

NUCLEAR REGULATORY COMMISSION



50-400

In the Matter of:

PUBLIC MEETING

SHARON HARRIS NUCLEAR POWER PLANT

NRC ENVIRONMENTAL REVIEW

DATE: April 7, 1982 PAGES: 1 - 90

AT: Apex, North Carolina

DESIGNATED ORIGINAL
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1 UNITED STATES OF AMERICA
2 NUCLEAR REGULATORY COMMISSION
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6 PUBLIC MEETING
7 SHARON HARRIS NUCLEAR POWER PLANT
8 NRC ENVIRONMENTAL REVIEW
9
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11 Apex High School,
12 Apex, North Carolina
13 Wednesday, April 7, 1982
14

15 The meeting convened, pursuant to notice, at
16 7:08 o'clock p.m., the Honorable Bob Heater, Wake County
17 Commissioner, presiding.

18 PRESENT FOR THE NRC:

19 BOB TEDESCO
20 FRANK MIRAGLIA
21 DANIEL MONTGOMERY
22 FRANK LONG
23 JOHN LEHR
24 CHARLES BILLUPS
25

1 PRESENT FOR THE NRC (continued):

2 ED PENTACOST
3 CHARLES FARRELL
4 BRIAN RICHTER
5 PHIL STOHR

6 ALSO PRESENT:

7 BOB HEATER, Wake County Commissioner
8 COLTON BOOTH
9 SARAH DAVIS
10 WELLS EDDLEMAN
11 JIM HENDERSON
12 BIBBIE MOORE
13 JOHN BERNARD
14 MARY ROSENSON
15 JIM FRENCH
16 RICHARD WILSON, M.D.
17 JANE SHARP
18 BILL YEAGER

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(7:08 p.m.)

3 MR. HEATER: It is 7:08. It appears that most
4 of the people have come in, so we will get started. We
5 are all set to start this NRC meeting this evening. Our
6 transcription service is all set up and I have been
7 asked by the NRC to moderate this meeting.

8 My name is Bob Heater and I am your Wake
9 County Commissioner representing this district. The
10 meeting is called to allow members of the public to
11 address the NRC Staff. These gentlemen are charged with
12 reviewing the environmental impact statement as a part
13 of an operating license procedure for the Sharon Harris
14 plant.

15 I remind you that there is a sign-up sheet on
16 the front table outside the door. The order of the
17 people on that sheet is the order on which I will call
18 them to address the Staff.

19 The NRC Staff is here and I would like them to
20 introduce themselves at this time and each one of them
21 explain what their purpose will be in this meeting. At
22 this time I would like to introduce Mr. Robert Tedesco
23 of Washington, D. C. and I will turn the meeting over to
24 him at this point.

25 MR. TEDESCO: Thank you. I am Robert Tedesco,

1 the Assistant Director for Licensing. As indicated by
2 Mr. Heater, this is a public meeting which is being held
3 to allow us to have a discussion with the public and
4 with the Staff regarding the preliminary information
5 concerning the environmental review on the Sharon Harris
6 project.

7 There are a number of members of the
8 Regulatory Commission Staff here tonight, each of which
9 has a speciality that they can share with you and to
10 respond to questions as they arise with regard to the
11 particular evaluation that they have done. This is in
12 reality the beginning of our review. The details of our
13 evaluation are not yet complete.

14 The first report that we expect to prepare
15 should be ready sometime in October of this year. That
16 will be our draft environmental statement. At that time
17 comments will be received on the contents of the report
18 from a number of Federal and state agencies as well as
19 others as appropriate.

20 At this time I would like to call upon Mr.
21 Frank Miraglia, who is the Branch Chief and bears the
22 responsibility for the Sharon Harris project. He will
23 give you a brief summary of where we are at this stage
24 of review, as well as to introduce the Staff members.

25 Mr. Miraglia.

1 MR. MIRAGLIA: Thank you, Bob. My name is
2 Frank Miraglia. I am Branch Chief, Licensing Branch 3,
3 Division of Licensing, U.S. NRC. My Branch has the
4 responsibility for the Sharon Harris project, both the
5 management of the safety and environmental reviews.

6 As Mr. Tedesco has mentioned, this review,
7 which is being initiated, this environmental review,
8 represented the second environmental assessment by the
9 Staff of the environmental effects associated with the
10 operation of the Sharon Harris project. The first
11 assessment was completed and published in the form of a
12 revised final environmental statement in March of 1974.

13 This reassessment will consider information
14 that will update that previous evaluation in four ways.
15 The first way is by evaluating changes to the facility
16 design and operation that will result in different
17 impacts from those that were assessed and evaluated at
18 the pre-construction period.

19 Secondly, it will evaluate the results of any
20 relevant new information that has become available since
21 the time that that initial assessment was published.
22 Third, we will also consider and factor into our review
23 new environmental policies and statutes that have a
24 bearing on the licensing action that is before the
25 Commission.

1 And, four, we will identify any unresolved
2 safety issues or surveillance needs that are required to
3 be placed as conditions of the license in the form of
4 technical specifications to be sure that the
5 environmental values in the Sharon Harris vicinity are
6 protected.

7 We have been in the site vicinity since
8 Tuesday morning. Tuesday we spent at the site touring
9 the facility. The members of the Staff were meeting
10 with the CP&L, toured the facility and the Sharon Harris
11 project, with principal focus on the interfaces between
12 the plant and the surrounding environment.

13 The Staff completed an acceptance review of
14 the environmental report that was submitted by CP&L late
15 last year. As a result of that acceptance review we
16 requested additional information from CP&L. They
17 formally responded to those questions. The Staff
18 reviewed those responses and during the course of the
19 site visit additional requests for information were
20 developed.

21 Those requests were discussed this morning at
22 the Sharon Harris site with CP&L and will be formally
23 transmitted to the utility for a formal response.

24 At this time I would like to introduce some of
25 the Staff members who are here and ask them to identify

1 themselves and their area of review responsibility that
2 they have. We will start at the far left with Tim Mo.

3 MR. MO: My name is Tim Mo. I am with the
4 Radiological Assessment Branch and I am concerned with
5 the radiological impact from normal operations off-site.

6 MR. RICHTER: My name is Brian Richter. I am
7 in the Site Analysis Branch. My area of
8 responsibilities include the socio-economic impacts of
9 the plant operation.

10 MR. FERRELL: My name is Charles Ferrell. I
11 am a site analyst in the Siting Analysis Branch. My
12 area of review will be demography and off-site hazards.

13 MR. PENTACOST: My name is Edwin Pentacost. I
14 am in the Environmental Engineering Branch. My area of
15 responsibility will be operational impacts due to
16 vegetation and wildlife.

17 MR. BILLUPS: My name is Charlie Billups. I am
18 in the Environmental Engineering Branch and as an
19 aquatic scientist I will be responsible for the review
20 of non-radiological impacts of the plant on primarily
21 fisheries.

22 MR. LEHR: My name is John Lehr. I am Senior
23 Environmental Engineer in the Environmental Engineering
24 Branch, U.S. NRC. My area of interest on this case will
25 be water quality impacts, analysis of chemical

1 discharges to site waters.

2 MR. MONTGOMERY: I am Dan Montgomery. I am
3 with the Region II office. I am Chief of the
4 Independent Measurements and Environmental Protection
5 Section. As opposed to the other gentlemen, we are from
6 the regional office and our responsibilities are
7 primarily in inspecting against the construction of the
8 facility and eventually the operation.

9 In that area we will be involved in reviewing
10 the pre-operational environmental monitoring program
11 which will be initiated prior to operation of the
12 plant. Ultimately, we would have the responsibility for
13 ensuring that all of the environmental monitoring
14 requirements by the NRC are implemented and, in addition
15 to that, the NRC at all current operational plants has
16 developed a direct radiation monitoring network around
17 all operating facilities and we will have responsibility
18 for implementation of that program.

19 MR. LONG: I am Frank Long, also from the
20 Atlanta Region II NRC office. I am Chief of one of two
21 operating project management branches. We are charged
22 with overall responsibility. My branch is composed of
23 project managers, basically, and we have at all sites,
24 as we do at the Harris plant, a resident inspector who
25 is an on-site representative of the NRC.

1 We have a very broad inspection program
2 throughout construction. This is related to actual
3 construction work, both civil, electrical, mechanical
4 and the various skills employed in the construction. We
5 evaluate the management programs for control of the
6 quality of construction and compliance with codes and
7 standards that are applicable.

8 We also have responsibility for a
9 pre-operational test program which begins in the late
10 phases of construction and continues on through plant
11 start-up, through plant ascension, to power.

12 We also have a very comprehensive operating
13 reactor inspection program. One of our major functions
14 is the evaluation of various management programs,
15 qualifications of people, training programs and those
16 things which lead to not only the quality of
17 construction and testing but the quality of plant
18 operations at a later date.

19 MS. ROTHSCILD: My name is Marjorie
20 Rothschild. I am a lawyer in the NRC headquarters
21 office of the Executive Legal Director and I advise the
22 Staff on any legal matters which may come up as a part
23 of their review of the Sharon Harris licensing
24 application.

25 I am also one of the attorneys who represent

1 the Staff in any hearings that might be held on the
2 Sharon Harris application.

3 MR. HEATER: Thank you, gentlemen, ladies. At
4 this time we will proceed with the people who have
5 signed up. The first one will be Mr. Colten Booth. Mr.
6 Booth, if you will come around and come up the steps to
7 the podium we will be glad to hear from you, sir.

8 MS. MOORE: I have a question. I am wondering
9 how people -- do you have a format for people asking
10 questions, because I have two questions, just based on
11 how you introduced your areas of expertise. I wanted
12 some clarification on two things.

13 MR. TEDESCO: Go ahead.

14 MR. HEATER: If you will ask the questions now
15 and I will repeat it.

16 MS. MOORE: My interest is in knowing what is
17 included in the term "the surrounding environment",
18 whether that is a -- I'm sure that varies depending on
19 whether your speciality is aquatic interests or
20 vegetation or plant demography, but what does that
21 surrounding area mean?

22 And the other one is, is there any way to
23 share with us what kinds of additional information have
24 currently been requested?

25 MR. HEATER: The first question was what does

1 "the surrounding area environment" mean, and the second
2 question is is there any way of sharing the information
3 with you. Would that be correct? Does that correctly
4 state your questions?

5 MS. MOORE: In your meetings with CP&L you
6 have requested some additional information from them. I
7 am wondering if someone could simply state what those
8 areas are.

9 MR. TEDESCO: Yes, we will. Frank, will you
10 answer that?

11 MR. MIRAGLIA: First of all, in response to
12 your first question, the surrounding environs considers
13 the environmental impacts associated with the effluents
14 from the facility in terms of radiological effluents and
15 non-radiological effluents. That would include effects
16 on terrestrial ecology, aquatic ecology, radiological
17 assessment of the releases in the site environs, again
18 from a terrestrial ecology and an aquatic ecology point
19 of view.

20 Environmental assessment will also include an
21 assessment of the socio-economic impact of the operation
22 of the facility on the area.

23 With respect to the second part of your
24 question as to the types of information that we
25 requested of CP&L this morning, additional information

1 was asked in almost each of those areas. I will try to
2 briefly characterize them for you.

3 With respect to radiological monitoring,
4 environmental monitoring, we asked for an updated land
5 use census in terms of locating nearest dairy herds,
6 vegetable gardens, meat supplies. Again, this is with
7 the view of establishing what the food chain would be
8 and appropriate consideration of uptake of any potential
9 radionuclides in their environment. And we assess what
10 the radiological consequences of those might be.

11 We asked for additional information on the
12 water use of the facility, flow rates, water makeup,
13 biocide additions, chlorination of the cooling water.
14 We look at the effects of the chemical releases in the
15 aquatic area. We have asked for information relative to
16 the planned recreational uses that might be made at the
17 Harris reservoir as a result of construction of the
18 reservoir.

19 We asked questions in the socio-economic area
20 indicating need for information as to the amount of
21 taxes that would be paid and how those taxes relate to
22 the tax situation in the country.

23 We have asked for information relative to the
24 -- some of the cultural resources in the area that might
25 be affected, whether they be any historic or

1 archaeological areas that would require some sort of
2 protections under the various statutes that do protect
3 them.

4 It is a very broad characterization. I do not
5 know if that is sufficient for your needs. Do you have
6 a follow-up question?

7 MS. MOORE: It was much more detailed and I
8 appreciate that information, but when you are talking
9 about effluents in the terrestrial limit, are you
10 talking about -- I am being a little facetious -- two
11 feet or something that any land animals inhabit, their
12 hunting range, like squirrels, or are you talking about
13 water, 100 yards or five miles or 20?

14 MR. MIRAGLIA: From a radiological point of
15 view we look at the potential effects out to 50 miles.

16 MS. MOORE: That would also be for like
17 windborne or airborne?

18 MR. MIRAGLIA: That is correct.

19 MR. HEATER: I think we will hear the
20 statements of the people that signed up first and then
21 we will come back to the questions, if you would, since
22 we stated we would.

23 PUBLIC STATEMENT OF COLTON BOOTH

24 MR. BOOTH: My name is Colton Booth. I live
25 in Cary, North Carolina. I speak as a private citizen.

1 I have visited the Sharon Harris site. I have been in
2 the coal business for some eleven years of my life, so I
3 can speak with some authority about a coal-fired plant.
4 I lived in West Virginia so I can speak with some
5 authority about hydroelectric power plants.

6 And in my mind I am satisfied that the Sharon
7 Harris Plant will provide adequate electricity to our
8 vicinity. I am satisfied with all the environmental
9 situations that could be prevailing, such as coal or
10 hydroelectric and nuclear. All of these have some
11 adverse effects on the livelihood of our community, but
12 I cannot see any more adverse effect by what is being
13 built there by what I have seen the rest of my life.

14 Personally, my family, we enjoy electricity
15 very much. I am glad to see the plant here. I am glad
16 to see the tax base and I think they are doing an
17 excellent job and if we have an accident I just hope
18 they have room for me over there because I think it's a
19 very safe place.

20 Thank you for letting me speak.

21 MR. HEATER: Thank you, Mr. Booth.

22 Next will be Mr. Fred Oliver. If Mr. Oliver
23 will come up.

24 (No response.)

25 MR. HEATER: We will go to the third one and

1 come back to Mr. Oliver. Sarah Davis.

2 PUBLIC STATEMENT OF SARAH DAVIS

3 MS. DAVIS: My name is Sarah Davis. I live
4 here in Apex on Tender Road about five or six miles from
5 the Sharon Harris plant.

6 As a community health worker I have two main
7 concerns about the operation of the Sharon Harris
8 nuclear plant. These concerns are: What will be the
9 health implication of the Sharon Harris plant? And,
10 number two, what is and will be the economic consequence
11 of the plant's continued construction and operation?

12 As a community health worker I am very aware
13 of the fact that what happens in a community directly
14 affects the health and wellbeing of individuals. I
15 believe there are a number of unanswered questions and
16 unexplained facts about the health effects of nuclear
17 power on the surrounding population.

18 Since abnormalities from radiation exposures
19 are not obvious for two or three generations, can we in
20 Apex expect to see a rise in the number of patients with
21 cancer, leukemia, mental retardation in years to come?
22 Why was there an unexplained rise in the number of
23 miscarriages and low thyroid diseases in local newborns
24 after the accident on Three Mile Island?

25 How does the stress caused by the fear and

1 uncertainty of living around a nuclear power plant
2 affect the health of our people? Health problems are
3 often made worse by financial problems. Therefore, I am
4 also worried about the cost of the Sharon Harris.

5 Again, these are unanswered questions. Why
6 would we pay for the plant in the three Sharon Harris
7 reactors that have been cancelled? Who will pay for
8 cleaning up if we have an accident like Three Mile
9 Island? If nuclear power is so cheap and reliable, why
10 do we keep paying more for electricity while the CP&L
11 nuclear plant in Wilmington breaks down.

12 Since a nuclear reactor only has a life span
13 of 30 years, how can we be sure our children and
14 grandchildren will be protected from the dangerous
15 contaminated plant, and since our regular homeowner's
16 insurance does not cover nuclear accidents, the
17 Price-Anderson Act provides inadequate coverage for
18 serious accidents.

19 Who will pay for damage to my home and land if
20 an accident occurs? I have a patient who is 87 years
21 old. She lives on a fixed income. Her electrical bill
22 for this year has run almost double per month. I do not
23 think patients or my neighbors can stay healthy and
24 continue to pay and eventually live around the Sharon
25 Harris Nuclear Plant.

1 MR. HEATER: Has Mr. Fred Oliver come back in?

2 (No response.)

3 MR. HEATER: I will move to Mr. Wells Eddleman.

4 MR. EDDLEMAN: E-d-d-l-e-m-a-n. There is
5 about 50 ways to spell that name.

6 PUBLIC STATEMENT OF WELLS EDDLEMAN

7 MR. EDDLEMAN: Maybe these electronic things
8 weren't such a good idea after all.

9 I had a number of questions about the
10 environmental review of this plant. First, how is the
11 question of the effect of the radon gas that is released
12 by the mining and milling of uranium and the mill
13 tailings being taken into account?

14 I understand that this is a pretty substantial
15 radiation effect and radon has a half-life of about
16 three days, which happens to be about the time it takes
17 the winds to blow from the main uranium mill areas over
18 to here. So I am assuming about half the concentration
19 that pops into the atmosphere over there is
20 technologically-enhanced radiation. That is, if we
21 didn't dig it up, it wouldn't get to us. It is easy
22 that that would get to us.

23 I am concerned about the radiation monitoring,
24 first as to the level of the study of the existing
25 background around the site and in the surrounding area

1 and if it's out to 50 miles, I think that is good. But
2 in a 50-mile radius you would have to examine quite a
3 number of places to get a statistically significant
4 reading. I am wondering if that is being done. I wish
5 it were.

6 The reason I am concerned about monitoring
7 before the plant starts up, in the stuff I have been
8 able to find out about the plant the only thing that is
9 in there is kind of a fudge factor that says well, there
10 are some areas in North Carolina that have some
11 background as high as this number. The number they put
12 in there, I think, was around 187 millirems a year,
13 which is a pretty high cosmic background level, but
14 there is no indication of anything like that was ever
15 measured around the site.

16 I would also like to know if they are
17 analyzing for all the specific radionuclides. In
18 determining levels of them I would be curious as to what
19 the accuracy of the equipment is, how thoroughly you
20 would have to check over an area to make sure you find a
21 certain concentration -- in other words, what your
22 statistical error limits are in inspecting an area. If
23 you sample a few places, what does that tell you with
24 confidence about the amount of radionuclides that are in
25 the area already?

1 I am further concerned as to what provisions
2 would be made for continuous and comprehensive
3 monitoring in communities within 30 miles of the plant
4 site after it goes on line. The Durham County
5 Democratic Convention passed a resolution calling for
6 this this Saturday. I think some of the other groups
7 around have been interested in it.

8 Will there be provisions for independent
9 monitoring, independent continuous, independent periodic
10 testing, besides CP&L, the NRC and the State? I have a
11 particular reason for this concern, which is that the
12 State Radiation Protection Commission meeting was in
13 February.

14 One of the concerns stated by the staff there
15 was that they were already having to cut back the
16 environmental monitoring for radiation around the
17 existing nuclear plants in the Carolinas because of
18 inadequate funds to get sufficient monitoring licenses.

19 I want to know also how fast we can find out
20 if something goes wrong with the plant. What kind of
21 alerting systems are going to be there? Who is going to
22 have the authority to initiate them? If the company
23 decides they don't want to tell us something, will the
24 NRC tell us since they have somebody there all the time?

25 I am concerned about this because the average

1 wind speed at the site is, as I recall from the reports
2 that were put out earlier, in excess of seven miles an
3 hour. That means if something escapes you have got a
4 little over two hours to Raleigh, a little over three
5 hours to Chapel Hill, maybe four hours to most of Durham.

6 If they decide they don't want to tell you
7 fast, how do you know and what can you do about it?
8 This ties into the question of evacuation planning. If
9 it turns out that we should have to evacuate this place,
10 how are we going to take care of things like the major
11 hospitals around here? How about Central Prison? What
12 about people who don't have their own transportation?

13 I am wondering how these things are going to
14 be addressed. I am also very concerned about the
15 question of how far out you have to plan to deal with
16 these things. If you are within ten miles of the site,
17 that is nice, but what barrier is going to stop the
18 effects of any ten-mile mark? How is this going to be
19 dealt with?

20 I am concerned as to how the cost-benefit
21 analysis of the plant is carried out, particularly with
22 respect to whether it's really worth it to complete the
23 things or whether you should invest the money to produce
24 energy in other ways and make the equivalent amount of
25 energy available.

1 I am particularly concerned about this because
2 of the operating record of some of these plants. I
3 would like to know how long this plant is really going
4 to last, not just how long the architect-engineer
5 projects. I understand the steam generators are
6 Westinghouse Model D, which is a defective design, and
7 such are having to be replaced some places or
8 extensively modified. I wonder how that's going to
9 affect the cost of the plant in its lifetime.

10 I wonder what you are going to do with a steam
11 generator that's worn out and is full of radioactive
12 material, what the environmental impact of either
13 storing it on the site or trying to disassemble it or
14 trying to dispose of it. I guess parts of it, at least,
15 you get high level nuclear waste, not low level -- how
16 that would be dealt with.

17 I am concerned about various things that I
18 have heard about what is going on at the site. I would
19 just like to ask the NRC to take a look into these. I
20 cannot verify them for myself but, for example, I have
21 heard people say -- they tell me they work there --
22 saying that non-conforming materials that are rejected
23 on one shift are installed on the next shift, that when
24 they do the static pressure tests on certain equipment
25 that the pipes that lead from the testing pressure

1 meters into the equipment are sealed themselves.

2 So all you are measuring is whether that pipe
3 is welded properly. Well, if they have the best welder
4 they have got weld that one pipe, the vessel itself is
5 not really getting pressure-tested at all.

6 I am concerned about the water quality and
7 supply downriver from the place. I think that
8 cancelling two units makes a difference, but I am still
9 concerned about what happens if you take a very large
10 proportion of the Cape Fear flow, how much you would
11 concentrated in the loops that already exist in that
12 water, what the effect on the plant would be for various
13 pollutants that would be taken in for emergency cooling.

14 I have some questions about the cooling
15 towers. This is a very high humidity area and a very
16 low wind speed area compared to many others. I am
17 wondering how efficient the cooling towers will be,
18 whether they will grow more molds and have other
19 problems, and really whether they can get rid of that
20 much humidity if it is that humid around it. This area
21 does have pretty high humidity most of the year.

22 I am also wondering whether the added humidity
23 from those towers will have other environmental effects
24 -- particularly fog on the roadways, fog on the lakes
25 where people might be boating, whether it might require

1 the air conditioners downwind of the plant to work
2 harder because they are getting more humidity. I am
3 serious about that.

4 I think you might have a tiny effect, but
5 multiply it by one million air conditioners and you may
6 have a sizeable effect.

7 There are some questions that have come up
8 just listening to this. I wonder how many of you all
9 who are here now were here in 1974 when the previous
10 review was done or worked with the NRC at that time and
11 the AEC. I would like to know what methods are being
12 considered or what method is planned to decommission the
13 Harris Plant, what the environmental impacts of that
14 will be particularly with respect to the very long lived
15 activation products like nickle-59, niopium-94 and so
16 on.

17 I am concerned about the environmental effects
18 of nuclear waste transportation to this plant for
19 storage at some of the other CP&L plants and from it and
20 storage at it, the question of whether the spent fuel
21 pool will actually hold itself together, and whether its
22 space is adequate for how much will be in it and whether
23 they can make sure that accidents there will not have
24 too serious an impact on us, whether the containment
25 building can stand up to -- not the containment, pardon

1 me, the fuel building, whether that can stand up to
2 certain forms of terrorism.

3 For example, we have Ft. Bragg right down the
4 road here where things unfortunately are stolen from
5 them a lot. One of the things that the Army and the Air
6 Force have now are these precision guided munitions
7 which can blow a hole in almost any designated spot in
8 anything. And although I would certainly hate to think
9 that somebody would be crazy enough to try it, I think
10 things like this have to be considered before they might
11 happen.

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1 I am also curious as to what the benefits are
2 that are considered to derive from the plant, what kind
3 of performance the plant is expected to have and whether
4 CP&L's past experience and operating record is being
5 figured into that. Lately I have been seeing things.
6 Whenever their actual performance goes down they predict
7 that it will still be a few more years before we can get
8 it back up and then it will be good again. I am a
9 little skeptical of that.

10 I would like to finish up with possibly a
11 apocryphal question. There is a story about hearings
12 like this in western North Carolina where the Duke Power
13 Company came and gave a lot of technical information
14 about how safe the nuclear plant there was going to be.
15 The story goes that there was this old farmer in the
16 audience. When they asked for questions, he got up and
17 said well, sir, you have given me a lot of very detailed
18 information. You have answered most of the questions
19 that I had, but I just have one more. That is, what is
20 the worst thing that can go wrong with this plant and
21 what consequences would that have.

22 And I am rather disturbed about whether the
23 NRC is really dealing with the worst case, particularly
24 in light of what has already happened at Three Mile
25 Island and a number of other plants.

1 MR. HEATER: Mr. Tedesco would like to have
2 someone reply to some of your questions.

3 MR. MIRAGLIA: Mr. Eddleman, you had a large
4 number of questions. I will attempt to answer some of
5 those. I was trying to keep a list. I may not have
6 them all and we may have some other members of the Staff
7 here who can address some of the other areas and we will
8 have them do that.

9 Your first issue was with respect to radon and
10 the contribution of the radiological impact from radon
11 releases that would emanate from emissions from the
12 mining operation used to get uranium that would be used
13 to fuel the Harris reactor.

14 The NRC has developed a position relatively to
15 radon and the releases in the environment and the
16 environmental impact that would be attributable to the
17 licensing of any individual reactor. Discussion of
18 radon and its environmental impact will be contained in
19 the draft statement that will be prepared and issued in
20 the fall of this year.

21 You had some questions in the emergency
22 planning area. The emergency plan is developed in a
23 cooperative effort between the utility, the NRC, the
24 State and the Federal Emergency Management Agency.

25 With respect to the development of the on-site

1 plan, the NRC has various guidance criteria as to what
2 elements must be considered in development of the plan.
3 That includes establishment of various emergency levels,
4 difference classes of incidents, what actions must be
5 taken by the utility, what notifications must be
6 instituted by the utility to the appropriate agencies --
7 the NRC and State and others, as appropriate.

8 So those elements will be contained in the
9 emergency plan. In addition, the off-site emergency
10 plan, FEMA, working in concert with the State and the
11 local agencies, will make sure that the emergency
12 planning for the off-site agencies is compatible with
13 the emergency plan to be developed for Sharon Harris.

14 You talked in terms of cooling tower effects,
15 fogging and the like. Perhaps Ed Pentacost could go
16 into a little more detail about the effect of the
17 cooling tower operating in terms of drift, which would
18 be chemical deposition resulting from the operation of
19 the cooling tower, incidents of fogging, how far
20 off-site fogging effects, if any, would exist.

21 These kinds of things will also be assessed
22 and evaluated by the Staff and discussed in their draft
23 statement as well.

24 The number of other issues you raised are
25 perhaps not environmental issues as such, but will be

1 considered in the Safety Evaluation Report that is to be
2 prepared by the Staff.

3 As to the adequacy of the spent fuel storage
4 facility, accidents in that spent fuel storage facility
5 -- these will all be evaluated and considered by the
6 Staff and the results of those evaluations will be
7 contained in the Safety Evaluation Report prepared by
8 the Staff, which would be issued in the first quarter, I
9 believe, in 1983.

10 As far as worst case, the environmental
11 statement to be prepared will have a discussion and an
12 assessment prepared by the Staff of accidents beyond the
13 design basis accident and would include accidents at TMI
14 and the like and an assessment of what the environmental
15 consequences of such an accident at the Harris station
16 might be in terms of radiological health and economic
17 impacts. That will also be part of the draft statement
18 to be prepared.

19 You had several other points, one on the
20 environmental monitoring of background radiation. That
21 sort of thing I think Dan Montgomery might be able to
22 provide some specifics on that.

23 MR. EDDLEMAN: Could I just ask you one thing
24 about this? You said some of these issues would be
25 addressed in the Safety Evaluation Report, the report

1 that would be out in 1983, but your draft is going to
2 come out in 1982. Do I take it you are going to have
3 some reevaluation of those radiological impacts from the
4 safety issues later?

5 MR. MIRAGLIA: The environmental review, there
6 are two reviews that will be conducted in parallel. One
7 review is the environmental review. It is the
8 assessment of the environmental impacts of the operation
9 of the facility. The draft environmental statement will
10 be prepared and issued for comment in October.

11 In concert and in parallel with that
12 environmental review, the Staff also will review and
13 prepare a Safety Evaluation Report. The scope of the
14 Safety Review is much broader than that of the
15 environmental review. The Safety Evaluation Report is
16 to be prepared and issued in the first quarter of 1984.

17 MR. MONTGOMERY: I guess the first thing I
18 would like to address is the question regarding
19 pre-operational monitoring, establishing a baseline. As
20 I mentioned briefly, within our office in Region II we
21 have the responsibility for a series of pre-operational
22 environmental inspections.

23 This is a series of three inspections in which
24 we look at the implementation of what we call the
25 pre-operational environmental monitoring program. This

1 will start approximately three years prior to operation
2 of the plant. The purpose of the pre-operational
3 environmental monitoring program, which is a requirement
4 of the NRC, is to measure background levels and the
5 variation among all the different pathways which will
6 not only be monitoring during the operation of the plant
7 but additional reasons for doing this is to ensure that
8 the program is properly implemented in terms of sampling
9 procedures, analysis procedures, proper equipment and
10 the proper capability to monitor the environment.

11 Briefly, two years prior to operation of the
12 facility the direct radiation part of the environmental
13 monitoring program would be initiated. In addition, the
14 fish monitoring of aquatic pathways would be initiated,
15 food products, and sediment from streams.

16 Approximately one year prior to plant
17 operation, the airborne monitoring program would be
18 initiated to sample milk samples, surface water, ground
19 water, and any drinking water intakes that may be
20 involved.

21 Then, six months prior to operation, we
22 initiate radioiodine airborne measurements and
23 radioiodine in milk and any other types of radionuclides
24 in milk.

25 With respect to the pre-op program, it is

1 designed primarily to determine any variations in
2 background but it turns out that in general the only
3 radionuclides that you would normally find in the
4 environment now are still some of the longer-life
5 radionuclides from the weapons testing in an area where
6 you do not have an operating nuclear plant -- things
7 like seesium-137 and strontium-90 in milk.

8 The pre-op program is set up to identify any
9 local variations in these background levels to establish
10 what would be the norms in regard to the effect from the
11 plant. Does that answer your question regarding the
12 pre-op program?

13 The monitoring program is set up with the
14 theory that the environmental monitoring stations are
15 located normally in those areas in which you would
16 expect the highest concentrations in the environment.
17 Normally from normal operations of a nuclear plant you
18 seldom can detect any effect of the plant on the
19 environment, so the theory is to monitor what we call
20 critical pathways which are not necessarily, in some
21 cases, even measurable.

22 But if the releases are such that they would
23 be detectable in the environment, then the environmental
24 monitoring stations are located where you would expect
25 the highest concentrations.

1 MR. EDDLEMAN: That is helpful. I asked a
2 more complicated question and I do not think you can
3 really address it in a forum like this. I would like to
4 go over it with you some more.

5 MR. MONTGOMERY: Yes. When you start talking
6 about statistical variations and T-tests and things like
7 that, that would be beyond the scope. .

8 MR. EDDLEMAN: I'm not asking you to respond
9 here.

10 MR. MONTGOMERY: Okay.

11 MR. TEDESCO: Mr. Eddleman raised another
12 question about the steam generator. The issue on the
13 steam generator that would be used on Harris has its
14 origin back with a foreign plant who used a similar
15 steam generator. There are certainly anomalies in the
16 hydraulic flow that have been detected. These matters
17 are being investigated on Harris as well as a number of
18 other plants. By the time the Harris does go into
19 operation this matter should be resolved.

20 We are talking about two years, 2-1/2 years,
21 three years from now.

22 MR. EDDLEMAN: Well, I certainly hope so,
23 because Duke Power said they would have it resolved
24 before they got McGuire into operation and they are
25 still limited to half power.

1 MR. TEDESCO: Yes, they are limited to fifty
2 percent power and the matter is still under review.
3 They are running tests, taking data. The data are being
4 evaluated by Duke Power and Westinghouse and the Staff.

5 I would like to have Frank Long now say some
6 words about the question of non-conformance.

7 MR. LONG: I would just like to address the
8 subject in general terms because it is a very broad
9 program devoted to detection and correction of
10 non-conformances.

11 Obviously, during the construction phase this
12 is a very routine and a very comprehensive program. You
13 are, I believe, more concerned with -- for the long
14 term, particularly in the operating plants. I would
15 like to say just briefly that this is a very major
16 factor in our inspection program.

17 It all originates with, first, what we feel
18 are very stringent reporting requirements for all
19 anomalies, whether they are identified as
20 non-conformance factors in materials, components
21 supplied in the plant, replaced on spare parts and that
22 type of thing.

23 We have a very large effort applies to the
24 management systems for control of this type of thing.
25 as you know, very obviously you mentioned the steam

1 generators, of course. There are license conditions for
2 detection of deterioration or degradation of the quality
3 of those components -- steam generators and many others
4 -- by the limitations on samples of the primary water
5 testing and things such as that.

6 We have in our regional office a very broad
7 spectrum of special skills to address routinely and in
8 an inspection program, amounting to somewhere perhaps in
9 the range of 2,000 or more manhours a year of direct
10 effort in this broad spectrum of area that are covered
11 by the license or regulatory requirements.

12 The reporting requirements, of course, would
13 not be the sole source. We would expect and look for
14 things that perhaps were not reported or where the NRC
15 may not be satisfied with the amount of reporting or the
16 fact that something was adequately reported. We do
17 expect and obtain prompt correction of identified
18 non-conformances.

19 We take enforcement action at various levels
20 of enforcement action depending on the types of
21 non-conformances, whether they consist of more serious
22 violations or lesser violations. We follow up on these
23 by the utility taking the actions that he has identified
24 to us. We verify that these were in fact taken promptly
25 and there is usually, in most things of significance, a

1 continuing program of followup.

2 We look for two things -- correction of
3 specific problems and correction of root causes, whether
4 the root cause may be one of qualification of personnel,
5 maintenance procedures, operating procedures or
6 defective equipment. We try to establish the root
7 causes of all non-conformances so that the likelihood of
8 recurrences would be diminished.

9 One very important thing not only in the
10 construction but in the operating plant are the
11 management systems established for controlling the
12 quality of not just parts, replacement parts and
13 components, but the quality of actual operations,
14 recordkeeping, a broad spectrum of things that are vital
15 to the ultimate safety of the plant.

16 MR. LEHR: My name is John Lehr. I would just
17 like to address a couple of things Mr. Eddleman
18 mentioned. You made some comments about water quality
19 effects downstream of the Cape Fear River and the
20 consequences of withdrawing water containing pollutants
21 from the Cape Fear and concentrating it in the plant
22 systems and discharging it.

23 I do not know if you are aware -- we learned
24 just as a result of the site visit -- that the plant is
25 being constructed now without an intake on the Cape Fear

1 River. In other words, the combination, I guess, of
2 revised hydrologic analysis and the reduction in the
3 size of the cooling lake and the reduction in the number
4 of units at the site has resulted in no longer having a
5 need for takeup water being withdrawn from the Cape Fear
6 River, that the normal inflows into the streams which
7 feed the Harris Lake will be sufficient to supply
8 cooling tower makeup and other cooling tower uses.

9 So there will, however, likely occur some
10 discharges from the Harris reservoir to the Cape Fear
11 River. There are provisions in the main dam of the
12 Harris Lake for two levels of discharge or discharge
13 from two water levels, which gives the utility some
14 flexibility in choosing the characteristics of the
15 waters they would choose to discharge to lower Buckhorn
16 Creek and consequently the Cape Fear River.

17 It is not anticipated, we understand, that
18 this discharge would be continuous. It would probably
19 only occur during periods of high inflow into the Harris
20 Lake. We have indicated to the Applicant that we would
21 want the environmental report to be revised with more
22 detail in this area.

23 And our formal request for additional
24 information, which will be going to the utility in the
25 next month or so, will have a couple of questions

1 addressing this, so that that information will be in the
2 docket if you ever want to examine it.

3 The other thing I wanted to mention, you asked
4 about the qualifications and the length of service of
5 the people preparing this environmental statement. The
6 Council on Environmental Quality Regulations, a modified
7 form of which we have adopted or proposed to adopt as
8 part of our regulations, calls for the qualifications,
9 names, qualifications and areas of responsibility in
10 environmental statements to be placed in one section of
11 the statement so that members of the public, interested
12 parties, can see who did what and what qualifications
13 the individuals have.

14 I cannot speak for everyone up here. I have
15 been working for the Atomic Energy Commission since
16 1973. I have worked on over 80 of these different
17 cases. I am sure a number of these gentlemen have had
18 just as much experience. That is all I have to say.

19 MR. HEATER: Thank you, gentlemen.

20 The next person on the agenda is Mr. Jim
21 Henderson.

22 PUBLIC STATEMENT OF JIM HENDERSON

23 MR. HENDERSON: I think this is a very
24 important hearing and I am grateful for the opportunity
25 to participate. I wondered whose responsibility

1 publicity for this meeting was.

2 MR. MIRAGLIA: In what sense?

3 MR. HENDERSON: Whose responsibility was
4 publicity for the meeting tonight?

5 MR. MIRAGLIA: We, I guess, in concert with
6 Region II did arrange for a press release to be made
7 announcing the meeting. In addition, standard meeting
8 notices were provided to all parties that we have
9 identified on our service list and parties who are
10 potential Intervenor to these proceedings received
11 notice of this meeting as well.

12 MR. HENDERSON: I have several problems. I
13 guess when I first found out about the meeting it was
14 simply through talking to a neighbor who is an
15 Intervenor in the Harris case. When I contacted my
16 Mayor of Apex at the end of last week, as soon as I
17 found out, he had not -- he told us he had not been
18 notified.

19 I contacted a couple of the local television
20 stations and they had not been notified. This was last
21 Thursday. I think a couple of announcements were placed
22 in the local newspapers, but no one has found one
23 earlier than today. I think this is an excellent kind
24 of forum and a very important one and I am quite certain
25 that attendance would be much larger had publicity been

1 more effective.

2 MR. MIRAGLIA: We did provide a press
3 release. I know it is more current than today. It is
4 at least a week to ten days, maybe even older than that,
5 where we did make a press release.

6 MS. ROTHSCHILD: March 24.

7 MR. MIRAGLIA: March 24 the press release was
8 made from the regional office and provided to, I am
9 sure, the local newspapers as well as -- is Joe -- Joe
10 is not here right now, our representative from the
11 Region II office.

12 So we do attempt to the best of our ability to
13 provide this information to newspapers. I guess it is
14 at the editor's discretion as to what he considers
15 newsworthy items to be placed in the paper. We do make
16 the information available. The news notices went out
17 even before that and copies were provided, as I said, to
18 people on the service list, other Federal agencies,
19 potential petitioners to intervene, as well as made
20 available at the local public document room in the
21 vicinity.

22 It's a fair question. That is the best answer
23 we have.

24 MR. HENDERSON: Well, thank you. As I say, I
25 am very grateful for the opportunity. I think it is

1 clearly an important issue for our community and the
2 communities nearby and I think this is a very
3 appropriate format for addressing it. Thank you.

4 I would like to ask a couple of short
5 questions. I think the first one would probably be best
6 directed to Mr. Richter. I have noticed and been
7 disturbed since the time I first noticed it that my
8 homeowner's insurance policy does not cover and
9 specifically excludes damage from any nuclear source --
10 atomic action, atomic explosion. There are several
11 causes that would seem to cover accidents from nuclear
12 power plants.

13 Is this in general true for most or all
14 homeowners' insurance policies, that damage from nuclear
15 power plants is specifically excluded?

16 MR. RICHTER: It is with mine.

17 MR. HENDERSON: It is with mine as well. I
18 just got new insurance on my home a week or so ago and I
19 noticed it.

20 MR. RICHTER: It was in there too.

21 MR. HENDERSON: It was excluded.

22 I have heard some talk about the
23 Price-Anderson Act. If an accident does occur and my
24 home or my rental properties are damaged, who will pay?

25 MR. RICHTER: Unfortunately, I do not believe

1 I am the most qualified to discuss this.

2 MS. ROTHSCCHILD: I can speak in general terms
3 about it, that it is a Federal statute that does provide
4 for compensation for damages that might result from
5 accidents at nuclear facilities. I cannot speak about
6 specifics, but there is a statute that does provide for
7 compensation.

8 MR. HENDERSON: And what are the upper limits
9 of that statute?

10 MS. ROTHSCCHILD: I am not sure. I think it
11 has recently been revised. I think it was \$540
12 million. This is just in general terms. I think it was
13 recently amended and I am not certain what the limits
14 are.

15 MR. HENDERSON: About a half a billion
16 dollars, something like that?

17 MR. MIRAGLIA: The reason most of the
18 homeowner's insurance has an exclusion clause in there
19 is that there is a Federal statute that provides for a
20 certain degree of insurance which is provided by the
21 Price-Anderson Act.

22 The Price-Anderson Act has been recently
23 revised somewhat, so I do not know if the number is
24 still \$540 million or \$560 million, but it is on that
25 order of magnitude. The revenues for that are

1 contributed to by the utility as well as the Federal
2 government.

3 Very, very early, the bulk of the revenue was
4 provided by the Federal government. As times progressed
5 and as the industries matured, the contribution to that
6 fund has shifted and a larger proportion is provided by
7 the utilities. So that fund would be made available.

8 In the instance of TMI, a nuclear insurance
9 group that administers this thing set up claims offices
10 within the vicinity of the site and claims were made
11 against that insurance provided via the Price-Anderson
12 Act.

13 MR. HENDERSON: Thank you. Is it true --
14 maybe Mr. Heater would know -- that the total tax base
15 of Wake County alone, is that something on the order of
16 \$8 billion? Isn't that about a ballpark figure?

17 MR. HEATER: It is higher than that.

18 MR. HENDERSON: Higher than that. Well, if
19 there is a serious accident, who is going to make up the
20 difference? Who do I sue, in other words, if my home or
21 properties are damaged as a result of the Sharon Harris
22 plant and what is my likelihood of getting reimbursed?

23 MR. MIRAGLIA: I am not quite sure what your
24 legal rights on that is. It is a question --

25 MR. TEDESCO: We can't answer that.

1 MS. ROTHSCCHILD: Other than there is this
2 Federal law of Price-Anderson that is designed to
3 provide a method of compensation. But there are limits.

4 MR. HENDERSON: I had one other related
5 question which deals more with the -- it deals with the
6 example of Three Mile Island. I understand, is it true,
7 Mr. Mo, that pregnant women were encouraged to evacuate
8 from the Three Mile Island plant area within ten miles
9 or five miles of the plant?

10 Is that true, that radio announcements were
11 made advising pregnant women to leave their homes in the
12 immediate area around the plant?

13 MR. TEDESCO: Yes.

14 MR. MIRAGLIA: Yes, that is true.

15 MR. HENDERSON: Were those women or families
16 compensated in any way for lost work, for travel costs?

17 MR. TEDESCO: I do not think the whole issue
18 has been resolved.

19 MR. MIRAGLIA: Various claims were made under
20 the Price-Anderson Act for times lost, of lost work,
21 transportation and various other claims. Those claims
22 were made to the --

23 MR. HENDERSON: To the utility?

24 MR. MIRAGLIA: To the utilities that
25 administer this under the Price-Anderson Act. A number

1 of sums were paid and others are still pending.

2 MR. HENDERSON: Well, one more question, if I
3 could, and a brief one. Is psychological stress a
4 factor in projecting the possible health effects of
5 Sharon Harris? I do not know who to ask again.

6 MR. MIRAGLIA: I will answer again. It is
7 really not a specific answer, but the question of
8 psychological stress and the consideration of
9 psychological stress with respect to environmental
10 impacts arose out of a recent court decision relating to
11 Three Mile Island.

12 That court decision -- they have issued their
13 judgment. The specific decision and considerations to
14 that that explain the rationale of the court has not
15 been provided yet, but the matter is one that is under
16 review by the Commission itself and as to whether the
17 National Environmental Policy Act requires psychological
18 stress to be considered in terms of environmental
19 assessments, the question of whether the Atomic Energy
20 Act in the context of assuring the adequate public
21 health and safety is at a broad enough term to consider
22 psychological stress under the statutes and the Act.

23 The only thing I could say is the matter is
24 under review. It is under consideration. There are
25 legal judgments and decisions that have to be rendered

1 yet, and at that point in time psychological stress is
2 not in the environmental assessment as we have been
3 conducting them in the past.

4 The impact of the decisions to be made as a
5 result of these pending court actions remains to be
6 seen. The Staff will then have to respond to the
7 directive it receives via the courts and the Commission
8 itself to the degree this issue would be discussed, if
9 at all.

10 MR. HENDERSON: Thank you very much. Again,
11 this is a very important forum.

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1 MR. HEATER: Thank you, Mr. Henderson. We
2 have been in session now for about an hour and ten
3 minutes, and I think the Court Reporter would like a
4 little break. We will take a ten-minute break and
5 reconvene at 8:25 for the balance of the people who want
6 to speak and for questions.

7 (Whereupon, a brief recess was taken.)

8 MR. HEATER: If everybody will come back in
9 and take your seats now, it is about time to start.
10 Will everyone please be seated? We are going to start
11 now.

12 The next person to be heard from will be Ms.
13 Bennie Moore.

14 PUBLIC STATEMENT OF BIBBIE MOORE

15 MS. MOORE: I wonder if I should wait until
16 the lights get turned on here. I have been asked to
17 wait a minute until all the panel members reconvene.

18 MR. TEDESCO: Frank, are you coming up?

19 (No response.)

20 MS. MOORE: I was wondering, someone mentioned
21 there was another hearing today, a daytime hearing, for
22 people who could not come tonight?

23 MR. TEDESCO: There was a meeting this
24 afternoon, yes.

25 MS. MOORE: Was it a public hearing meeting?

1 MR. TEDESCO: It was an open meeting.

2 MR. LEHR: It was a public meeting this
3 morning at the Appleton -- there was a public meeting
4 this morning at the Sharon Harris Visitor and Energy
5 Center, at which time we discussed some of our concerns
6 with the applicant, and it was open to members of the
7 public.

8 MS. MOORE: Okay, but this would really be the
9 more official one for people in the nearby community?

10 MR. TEDESCO: Yes.

11 MR. LEHR: Yes.

12 MS. MOORE: I would also just like to
13 underline Jim's comment earlier about the way this
14 meeting was publicized, and one member here did say you
15 had reviewed 80 other plants, and I think with that kind
16 of experience in seven or eight years that an awareness
17 of how important it is, at least to the public, to be
18 notified of these meetings would mean that you would
19 have better attendance. I am also guessing that \$2,200
20 was spent bringing these eleven fine people together
21 from Atlanta and from Washington, D. C., and I think
22 that is a very good use of public money, but my
23 complaint is in terms of the number of people
24 represented that it is not a very egalitarian use of the
25 money, so I would encourage you for the fall meeting to

1 use some other methods of networking, and my idea is
2 certainly that the Triangle J Council of Governments
3 could notify most of the community served in this area
4 of the meeting.

5 I am really wondering how many people there
6 are from Pittsboro, Buchner, and Montcure, Durham,
7 Chapel Hill, Garner, Raleigh, Warstel, and Apex. I
8 think those are some of the communities that should be
9 represented. I did call all the town commissioners in
10 Morrisville and informed them of the meeting, invited
11 them, and do intend to go back and report to them the
12 information I have. So I do have a few other
13 questions.

14 I am wondering if, again, this is one of the
15 ways in which state government and federal government
16 have to let us know how good their reporting to the
17 public is. If this is how many people found out about
18 this meeting, how are the rest of us going to find out
19 about any monitoring reports? That is one question.
20 And in terms of my primary interest, as a gardener and
21 as a hortitherapist at the North Carolina Botanical
22 Garden is really about radiation impact on food and
23 plants that are in the near environment.

24 I think that in the next 20 years, North
25 Carolina will continue to rely on local food production

1 as opposed to shipping foods from California and Florida
2 because of the high cost of petroleum and gasoline. And
3 because of that, what is going to be the impact for us
4 in terms of eating the food that we grow? So, again,
5 what data collection methods are effectively being used
6 by other plants to look at home vegetables, orchards,
7 and flowers? I heard milk and air being monitored, but
8 not these other locally consumed foods.

9 Also, in terms of hunting here in this area, I
10 think turkey, deer, squirrel, opossum and raccoon are
11 common foods for a small percentage of the population,
12 and I am sure that wildlife will be looked at. I am
13 interested in not only knowing how Sharon Harris
14 potentially might be doing if there is an accident, I
15 would really like to know how well the plant does
16 operationally on a regular basis. I would also like to
17 know how frequently will -- do you think standards will
18 be upgraded and changed? I know there have been some
19 changes since 1974.

20 I guess my last concern is: How are the
21 monitoring requirements chosen for Sharon Harris
22 specified depending on the characteristics of this
23 50-mile area? I am thinking about -- I am sure that our
24 area is different from some New England areas in terms
25 of soil, climate, vegetation grown here, water supply

1 resources, population growth and expansion. We all know
2 that the Raleigh area of North Carolina is one of the
3 fastest growing states in terms of population change in
4 the United States, agricultural marketing, and also the
5 quality of the level of citizen participation or
6 awareness on the issues of safety.

7 My guess is that North Carolina, I don't know
8 about participation activity by the public, but it might
9 not be as great as some of the other New England states
10 where there has been more experience with nuclear power
11 plants.

12 My last comment is, I hope that as things are
13 talked about, that instead of saying, by the time Sharon
14 Harris goes into operation, this will be resolved, that
15 by just saying that you do not really leave yourselves
16 open to consider the possibility that Sharon Harris may
17 never be opened. I think to be truly open and really
18 look at the information, I would like to say, not by the
19 time it opens, or should it open, and the possibility
20 that it might open.

21 So, thank you.

22 MR. TEDESCO: Thank you.

23 MR. HEATER: They would like to reply to some
24 of your questions.

25 MR. MONTGOMERY: With respect to monitoring of

1 radiation levels in the environment, I guess one of the
2 things that is sometimes not considered in an
3 environmental hearing such as this is that prior to the
4 discharge of radioactive effluents from the plant, there
5 are many other controls, many other specific license
6 conditions that have been imposed for the release of
7 radioactive material from the plant, whether by airborne
8 effluents or by liquid effluents. The NRC has a
9 responsibility to implement general standards which have
10 been set by the Environmental Protection Agency with
11 respect to exposure of individuals, people living near
12 the plant.

13 At the same time, our regulations for the
14 discharge of radioactive effluents, we are under a
15 policy of -- to limit releases to as low as reasonably
16 achievable. Prior to the discharge of radioactive
17 effluents, they are required to be monitored
18 continuously. It turns out at this point in time the
19 quantity of radioactivity discharged from a nuclear
20 power plant is extremely low. Generally, it is most
21 measureable at the time of the discharge. We have
22 requirements in this area in which the companies are
23 required to account for all the radioactivity discharged
24 from the plant.

25 In addition, we are currently implementing a

1 new policy in regard to radiological effluent, technical
2 specifications which basically spell out all of the
3 regulations associated with the eventual exposure or
4 potential exposure of individuals living near a plant.
5 At the time that they release the radioactivity, they
6 have to project all the doses and account for the
7 potential doses associated with all these releases, and
8 really, in practice, we find that in the environmental
9 monitoring area, you normally cannot even measure the
10 level of radioactivity in the environment. They are so
11 low, they are virtually immeasurable.

12 Secondly, regarding your concerns of
13 monitoring of different types of what we call pathways
14 of exposure, for example, vegetable gardens, there is a
15 basic environmental monitoring program, requirements
16 that become part of their license at the time the plant
17 starts to operate. There is what we call a branch
18 position regarding minimum environmental monitoring
19 requirements, which include things such as vegetable
20 gardens and any type of pathway which could involve
21 exposure of people, of persons in the area.

22 With regard to radio sensitivity, in general,
23 the pathways of radioactivity environment from nuclear
24 power plants, we normally do not see a concentration
25 from various levels like accepting a few pathways such

1 as iodine in milk. In general, man is more
2 radio-sensitive than any of the other organisms and
3 along with the principle of radiation exposure is that
4 protection of man through limited exposure levels will
5 automatically assure that the other forms of flora and
6 fauna are protected at the same time.

7 MS. MOORE: All those comments mean that it is
8 over time considered, not just on that date, but if you
9 take that amount over 40 years, it still is at such a
10 low level?

11 MR. MONTGOMERY: Yes. The monitoring
12 programs, one of the purposes is to early on detect if
13 there is any buildup in the environment. So that one
14 would be aware prior to any time at which the levels
15 would be built up to be of concern, that we would know
16 of that, and in terms of the actual environmental
17 monitoring program, there are certain levels under --
18 probably the way the license for Sharon Harris would be
19 that if they detect certain levels in the environment,
20 they have to report this within 30 days to the
21 Commission, to the staff, and we would at that time
22 evaluate the significance and perhaps require additional
23 monitoring, whatever is necessary to determine what the
24 source is, and if there are any needed controls.

25 MR. HEATER: The next person will be Mr John

1 Bernard.

2 PUBLIC STATEMENT OF JOHN BERNARD

3 MR. BERNARD: I have only a couple of very
4 brief questions. They pertain to radiological
5 monitoring. I believe that is Mr. Mo. Is that
6 correct? Is that your area?

7 MR. MO: Yes.

8 MR. BERNARD: The first question is, what
9 provisions for off-site radiological monitoring does NRC
10 requirement for the Sharon Harris plant once it goes on
11 line?

12 MR. MO: Dan Montgomery just now described
13 some of those programs. They will be more or less along
14 that line. We do have a standardized guide branch
15 position which specifies all these requirements.

16 MR. BERNARD: I guess the question I am asking
17 is, what kind of equipment are you proposing to use? Is
18 there such a thing as off-site monitoring available once
19 the plant goes on line?

20 MR. MIRAGLIA: Yes.

21 MR. TEDESCO: Yes.

22 MR. BERNARD: Is it along the lines perhaps of
23 the equipment that is being used by Metropolitan Edison?
24 They are employing a Rooter Stokes pressurized ion
25 chamber. Is it anything along these lines?

1 MR. MIRAGLIA: As far as the specific
2 instrument, there will be direct radiation monitors,
3 which is a thermal luminous dosimeters required. There
4 will be airborne air sample required. There will be
5 soil and vegetation samples required. There will be
6 liquid effluent samples required. As to the specific
7 instrumentation and things of that nature, the
8 Commission does not usually prescribe the branch
9 technical position, and the guidance provided by the
10 Commission indicates frequency of the samples, the
11 critical pathways, and the sensitivity, minimum
12 sensitivity to detection that would be required, and
13 they would then propose what they were going to use, and
14 demonstrate that the sensitivities of whatever
15 instrumentation they were going to use or whatever
16 techniques they were going to use are consistent with
17 that guidance.

18 MR. BERNARD: What you are doing is, you are
19 describing a system that is reporting back to Sharon
20 Harris, right? This is not something that will be also
21 capable of being monitored by, say, the local community?
22 There will be nobody in populace areas, for instance,
23 who will be capable of being notified at the same time?
24 The system that I am describing that has been put
25 together at TMI --

1 MR. MIRAGLIA: Are you talking about direct --

2 MR. BERNARD: There is immediate feedback.

3 For instance, when a plume is detected --

4 MR. MONTGOMERY: There are existing systems
5 like that in operation. There is no requirement at this
6 time imposed by the NRC that they have the direct
7 telemetry, direct readout that you are referring to.
8 There are requirements to have the thermal luminous
9 dosimeters which are -- you have to exchange this out on
10 a routine readout. The NRC will have a network of
11 TLD's. CP&L will have a recurrent monitoring of the
12 TLD's in the state Radiological Health Department. The
13 state of North Carolina will have, from my
14 understanding, will also have some TLD stations around
15 there also.

16 To my knowledge, I am not sure if CP&L has any
17 plans for direct telemetry.

18 MR. BERNARD: I would like to recommend that
19 they would do this because I would have for us to have
20 to wait for a TMI type accident. You see the need for
21 such a device as this.

22 MR. MONTGOMERY: There are other capabilities
23 within a site to make verification of radiation levels
24 on a direct measurement. You do not have to wait until
25 a readout TLD. There are various portable survey

1 equipment that is required as part of the emergency
2 response capability, to be able to make these
3 measurements, so it is not as if there is just a
4 difference in philosophy, telemetry versus other types
5 of equipment.

6 MR. MIRAGLIA: If anyone is having difficulty
7 hearing the responses to this, it would be preferable to
8 use the microphone. Could you just signify by raising
9 your hand, we will go to the microphones. We will try
10 to use the microphone to make sure you hear the
11 responses.

12 MR. BERNARD: Thank you very much. For
13 instance, if there were plans for a device such as the
14 one I described, if there were plans for something like
15 that to be implemented, when would we find that
16 information out? How long will it take before we know
17 this? The plant will have to be on line? Is that the
18 way it is going to work for a device that is capable of
19 being monitored by both the population, surrounding
20 populations as well as on site?

21 MR. TEDESCO: There are no requirements right
22 now for that.

23 MR. BERNARD: Okay. Thank you.

24 MR. HEATER: Thank you, Mr. Bernard.

25 Next is Ms. Mary Rosenson.

1 PUBIC STATEMENT OF MARY ROSENSON

2 MS. ROSENSON: I am on a study task force of a
3 community which is beyond the ten-mile limit. Just so
4 you don't think we are all humorless and have one-track
5 minds, I think it is a special community because it
6 houses the NCAA national basketball champions.

7 (General laughter.)

8 MS. ROSENSON: After a year's study, we know
9 that in the event of a Class 9 accident, or even a
10 lesser radioactive release, there is no sign up in the
11 sky that says, plume, you have hit ten miles, don't go
12 any further, and the wind is going to stop blowing at
13 that point.

14 Second, we have learned that we might well be
15 receiving victims from an accident at the Sharon Harris
16 plant. My question on behalf of all communities like
17 ours is, first of all, what monitoring provisions are
18 you making for communities beyond the ten-mile limit?
19 Anybody? Is there an answer to that?

20 MR. STOHR: Bill Stohr, NRC. In terms of
21 planning for a precautionary measure, the requirements
22 are now that they go out, as you are probably aware, out
23 to the ten-mile radius, 360 degrees around the plant.
24 The general thinking is that for accidents that are
25 envisioned and planned for, that is generally

1 sufficient, in terms of having preplanning for that
2 area, but there is also the consideration that the
3 preplanning that goes in in the general state planning
4 framework, et cetera, having that all accomplished would
5 facilitate any situation arising which would possibly
6 extend beyond ten miles. Overall, realize that you are
7 talking in the realms of very small probabilities for
8 all of this. A lot of the characterization of the
9 questions, et cetera, is as if this was something that
10 was impending. It sounds like twice a year you are
11 going to have these types of situations. The
12 probabilities for any of that of this magnitude are very
13 small.

14 There are many other safeguards built into the
15 plant, and emergency planning is another safeguard
16 tacked onto the end of that situation if you did get
17 into a very serious accident. The current philosophy is
18 that planning to that extent right now is prudent, and
19 that is generally considered sufficient by the NRC and
20 the Federal Emergency Management Agencies.

21 MS. ROSENSON: That is the next part of my
22 question, sir. What data did you use to establish the
23 ten-mile limit? Probability statistics?

24 MR. STOHR: I do not have that specific
25 information. However, there was an EPA --

1 MR. MIRAGLIA: There was a joint interagency
2 steering group which developed the basis for that
3 recommendation of ten miles. NRC was a member of that
4 steering group. I believe EPA was a member of that
5 steering group, and there is a specific report which
6 provides the basis for the recommendations for that
7 steering group. Other agencies may have also been
8 involved, such as FEMA or DOE. I am not sure of those,
9 but there was a report, and I do not have a specific
10 number for the report right at the tip of my tongue, but
11 the basis of that report looked in terms of not only
12 probabilities of the accidents, but the consequences of
13 the accident and the consideration of a number of
14 factors. The judgment was reached and the rationale and
15 the technical basis for the ten-mile number is provided
16 in that document, which was the basis for the guidelines
17 established.

18 MR. TEDESCO: If we have your name and
19 address, we will send you that report. Would that
20 help? If you give us your name and address, we will do
21 that.

22 MR. MONTGOMERY: One of the things, there are
23 mechanisms to evaluate the consequences beyond ten
24 miles. That is not to say the state is involved in
25 emergency plans with monitoring teams and other federal

1 agencies involved that could evaluate consequences out
2 to greater than ten miles.

3 MS. ROSENSON: My final question --

4 MR. TEDESCO: Would you put your name and
5 address into the record so that we could send it to you?

6 MS. ROSENSON: It is Mary Rosenson, 204 Rich
7 Trail, Chapel Hill, 27514. My final question speaks
8 directly to that. What magnitude of accident would have
9 to occur for that plan to go into effect for people
10 beyond a ten-mile limit? Things cannot just stop at ten
11 miles. Even when you are talking about probabilities.

12 MR. MIRAGLIA: I think the ten-mile guidance
13 is that preplanning and contingency planning out to ten
14 miles has to be prescribed as a minimum. Certainly the
15 capabilities to assess the consequences of the accident
16 beyond that exist, and will be evaluated. With respect
17 to the emergency plan, the whole purpose of the
18 emergency plan is, as Mr. Stohr indicated, is another
19 level of defense.

20 There are various safeguards built into the
21 facility that are there to minimize such occurrences
22 from happening. The emergency planning is to have the
23 responsible agencies and the decision makers equipped
24 with the tools necessary for them to make the decisions
25 that are required, to take whatever protective action is

1 necessary to protect the public.

2 I am sure the decision-makers are not going to
3 say, you know, we are going to go to ten miles, if the
4 situation and the information at hand dictates that they
5 should go to a further radius. It is just a tool that
6 is being utilized to provide information to all the
7 involved agencies to make those kinds of decisions.

8 MR. TEDESCO: But in any event, we are dealing
9 with accidents beyond what we call design basis
10 accidents. We are talking about severe accident
11 consequences now much beyond the design basis of the
12 plant, so we are dealing with these more severe and
13 lower probability type of events that do involve very
14 significant damage to the core.

15 Now, you cannot go all the way. There is a
16 probability that you start getting so small that there
17 is enough backup that it is not going to happen.

18 MS. ROSENSON: I agree. But the word
19 probability implies that something could happen.

20 MR. TEDESCO: Yes.

21 MS. ROSENSON: I think people outside the ten
22 mile limit feel like what are we to expect and what are
23 we to prepare for and what are we to ask our mayor to do?

24 MR. TEDESCO: The whole basis upon which we do
25 it is based upon probability. We do a probabilistic

1 risk assessment. We have a number of accident
2 scenarios, and we start to categorize them in
3 probabilistic echelons. Dealing with ten miles, fifty
4 miles, you are really dealing with very low probability
5 events, but yet --

6 MS. ROSENSON: It depends on what you mean.
7 It depends on whether you think like Herman Kahn.

8 MR. MIRAGLIA: Various critical pathways are,
9 even within the context of your present emergency plans,
10 looked at -- pathways out to 50 mile ingestion pathways,
11 critical pathways. It is not limited to ten miles.
12 There is information and assessments made to say whether
13 milk sources should be quarantined for a certain number
14 of days, or beef cattle should be slaughtered or -- and
15 these kinds of things, so the plan in the ten-mile limit
16 has a specific criteria for a specific thing, but there
17 are elements of the plan that evaluate what the
18 consequences of what a severe event would be beyond that
19 ten-mile radius.

20 MS. ROSENSON: That will be in place before
21 the plant goes on line?

22 MR. MIRAGLIA: Yes.

23 MR. TEDESCO: The 10-mile is mostly for the
24 short-term response. Whatever you have to do for a
25 very, very severe accident would be within that 10

1 miles, on a short-term basis, compared to the 50 miles.

2 That is for the longer term.

3 MS. ROSENSON: Thank you.

4 MR. HEATER: Thank you.

5 Is Mr. Fred Oliver here?

6 (No response.)

7 MR. HEATER: I assume Mr. Oliver left us for
8 good. The next one would be Mr. Jim French.

9 PUBLIC STATEMENT OF JIM FRENCH

10 MR. FRENCH: Good evening, gentlemen. I
11 believe my family's home is within the ten-mile radius
12 you have described tonight, and I am glad you are doing
13 all you can to study the alternatives to protect us from
14 accidents which are envisioned and currently planned for.

15 I assume we are not here to discuss whether or
16 not nuclear power is something we can financially afford
17 here in the south, and I welcome you to the south. Many
18 years ago political decisions were made by the people
19 here which was to continue and develop a progressive
20 development of our county and our state. Mr. Bob Heater
21 has given a great portion of his life to developing Wake
22 County into what is now one of the ten most desirable
23 places to live in the United States.

24 Back then, when the decision was made to go to
25 nuclear power, there were many questions that were not

1 answered, or else the answers have proven to be false.
2 One of those is the cost of nuclear fuels and the demand
3 for electricity produced by nuclear power, but I assume
4 we are not here tonight to decide whether on a cost
5 financial benefit the decision by the people of this
6 county to continue with this plant is a wise one in
7 terms of dollars.

8 We are here to decide whether or not we can
9 afford the safety risk. In my own personal opinion, the
10 data on the financial cost is such that we really do not
11 need to reach the safety risk. It is just too
12 expensive. But I would ask you if CP&L was working to
13 plan a solar energy research facility or solar
14 generating plant or geothermal or another hydroelectric
15 plant or even a fossil fuels plant for the generation of
16 energy. If they were placing that at the site where
17 Sharon Harris was meant to be, would we be having a
18 hearing such as this? Would we be considering the
19 question of risk to vegetation, to wildlife and unborn
20 children? I would ask any of you.

21 MR. TEDESCO: Mr. French, Congress has given
22 us responsibility for regulating nuclear power, and that
23 is the authority that we have. To go beyond that in
24 another form of energy, we are not the right people.

25 MR. FRENCH: Absolutely, but part of your

1 authority is to consider questions of risk to unborn
2 children, to milk, to those who drink the water here.
3 Is that correct?

4 MR. TEDESCO: Yes, sir.

5 MR. FRENCH: Why do you find that as part of
6 your authority when considering nuclear generating power?

7 MR. TEDESCO: Because it does involve the
8 radiological aspects of plant operation.

9 MR. FRENCH: So is it fair to say the
10 radiological aspects of plant generation involves a
11 substantial risk to those flora and fauna in our
12 environment?

13 MR. TEDESCO: You used the word substantial.
14 I think we have done as much as we can to minimize that
15 risk.

16 MR. FRENCH: I see. To minimize a substantial
17 risk, I suppose?

18 MR. TEDESCO: To minimize the risk.

19 MR. FRENCH: Risk, to me, the use of the word
20 seems to imply that -- and planning for safety, to make
21 something safe, implies that there is a risk there. I
22 would assume, and if I am incorrect in this I would
23 appreciate you pointing this out, that a meeting very
24 similar to this was held before the Three Mile Island
25 plant went on line, and at that hearing people were

1 assured, were they not, that the plant was substantially
2 risk-free, and that the risk to the environment, to the
3 people in that community was not substantial. Is that
4 correct?

5 MR. TEDESCO: I do not think that anyone would
6 ever say it is risk-free. I do not ever say anyone can
7 say that about any aspects we deal with, that there is
8 absolutely no risk involved. There is always a finite
9 risk. What we are trying to do is try to make sure that
10 that risk is as small as possible. That is the whole
11 purpose of our hearing.

12 MR. FRENCH: I see. But when the plant was
13 first being planned for back in the sixties --

14 MR. TEDESCO: Seventy-four.

15 MR. FRENCH: Seventy-four, we have all been
16 surprised at the rate of development in our own county
17 and the greater Triangle area. The placement of Sharon
18 Harris ten miles away was decided in '74, before Apex
19 became quite a bedroom community and suburban area as
20 well. If there had been a recommendation that the plant
21 would have been moved further up the Cape Fear River --

22 MR. TEDESCO: The site placement reflects the
23 demography of what we have done today as part of our
24 overall safety evaluation. That will be considered.

25 MR. FRENCH: But the plan is nearing

1 completion.

2 MR. MIRAGLIA: The question of alternative
3 plant sites was considered at the CP stage. With
4 respect to the questions of risk, I think no means of
5 generating electricity are risk-free.

6 MR. FRENCH: I would agree with you.

7 MR. MIRAGLIA: The risk associated with
8 nuclear power and what the consequences are of severe
9 accidents would be discussed in the draft environmental
10 statement.

11 MR. FRENCH: The risk from a fossil fuels
12 plant is possibly a more dirty quality to the air, but
13 the risk that you are doing your best to assure us or to
14 protect us from is really the risk from a disaster. Is
15 that not correct? The potential for a disaster that
16 does not exist with a down stream hydro plant or fossil
17 fuels plant?

18 MR. MIRAGLIA: It depends on how one
19 characterizes a disaster. Certainly a catastrophic dam
20 failure could be considered by many folks as being
21 classified as a catastrophe and a disaster, and it has
22 immediate consequences, and perhaps it has the same
23 degree.

24 MR. FRENCH: Is there a dam breakage that the
25 NRC would care to compare to what happened at Three Mile

1 Island?

2 MR. MIRAGLIA: In terms of what happened at
3 Three Mile Island, as far as radiological impacts, I
4 think there were numerous inquiries into the accidents
5 to study what the consequences of the release from the
6 facility were. The bottom line from all of those
7 studies, the Senate investigating committees, the
8 President's Commission on Three Mile Island, the
9 Commission's own inquiry into this, indicated that the
10 radiological impacts on the people that are living in
11 the vicinity and on the environment there were very,
12 very small. I think there were severe economic impacts,
13 but in terms of harm to the public, I think those
14 studies would bear out that it was not catastrophic nor
15 was it a disaster.

16 MR. FRENCH: Okay. Thank you.

17 MR. HEATER: Thank you, Mr. French.

18 Mr. Richard Wilson had some questions he
19 wanted to ask.

20 PUBLIC STATEMENT OF RICHARD WILSON, M.D.

21 DR. WILSON: Many of the questions tonight
22 were answered by saying that they would be issues that
23 would be taken care of by the NRC staff, many of them
24 taken care of by the NRC monitoring through CP&L. I
25 think there are many reasons to worry about CP&L's

1 ability to answer these questions. I think there are
2 even some questions that have emerged over the past few
3 years about the NRC's ability to assure us of
4 environmental safety. So I would like to ask a few
5 questions that might reassure me about the NRC.

6 The first has to do with the Kemeny and
7 Rogovin reports about the accident at Three Mile
8 Island. As I read those reports, I was surprised at the
9 sort of frankness of their language. As I turned the
10 pages, their attitude seemed to go from sort of surprise
11 to worry to outrage at the way in which the NRC seemed
12 to be not discharging their duty of protecting the
13 public, assuring the safety of the plants when they were
14 licensed and when they were operating. They called for
15 changes, some technical, but most broader than
16 specifics. Most had to do with sort of the attitude.
17 They implied that there needed to be changes in the
18 organization of the NRC, the procedures, and even the
19 personnel. They doubted -- or they wondered, I guess,
20 whether even those things would assure us that nuclear
21 plants would be safe.

22 Now, tonight hearing Mr. Stohr, who is in
23 charge of emergency preparedness, talk to us about small
24 probabilities, and Mr. Montgomery talking about when the
25 plant opens, he said, if the plant opens, make me wonder

1 if things have changed.

2 So, my first question is, just what has
3 changed at the NRC in that basic level? My second
4 question has to do with problems that come up in the
5 routine licensing of power plants which do not have an
6 answer. That is, they are hard problems. Nobody knows
7 the answer at this time. In the past, they have been
8 sort of soft in the case of each individual nuclear
9 reactor by saying that since we don't know the answer,
10 you don't have to answer that before your plant
11 operates.

12 It is a generic problem. Recently, I
13 understand, Congress has been taking a second look at
14 that way of sort of putting these issues aside
15 bureaucratically, and has asked for or designated a
16 certain number of them, I think 15 or 16, that they will
17 require, I think, quarterly reports on progress in
18 solving. My second question is, I wonder whether you
19 could list for me those 15 or 16 issues.

20 My third question has to do with the Diablo
21 Canyon Nuclear Plant. This was a plant built on a fault
22 line in California. Because of that, it was supposed to
23 be built extremely carefully. Just before the operating
24 license was to be issued, it was discovered that there
25 had been a mistake. The wrong blueprints had been used

1 for a major part of the construction. That in itself
2 led to more detailed investigation of the plant, and I
3 think somewhere in the neighborhood of 100 separate
4 mistakes had been uncovered.

5 My third question, then, is, what are these
6 100 mistakes that were discovered in the operating
7 license stage just before or after the review process
8 had supposedly been completed?

9 Finally, in view of these uncertainties, it
10 would seem that the NRC would have a lot of worries
11 about doing their job, and that they would want a lot
12 more people and a lot more money, but like everyone else
13 these days, I think you have been faced with some
14 substantial budget cuts, so I would like you to tell me
15 how your proposed budget is likely to fare and if there
16 are cuts in your budget, what things will you not be
17 able to do?

18 MR. TEDESCO: I will take some of those. Mr.
19 Wilson asks some very good questions. I don't know if
20 we've got some very good answers for him, but they are
21 really good questions. Realizing what happened on TMI
22 and the results of the Rogovin and Kemeny Commission
23 reports as well as the Commission's own, all that
24 information was put together and an overall NRC action
25 plan was developed. That dealt with all the issues that

1 were raised by the different investigative bodies. That
2 plan now is in the process of being worked out and
3 completed and implemented. Phases of it deal with
4 changes in plants. Changes in organizational structures
5 are being carried out already. So, a plan is unfolding
6 that will definitely show implementation of these
7 recommendations.

8 Within the NRC, there have been changes,
9 changes in personnel, changes in management, in
10 organizational structure, attitudes in some ways. You
11 cannot just start all over again with all brand-new
12 people. You may then be in a worse state than what you
13 were, but I think we have become more sensitive and more
14 aware of avoiding a mindset of keeping in blocks and
15 squares and being more open to consider accidents that
16 are beyond design base accidents. I think we are making
17 definite progress in those areas.

18 As far as the licensing problem that you
19 alluded to, I do not have a list of the 15 or 16 issues
20 that you talked about, but I am aware of them, and for
21 each of the items that are subject to an evaluation by
22 the staff, there is a basis for why we allow a plant to
23 operate today pending the full resolution of that issue,
24 so there are alternatives and fallback positions that we
25 have that will provide a short-term fix.

1 I am going to let Frank take care of Diablo
2 Canyon.

3 The other issue about the uncertainty in our
4 budget, as we regulate, we, too, are regulated by
5 Congress. They are the ones who give us our budget
6 allocations in terms of money and personnel. I think
7 there are areas that we would like to see more people in
8 and have more money, but what we do is, we develop our
9 program based on what we have, and try to get the
10 maximum amount that we are able to do.

11 So, I would like to have Frank talk about
12 Diablo, because he is directly involved in it.

13 MR. MIRAGLIA: As a result of the detection of
14 the errors at Diablo Canyon, the Commission did suspend
15 the operating authority for fuel load and low power
16 operations. The error that was detected, the initial
17 error was an error in design. As a result of that, the
18 Commission suspended the authority granted to Pacific
19 Gas and Electric and indicated a program that would have
20 to be carried out and would be required before the
21 Commission would reconsider lifting that suspension.

22 That program required an independent design
23 verification by a party that had not been involved in
24 the initial design of the facility. The focus of the
25 independent audit would be in the seismic design area,

1 because these are where the initial error had been
2 detected. The Commission has been working and has
3 recently approved the proposal from the utility to use
4 Teledine Engineering Services to conduct such an audit.
5 The staff just this week received the program plan for
6 review to determine whether it would be adequate to
7 fulfill the requirements of the Commission's order, so
8 that plan will be reviewed, modified as the staff sees
9 necessary to implement the terms of the order.

10 Thus far in the verification activities that
11 have been conducted to date, there have been, as Mr.
12 Wilson said, on the order of 100 discrepancies, errors,
13 things of this nature. They are relating to diagram
14 errors, perhaps improper spectra, things of this
15 nature. Part of the program is to fully evaluate and
16 assess the significance of each and every one of these
17 errors. The list is long. The significance of each of
18 the items is yet to be assessed, but that certainly will
19 be done, and each of those will be evaluated prior to
20 any further action at the Diablo Canyon facility.

21 MR. EDDLEMAN: Can I ask if other petitioners
22 to intervene can get a list of those errors, and
23 whatever explanation of it there is?

24 MR. MIRAGLIA: We can provide you with what is
25 available.

1 MR. EDDLEMAN: Thank you.

2 MR. MIRAGLIA: I think perhaps the easiest way
3 to do it would be to provide a copy of some of the
4 pertinent correspondence and reports to the local public
5 document room. We will undertake that activity.

6 MR. HEATER: That concludes the names that
7 have come in. Do we have a question from the floor?
8 Yes, sir?

9 PUBLIC STATEMENT OF BILL YEAGER

10 MR. YEAGER: Bill Yeager. I would like to
11 follow up the question about the steam generators.
12 Since the long-term reliability of the steam generators
13 has come into question, has the design of the plant been
14 modified? Are these generators easily replaceable
15 should it be determined in two or three years that
16 continued use of this particular design would require 50
17 percent operating capacity?

18 MR. TEDESCO: The issue on the steam
19 generators is presently being looked at by Westinghouse
20 as well as the people over in Sweden. They believe they
21 have an approach that should provide a fix for it. We
22 haven't seen it. We haven't revealed it yet. As you
23 know, Duke Power is still at 50 percent at McGuire.
24 They have to be fixed before the plant can go up beyond
25 that point, so the approach that is being taken is to

1 develop a permanent fix to eliminate the problem which
2 right now looks like the hydrodynamics due to vibratory
3 force on the steam generator tubes. They are looking at
4 different ways of monitoring the instrumentation to look
5 at the vibrational characteristics and then develop from
6 that a design fix, and that is the present approach they
7 are taking.

8 So, the expectation is to fix it rather than
9 replace it.

10 MR. YEAGER: So there has been no change.
11 Should the generators unfortunately have to be replaced,
12 that would be a very major undertaking?

13 MR. TEDESCO: It has been done before on a
14 number of plants. The plant at Surrey, they did replace
15 the steam generator tubes there.

16 MR. YEAGER: How long was the plant down?

17 MR. TEDESCO: In terms of a year or so or more.

18 MR. YEAGER: How much did it cost, \$200
19 million, \$100 million, \$200 million?

20 MR. TEDESCO: In that area.

21 MR. YEAGER: I have some other questions. My
22 understanding is that this is a hearing to assess -- to
23 draft the environmental impact statement, and that there
24 is apparently another separate report which relates to
25 safety matters. Will there be a public hearing on the

1 safety matters?

2 MS. ROTHSCCHILD: Yes. I just want to clarify,
3 this is not a hearing. I may just be talking about
4 terms, but it is just a meeting as part of the staff's
5 environmental review basically to hear the public's
6 concerns. As far as a comparable meeting on the safety
7 review, I do not think one is held. However, there is
8 an opportunity to request a hearing on the entire
9 application for an operating license, and a number of
10 requests for hearings have been filed. If those are
11 granted by the Atomic Safety and Licensing Board, then
12 there would be a formal hearing which would encompass
13 issues raised by people who are participating in that
14 proceeding, which would probably cover both safety and
15 environmental issues.

16 So, no ruling has been made yet on those
17 requests for hearings.

18 MR. YEAGER: Since most of the questions
19 raised tonight are related to safety, perhaps more than
20 to environmental impact, it seems to me some kind of
21 public meeting or provision for public input to that
22 report should be considered.

23 MR. MIRAGLIA: Perhaps I can -- In addition to
24 the formal hearings that Marjorie had indicated,
25 subsequent to the issuance of the safety evaluation

1 report, there is an advisory committee on reactor
2 safeguards, and the normal process is that subsequent to
3 the issuance of the safety evaluation report, the ACRS
4 reviews the staff evaluation. There is usually a
5 meeting in the vicinity of the site by a subcommittee of
6 the ACRS. The ACRS is a statutory body. It has 15
7 members, and it is sort of an oversight overview of the
8 adequacy -- it is an independent look at the evaluations
9 that are conducted by the staff.

10 As I said, they are usually held some time
11 shortly after the issuance of the safety evaluation
12 report. There is a published agenda. These meetings
13 are noticed, publicly noticed, and there is an
14 opportunity at those meetings for members of the public
15 to express their concerns in the safety areas to that
16 committee, so there would be that type of an opportunity
17 with respect to the safety evaluation.

18 MR. YEAGER: Can individuals be placed on a
19 mailing list for notification?

20 MR. MIRAGLIA: As to -- yes, if you write to
21 the Commission and indicated that you want to be placed
22 on a mailing list --

23 MR. YEAGER: To what address?

24 MR. MIRAGLIA: United States Nuclear
25 Regulatory Commission, Washington, D.C., 20555, and you

1 can mark that to the attention of Division of Licenses.

2 MR. YEAGER: Okay. Now this meeting is in
3 reference to an update to a 1974 environmental impact
4 statement. Among the things to be considered are
5 changes to design and operation based on any new
6 information that has come to light in that period.

7 Could you outline for us briefly some of the
8 major items that come under that heading?

9 MR. MIRAGLIA: During the course of our
10 meetings in the site vicinity for the last two days,
11 certain design changes have been identified. One of the
12 things that we had asked the utility in the request for
13 information was for a summary of those design changes.
14 Some of those have been discussed here this evening.
15 One is the elimination of the intake off the Cape Fear
16 River, which is a design change from that previously
17 set. I think the biggest and most significant change is
18 the fact that the lake and cooling tower on the site
19 would be for two units as opposed to four units, which
20 was the evaluation conducted at the CP stage.

21 I would say that is the biggest design change.

22 MR. YEAGER: Let me go over some of the things
23 that came to my mind under that heading. One, of
24 course, is the problem with the steam generators.
25 Another is radioactive waste disposal. Since 1974, all

1 reprocessing facilities have been closed, and it is
2 rather doubtful at this stage what the future of our
3 radioactive waste processing will be, which means that
4 these wastes will have to be stored on a relatively
5 long-term basis.

6 So, I presume that there will be some coverage
7 of this issue.

8 MR. MIRAGLIA: Both in the environmental
9 statement and also in the safety evaluation report, we
10 will be looking at the storage of spent fuel at the
11 Sharon Harris facility. The proposal that is before us
12 right now is for interim storage of the spent fuel prior
13 to shipment off-site to an appropriately licensed
14 storage facility.

15 MR. YEAGER: Another issue recently come to
16 light is embrittlement of the containment vessel due to
17 radiation effects. That will not be covered? That is
18 not an issue?

19 MR. MIRAGLIA: That will be an issue in the
20 safety reactor.

21 MR. TEDESCO: It is the reactor vessel, not
22 the containment vessel. That is an issue that will be
23 examined.

24 MR. YEAGER: Are there other comparable
25 issues? Do you see those as major issues?

1 MR. MIRAGLIA: All those issues have been
2 identified by the staff, and they would have to be
3 evaluated as part of the safety evaluation and will be
4 conducted on the facility.

5 MR. YEAGER: Do you see other issues which you
6 would consider more significant?

7 MR. MIRAGLIA: Well, we have just started to
8 initiate that review. All of the safety review will be
9 done. As I said, a re-analysis of the design as
10 proposed by the facility, and we will look at all the
11 aspects that were examined before plus all the new
12 requirements and issues that we have identified to date
13 that must be considered.

14 MR. YEAGER: I am referring not so much to
15 individual design changes, such as the decision to have
16 two plates instead of four, whether or not to take water
17 from Cape Fear, but generic issues which have arisen
18 about nuclear power plants since 1974.

19 MR. TEDESCO: That will be addressed.

20 MR. MIRAGLIA: The generic issues will be
21 discussed in the safety evaluation report, such as the
22 thermal shock question. The question of steam
23 generators will be evaluated in there. All the issues
24 that have been identified and the design changes that
25 have been necessitated as a result of the various

1 recommendations from the investigations on Three Mile
2 Island. All of those, and other things that may come up
3 will have to be considered as appropriate.

4 MR. YEAGER: One final question. Is it
5 possible for individuals to receive copies of the draft
6 reports or statements before the public meetings?

7 MR. MIRAGLIA: The safety evaluation reports
8 do have a press release announcing the issuance of
9 those. They are provided to the local public document
10 room, again. There will also be in the Sharon Harris
11 case a draft safety evaluation report to characterize
12 that aspect of the safety review process. The final
13 safety evaluation analysis reports provided by the
14 utility would be reviewed. The staff will generate
15 requests for additional information as needed to
16 initiate those reviews. The utility will respond to
17 those requests, and then the staff will, based upon the
18 information it has in hand, will do its analysis and
19 present a draft safety evaluation report. This will not
20 be the completed product, but will represent the staff's
21 position relative to the facility based upon the
22 information that has been provided. That will be
23 provided to the utility to indicate these are the issues
24 that we see remaining to be resolved on the facility.

25 If we have either additional questions,

1 additional needs for analysis, additional information
2 for us to appropriately satisfy ourselves that the
3 regulations and the terms and conditions and guidance of
4 the Commission are being complied with, that will occur
5 a little earlier in the process, probably late towards
6 the end of the year. Such a draft will be issued, and
7 again, those will be formally transmitted to the
8 utility, and copies of that material will also be
9 provided to the local public document room as well.

10 MR. YEAGER: Thank you.

11 MR. HEATER: Yes, ma'am, the young lady in the
12 back. Give your name, please, and come to the front so
13 the stenographer can hear you.

14 PUBLIC STATEMENT OF MICHELE RIVERSOME

15 MS. RIVERSOME: My name is Michele Riversome.
16 When do you plan to have another open forum like this
17 over this issue?

18 MR. TEDESCO: There are not any more scheduled
19 at this point except as Frank outlined it, at the time
20 that we have the meeting with the ACRS subcommittee, and
21 that might be, what, in 1983?

22 MR. MIRAGLIA: This will be this spring, about
23 a year from now. At that time our safety evaluation
24 report will be out.

25 MS. RIVERSOME: In that case, is there any way

1 as individuals that we can get a copy of this transcript
2 of this meeting?

3 MR. TEDESCO: This will be in the public
4 document room next week.

5 MS. RIVERSOME: Where?

6 MR. MIRAGLIA: The local public document room
7 for the Sharon Harris facility is at the Wake County
8 Public Library, in Raleigh.

9 MS. ROTHSCHILD: I would just like to add, if
10 a hearing is held on the operating license application,
11 there usually is an opportunity in addition to the
12 formal proceedings for the parties for members of the
13 public to make what is called a limited appearance
14 statement where you can -- this is a certain time period
15 that is set aside and members of the public at the
16 discretion of the licensing board can make their views
17 and other comments they may have known to the licensing
18 board.

19 MR. HEATER: We are getting close to the end
20 of our scheduled session. Are there other questions?

21 PUBLIC STATEMENT OF JANE SHARP

22 MS. SHARP: I am Jane Sharp. I live in Chapel
23 Hill, that town beyond the ten-mile limit, where a
24 number of concerned citizens live. At the end of the
25 hearing, I am interested in the end of the nuclear

1 plants in terms of nuclear wastes, which I understand
2 are to be safely taken care of by the government, I
3 guess. I wondered whether the NRC takes any
4 responsibility for the probable storage of an unnamed
5 number of tons of nuclear waste at the Sharon Harris
6 plant, in the center of a highly populated area in North
7 Carolina, coming not only from Sharon Harris but also
8 from Brunswick and possibly from Robinson in South
9 Carolina, even as we are already receiving waste from
10 Ocone at the McGuire plant in Charlotte. Do you feel
11 any responsibility for this at all?

12 MR. TEDESCO: Yes, we do, and that is part of
13 our review. It will be reported in the environmental
14 report and the safety evaluation report.

15 MS. SHARP: I wanted to ask a specific
16 question about the latest Nuclear Regulatory Commission
17 report I saw on waste management. They are now talking
18 about skin temperatures of the storage cans in metals
19 which are changing every time I read a report, from
20 steel to titanium to various alloys of copper, titanium,
21 lead, some very expensive metals, some not so very
22 expensive. They are now talking about skin temperatures
23 of 150 degrees centigrade.

24 When I first started studying it, the accepted
25 skin temperature was 400 degrees centigrade. Does this

1 mean that they are going to store the waste for maybe 50
2 years before they plan to put them underground?

3 MR. TEDESCO: I am not sure what kind of waste
4 you are talking about. When you say skin temperature --

5 MS. SHARP: Spent fuel of various ages. We
6 now have -- maybe the oldest spent fuel is 20 years
7 old? Is that correct? Thirty?

8 MR. TEDESCO: In that area, maybe a little
9 older. I think there are probably some older than
10 that.

11 MR. SHARP: We have some idea about how much
12 it cools down over that period. We know newly spent
13 fuel is very hot, and probably it cannot be buried for
14 at least ten years, maybe 20 or 30. Are we anticipating
15 then a storage facility in the center of this highly
16 populated area for ten to 30 years of spent fuel?

17 MR. MIRAGLIA: The proposal we have before us
18 for the Sharon Harris is in terms of interim storage of
19 the spent fuel, with ultimate storage to a --

20 MR. TEDESCO: To a long-term facility.

21 MR. MIRAGLIA: -- for a long-term permanent
22 storage either away-from-reactor storage facility, or a
23 waste repository.

24 MS. SHARP: This is what has been happening
25 ever since the waste problem reared its ugly head, I

1 guess, hasn't it, and we are not any closer than we were
2 20 years ago, are we, really?

3 MR. TEDESCO: We are closer. I don't know how
4 close. It is not finished yet.

5 MS. SHARP: Well, I am concerned about this,
6 and I think maybe the people here are concerned also
7 that we are planning to pile up increasing quantities of
8 spent fuel in ever closer racking arrays in a plant in
9 the center of North Carolina. I think we need to think
10 twice about this, and I would like to ask you to review
11 carefully whether or not this plant should plan to store
12 waste from Brunswick as I believe it is now planning to
13 do, and whether we should plan to store it and for that
14 long a period. Most people are not in favor of away
15 from reactor storage because it requires transportation,
16 which is dangerous in and of itself, and where would you
17 put them once they are generated and they are set
18 there? It is going to be very difficult to put them
19 some place else. We all know that now.

20 I would like you to very carefully consider
21 whether it is a desirable thing to contemplate to store
22 such waste in this vicinity for 30 to 50 years.

23 MR. HEATER: Another question?

24 MR. PHELPS: My name is Don Phelps. I think
25 it was about three weeks ago that it was decided that

1 cleanup of the Three Mile Island plant would be
2 subsidized by the power companies all over the U.S. Is
3 that true?

4 MR. TEDESCO: I have heard that. I don't know
5 that.

6 MR. PHELPS: I believe it was passed and
7 signed by Ronald Reagan about three weeks ago, and
8 decided that it would be. I would like to know if that
9 cost is going to be passed on to customers of those
10 electric companies.

11 MR. TEDESCO: We are not the right ones to
12 answer that question.

13 MR. HEATER: That is not in their field.
14 Therefore, they cannot accurately answer it. You would
15 have to check with CP&L to get an appropriate answer for
16 that, I think.

17 Are there other questions?

18 (No response.)

19 MR. HEATER: If not, I thank you all for
20 coming here tonight. The questions were very good
21 questions, to the point, and I appreciate that. I
22 appreciate the audience's attention. I believe we will
23 get the draft environmental impact statement -- that
24 will be available in about October of 1982.

25 MS. ROTHSCHILD: I would just like to say if

1 any of you are interested in additional ways of
2 obtaining information from the NRC, I have some
3 pamphlets that outline those various means, and I would
4 be glad to leave them with you.

5 MR. HEATER: Thank you. The meeting is
6 adjourned.

7 MR. TEDESCO: Thank you, Mr. Heater.

8 (Whereupon, at 9:35 p.m., the meeting was
9 concluded.)

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NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the

in the matter of: PUBLIC MEETING - SHARON HARRIS NUCLEAR POWER PLANT
NRC ENVIRONMENTAL REVIEW

Date of Proceeding: April 7, 1982

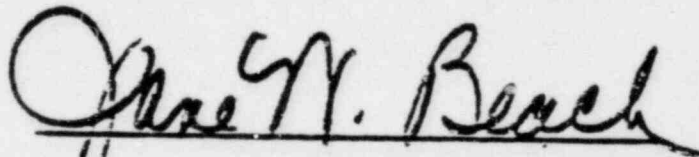
Docket Number:

Place of Proceeding: Apex, North Carolina

were held as herein appears, and that this is the original transcript thereof for the file of the Commission.

Jane N. Beach

Official Reporter (Typed)



Official Reporter (Signature)