02/04/83

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
CAROLINA POWER AND LIGHT COMPANY AND	)	Docket Nos. 50-400 OL
NORTH CAROLINA EASTERN MUNICIPAL	)	50-401 OL
POWER AGNECY	)	
	)	
(Shearon Harris Nuclear Power Plant	)	
Units 1 and 2)	)	

To: John D. Runkle, Esq.
Conservation Counsel of
North Carolina
307 Granville Road
Chapel Hill, NC 27524

NRC STAFF INTERROGATORIES TO
CONSERVATION COUNSEL OF NORTH CAROLINA

The NRC Staff hereby requires the Intervenor, Conservation Counsel of North Carolina (CCNC) pursuant to 10 C.F.R. § 2.740b, to answer separately and fully, in writing and under oath or affirmation, the following interrogatories on or before February 23, 1983.

GENERAL INTERROGATORIES FOR EACH CONTENTION

Provide for each of your contentions numbered 4, 12 and 14, separately by each contention, the following information.

INTERROGATORY 1

Identify by name, business or personal address, and telephone number each person upon whom CCNC relies to substantiate its assertion of inadequacy Applicant's or Staff analysis.

INTERROGATORY 2

Set forth the professional qualifications of each person identified in response to Interrogatory I.

INTERROGATORY 3

Provide a summary of the views of each person identified in response to Interrogatory 1.

INTERROGATORY 4

Identify by author, title, date of publication, publisher, and present location, all books, texts or other graphic material upon which the persons identified in response to Interrogatory 1 rely to substantiate their position.

INTERROGATORY 5

Will CCNC voluntarily make available to the NRC Staff for inspection and copying all materials identified in response to Interrogatory 4.

INTERROGATORY 6

Identify by name, telephone number and address, all persons which CCNC intends to use as witnesses at the evidentiary hearings.

INTERROGATORY 7

Set forth the professional qualifications of each person identified in response to Interrogatory 6.

INTERROGATORY 8

Summarize the position of each person identified in response to Interrogatory 6.

INTERROGATORY 9

Has CCNC, or anyone on its behalf, made any calculations or analysis to substantiate all or any of CCNC's contentions.

INTERROGATORY 10

If the answer to Interrogatory 9 is yes, provide the names, telephone number, and business or personal address of all persons who have made such calculations or analyses.

INTERROGATORY 11

If the answer to Interrogatory 9 is yes, provide a summary of all such calculations or analysis.

INTERROGATORY 12

If the answer to Interrogatory 9 is yes, will CCNC voluntarily make available to the NRC Staff all such calculations or analysis for inspection and copying.

INTERROGATORY 13

Provide the name, telephone number and address of each and every person who answered these interrogatories. Where more than one person contributed to an answer, identify all persons who contributed to the answer and indicate her or his contribution.

SPECIFIC INTERROGATORIES

CCNC CONTENTION 4

INTERROGATORY 14

Describe fully and specifically each and every difference or change in environmental impact of transportation of fuel and waste which you allege to be missing from the impacts set forth in Table S-4 of 10 C.F.R. § 51.20(g) as a result of Applicants transporting irradiated fuel from their Robinson or Brunswick facilities to Harris for storage.

INTERROGATORY 15

Quantify all differences or changes you propose in answer to Interrogatory 14.

INTERROGATORY 16

Provide all analysis and calculations made by or behalf of CCNC to support your allegation of need for changing the values set forth in Table S-4, 10 C.F.R. § 51.20(g).

INTERROGATORY 17

Identify all specific defects you allege to exist in the values of the environmental impact of transportation of fuel and waste set forth in Table S-4 of 10 C.F.R. § 51.20(g) not otherwise set forth in your response to Interrogatory 14.

INTERROGATORY 18

Set forth the factual basis upon which you allege the defects identified by you in your response to Interrogatory 17.

INTERROGATORY 19

Set forth all calculations and analyses which support your allegation of defects in answer to Interrogatory 17.

INTERROGATORY 20

Identify and describe all adverse environmental impacts which would occur in the transportation of irradiated fuel from Brunswick or Robinson to Harris which are omitted in Table S-4, 10 C.F.R. § 51.20(g).

INTERROGATORY 21

Provide the basis for each adverse environmental effect you allege in response to Interrogatory 20.

INTERROGATORY 22

Identify, describe and quantify the incremental increase in risk from accidents attributable to transporting irradiated fuel from Robinson and/or Brunswick to Harris, rather than from Harris to a waste storage site.

CCNC CONTENTION 12

INTERROGATORY 23

Set forth the physical and chronological scenario, step by step, which supports your assertion that the Jordan Dam may fail. If you assert more than one scenario, describe each.

INTERROGATORY 24

Set forth all relevant parameters of the failure of the Jordan Dam, including without limitation, meterology, time of year, hydrology, and the amount of water impounded at failure, and the level of the lake.

INTERROGATORY 25

Provide the analysis and calculations which support your assertion that the Jordan Dam may fail.

INTERROGATORY 26

Set forth the analysis and calculation that you, or others on your behalf, have made which provides the basis for your assertion that the flood resulting from failure of the Jordan Dam would exceed the probable maximum flood.

INTERROGATORY 27

Set forth a physical quantative description of inflow and tailwater conditions which will exist at the time the Jordan Dam fails.

INTERROGATORY 28

Describe the break from inception that you assert would develop in the Jordan Dam, describing the size, shape and position of the break.

INTERROGATORY 29

Describe by time and quantity the amount of water escaping through the break in the Jordan Dam.

INTERROGATORY 30

Describe the physical characteristics of the flood wave as it travels from the site of the Jordan Dam to the Harris site.

INTERROGATORY 31

Set forth your model, all calculations, and all relevant input parameters to your model which supports your assertion that the break of the Jordan Dam will create a water level at the Harris site higher than 256 MSL.

INTERROGATORY 32

What is the maximum mean sea level of the Cape Fear River in the vicinity of the Harris site resulting from a break of the Jordan Dam.

INTERROGATORY 33

Set forth the water conditions at the intake structure on the Cape Fear River which would cause adverse affects upon that structure, and describe those adverse effects.

INTERROGATORY 34

Set forth all analysis, models and calculations made by you or on your behalf which support your conclusion that a failure of the Jordan Dam would adversely affect the intake structure on the Cape Fear River.

INTERROGATORY 35

Quantify the amount of water at the Buckhorn Dam which you allege to be there due to failure of the Jordan Dam, including the site elevation.

INTERROGATORY 36

Set forth the physical and chronological scenario of the failure of the Buckhorn Dam which you assert.

INTERROGATORY 37

Provide all of the models, analysis, and calculations made by you or on your behalf which support your assertion that the Buckhorn Dam will be carried away.

INTERROGATORY 38

Identify the topographic maps used to support your assertion of water from failure of the Jordan Dam exceeding 250' MSL at the Harris site.

INTERROGATORY 39

Will you make available for inspection and copying, the topographic maps upon which you have plotted the movement of water from the Jordan Dam to the Harris site.

CCNC CONTENTION 14

INTERROGATORY 40

Identify by name, description, and location each particular intake valve you allege may be clogged by hydrilla verticillata (hydrilla).

INTERROGATORY 41

Describe the route taken by hydrilla from where you allege it to exist in the reservoir to the intake valves alleged to be clogged, including the elevation in mean sea level of all changes of elevation in the pathway.

INTERROGATORY 42

Set forth the period of time from commencement of power operation it will take for hydrilla to clog the valves to such a degree that safe shut down is impaired.

INTERROGATORY 43

What is the quantity (mass) of hydrilla transported to each valve during the time period set forth in your response to Interrogatory 42 above?

INTERROGATORY 44

What is the size of each valve opening at the point you allege clogging by hydrilla?

INTERROGATORY 45

What is the

(a) velocity
(b) quantity
(c) temperature
(d) direction of flow

of the water at the point you allege hydrilla will clog the valves?

INTERROGATORY 46

Identify the quantity of hydrilla that will pass through each of the three screens in the circulating water system intake structure, screen by screen.

INTERROGATORY 47

Identify the time periods required for the quantity of hydrilla to pass through each screen identified in your response to Interrogatory 46 above.

INTERROGATORY 48

Set forth the relevant physical parameters required for your response to Interrogatory 46 above, i.e., weather conditions, lake temperature, plant power levels, time of year, intake flow velocity.

INTERROGATORY 49

Describe in detail the process of clogging for each valve you allege will be clogged. What starts the clogging process and how does it proceed.

INTERROGTORY 50

What is the amount of clogging necessary to reduce the amount of water to cool the reactor so as to impair safe shut down?

INTERROGATORY 51

Where in the cooling lake will hydrilla grow?

INTERROGATORY 52

What is the depth of water in which hydrilla will successfully grow?

INTERROGATORY 53

Will hydrilla successfully grow at the depth of the water intake for the Harris facility?

INTERROGATORY 54

If hydrilla will not successfully grow at the depth of the Harris water intake, then describe the mechanism of physical transport of hydrilla from where it will grow to the Harris water intake structure.

INTERROGATORY 55

Identify by name of station and name of impoundment each and every coal or nuclear commercial power station in North Carolina which has been adversely affected by hydrilla clogging its cooling system in the past five years.

INTERROGATORY 56

For each power station identified in your response to Interrogatory 55 describe the degree to which cooling water intake was reduced and the period of time during which this occurred.

Respectfully submitted,

Charles A. Barth

Charles A. Barth
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 4th day of February, 1983

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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CAROLINA POWER AND LIGHT COMPANY AND NORTH CAROLINA EASTERN MUNICIPAL POWER AGENCY	)	Docket Nos. 50-400 OL 50-401 OL
	)	
(Shearon Harris Nuclear Power Plant, Units 1 and 2)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF REQUEST FOR ADMISSION TO CONSERVATION COUNSEL OF NORTH CAROLINA" and "NRC STAFF INTERROGATORIES TO CONSERVATION COUNSEL OF NORTH CAROLINA" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, or, as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system, this 4th day of February, 1983:

James L. Kelley, Chairman*
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Mr. Glenn O. Bright*
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dr. James H. Carpenter*
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

George Jackson, Secretary
Environmental Law Project
School of Law, 064-A
University of North Carolina
Chapel Hill, NC 27514

Mr. Travis Payne, Esq.
723 W. Johnson St.
P.O. Box 12643
Raleigh, NC 27605

Daniel F. Read, President
CHANGE
P.O. Box 524
Chapel Hill, NC 27514

Daniel F. Read
100-B Stinson St.
Chapel Hill, NC 27514

Patricia T. Newman, Co-Coordinator
Slater E. Newman, Co-Coordinator
Citizens Against Nuclear Power
2309 Weymouth Ct.
Raleigh, NC 27612

Richard D. Wilson, M.D.
729 Hunter St.
Apex, NC 27502

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Certified By AS
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Wells Eddleman
718-A Iredell Street
Durham, NC 27701

John Runkle, Executive Coordinator
Conservation Counsel of North Carolina
307 Granville Rd.
Chapel Hill, NC 27514

George F. Trowbridge, Esq.
Thomas A. Baxter, Esq.
John H. O'Neill, Jr., Esq.
Shaw, Pittman, Potts & Trowbridge
1800 M Street, N.W.
Washington, DC 20036

Dr. Phyllis Lotchin
108 Bridle Run
Chapel Hill, NC 27514

Atomic Safety and Licensing Appeal
Board Panel*
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Deborah Greenblatt, Esq.
1634 Crest Road
Raleigh, NC 27606

Richard E. Jones, Esq.
Associate General Counsel
Carolina Power & Light Company
P.O. Box 1551
Raleigh, NC 27602

Atomic Safety and Licensing Board
Panel*
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Docketing and Service Section*
Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Charles A. Barth
Counsel for NRC Staff