that
6 won't be -- it's a control sample.

7 MR. MIRAGLIA: It's a control sample.

8 MR. WARRINER: We have located dairy cattle,
9 including a one-family cow, closer in, more in the
10 critical sectors as far as site meteorology, and we will
11 be sampling those and contrasting those with Pittsboro.

12 MR. MIRAGLIA: Are there any other questions
13 or comments anyone would have?

14 (No response.)

15 MR. MIRAGLIA: If not, we have made a number
16 of appointments to meet with state officials this
17 afternoon and some of our reviewers will be keeping
18 those appointments. Some of us will remain here,
19 because the agenda that was published indicated that
20 there would be staff available in the afternoon. We
21 have no other indications whether there are going to be
22 any other state or local people showing up this
23 afternoon. But some of us will stay until early
24 afternoon to discuss any matters that may be of interest
25 to those individuals.

1 MR. ZIMMERMAN: I might say, we are going to
2 schedule lunch based on whatever our agenda ends up
3 being from this morning's session. So lunch will be
4 delivered here when it is appropriate.

5 MR. MIRAGLIA: If there are no further
6 comments, we will adjourn. Thank you.

7 (Whereupon, at 10:50 a.m., the meeting was
8 adjourned.)

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