

# ENVIRON

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MAY 31 1972

Docket Nos. 50-400

50-401

50-402

and 50-403

Carolina Power & Light Company  
ATTN: Mr. J. A. Jones, Senior Vice Pres.  
Engineering and Operating Group  
336 Fayetteville Street  
Raleigh, North Carolina 27602

Gentlemen:

This letter will confirm the June 13 and 14, 1972 site visit and meeting related to our environmental review of the Shearon Harris Nuclear Power Plant Units 1, 2, 3 and 4. I am enclosing a list of topics which we propose to use as an agenda for our discussions during this meeting.

Mr. William H. Regan, Jr., of the Directorate of Licensing, who has been designated as Project Manager for the preparation of the environmental statement, will represent the Regulatory staff at this meeting, and will be accompanied by several technical members of the Battelle Memorial Institute, Pacific Northwest Laboratory, who are providing technical support in our environmental review. Please feel free to contact Mr. Regan at 301/973-7588 if additional information is required pertaining to the site visit.

Sincerely,

Original Signed by

D. R. Muller

Daniel R. Muller, Assistant Director  
for Environmental Projects  
Directorate of Licensing

### Enclosures:

1. Agenda Pertaining to Shearon Harris Nuclear Power Plant Units 1, 2, 3 & 4
2. Sample Questions

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SURNAME >

W H Regan:peb

G K Dicker

D R Muller

DATE >

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R. J. Wade, J  
Committee (3)  
R. C. DayCounr, ADWR, J  
H. Benton, ADSS, J  
G. K. Dicker, BR-2, J  
D. R. Miller, ADWP, J  
A. Glanville, DDPY, J

19-5-1  
2/5/73  
11/10/73

Carolina Power & Light Company -2-

cc: George F. Trowbridge, Esq.  
Shaw, Pittman, Potts, Trowbridge  
and Madden  
910 Seventeenth Street, N.W.  
Washington, D. C. 20006

C. D. Barham, Jr., Esq.  
Carolina Power & Light Company  
336 Fayetteville Street  
Raleigh, North Carolina 27602

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1. The first part of the document is a list of names and addresses. The names are listed in the first column, and the addresses are listed in the second column. The names are: John Doe, Jane Smith, and Bob Johnson. The addresses are: 123 Main St, 456 Elm St, and 789 Oak St.

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10. The tenth part of the document is a list of names and addresses. The names are listed in the first column, and the addresses are listed in the second column. The names are: John Doe, Jane Smith, and Bob Johnson. The addresses are: 123 Main St, 456 Elm St, and 789 Oak St.

PROPOSED AGENDA FOR SITE VISIT TO  
SHEARON HARRIS NUCLEAR POWER PLANT UNITS 1, 2, 3 AND 4  
BY  
DIRECTORATE OF LICENSING

JUNE 13 AND 14, 1972

June 13 - Morning - Tour of site.

June 13 (PM), June 14 - Discussion with Carolina Power and  
Light Company, Raleigh, North Carolina.

Discussion Topics

Physical Plant  
Water Quality  
Ecology of Site and Surroundings  
Radiological Dose  
Need for Power  
Cost Benefit Analysis Data

Sample questions in each of the above areas are enclosed.

AEC Participants

Directorate of Licensing: Wm. H. Regan, Jr.

Battelle Memorial Institute: I. C. Nelson, Team Leader  
D. G. Watson, Aquatic Biology  
W. Rickard, Terrestrial Ecology  
D. L. Schreiber, Hydrology  
J. B. Burnham, Cost Benefit  
D. B. Shipler, Rad Waste

SAMPLE QUESTIONS  
FOR SHEARON HARRIS UNITS 1, 2, 3 AND 4 SITE VISIT  
BY  
DIRECTORATE OF LICENSING

Physical Plant

Detailed information is needed on such things as:

1. The water depth near the intake structure.
2. The water velocity at the intake screens.
3. The transit time of water through the condenser cooling system.
4. A description of the outfall structure; the water velocity at the point of discharge.
5. Identification, location and elevation of points of release of leakage gaseous radioactivity.
6. The average annual flow through the culvert in Harris Reservoir.
7. Plans to make the color and texture of the plant aesthetically compatible with the natural environs; how the plant profile fits with the surrounding topography.

Water Quality

Detailed information is needed on such things as:

1. The temperature differential between the water discharged from the Harris Reservoirs and the Cape Fear River, and the expected seasonal variation in temperature and volume of the reservoir discharge.
2. Increase in silt load discharged to the Cape Fear River from Whiteoak-Buckhorn Creek which will result from construction of Harris Units 1, 2, 3 and 4, if any.
3. The kinds and amounts of chemicals to be discharged in the liquid wastes released to the cooling reservoir.
4. Concentrations of chlorine which will be introduced into the condenser cooling system to control fouling.



### Ecology of Site and Surroundings

Detailed information is needed on such things as:

1. The extent that vegetation will be removed from the land that will be inundated by the cooling reservoir.
2. Results of entrainment studies on the Cape Fear River and Whiteoak-Buckhorn Creek waters, and laboratory studies made on aquatic organism passage through the condenser cooling system at the Brunswick Nuclear Power Plant (research directed by Dr. B. J. Copeland).
3. Results of preliminary limnological studies conducted on Whiteoak and Buckhorn Creeks.
4. Kinds of organisms that will be sampled, at what frequency and for what kinds of analyses in the pre- and postimpoundment biological studies.

### Radiological Dose

Detailed information is needed on such things as:

1. The location of the nearest milk cow and the nearest land which may be converted to pasture.
2. Average annual joint frequency distribution of wind direction (16 point compass), wind speed and stability class (delta T only) in percent of occurrence.
3. Detailed description of proposed radiation monitoring program including sampling sites, types of samples, frequency of sampling, types of analysis, description of analyzing equipment, consultants for the program and who will conduct the sampling and analyzing.
4. The exact locations and projected usage (man-hrs/yr) of anticipated recreational sites on Harris Reservoir.
5. The proposed plans for public access to the exclusion area; when, where and how often.



### Need for Power and Cost Benefit

Detailed information is needed on such things as:

1. System peak load and capacity data for years 1965-1976.
2. Estimates of capital and fuel costs for nuclear, oil, and coal plants.
3. Based on 1971 Wake County tax structure, the expected county tax payments on the Harris Plant.
4. Capital and annual operating cost penalties (if any) for the following cooling options:

Cooling Lake

Mechanical Draft Tower (including 7,200 acre pond)

Natural Draft Tower (including 7,200 acre pond)

5. What loss of capacity, if any, would be expected from the tower options.
6. How the cost penalty for loss of capacity is calculated.
7. Any land use plans made by the County Planning Board for the area to be occupied by the plant; typical land costs in this area.

### References

The team needs the following references from the Environmental Report and specified maps to be available for inspection at the time of the site visit:

1. North Carolina water quality standards.
2. Reports on CP&L's aquatic studies at the Asheville Steam Electric Plant (Lake Julian) and the H. B. Robinson Steam Electric Plant (Lake Robinson).
3. Huber, R. T., 1969. "Preliminary Biology Investigation Whiteoak Watershed (CNI Watershed 3-14)" unpublished report, Bur. Sport. Fish and Wildlife, Raleigh, North Carolina.

4. Louder, D. E., 1963. "Surevey and Classification of Cape Fear River and Tributaries. North Carolina. Final Report, Federal Aid in Fish Restoration, JOB 1-6, Project F-14-R." North Carolina Wildlife Resources Commission, Raleigh, North Carolina 96 pp.
5. Whitford, L. A., 1958. "Phytoplankton In North Carolina Lakes and Ponds," Jour. Elisha Mitch. Sci. Soc. 74 (2): 143-157.
6. Robbins, T. W., Toppings, M. S. and Raney, E. C., 1970. "Studies of Fishes in the Muddy Run Pump Storage Reservoir and Connecting Waters", Ichthyological Assoc., Misc. Rpt. No. 4.
7. Trembley, F. J., 1960. "Research Project on Effects of Condenser Discharge Water on Aquatic Life," The Institute of Research, Lehigh Univ., Progress Report.
8. Graham, P. (ED), 1971. "Ecological Effects of Hot Water Discharged by an Electric Generating Plant," unpublished report. NSF studies program, Grant 6Y-9129. UNC at Asheville, North Carolina.
9. Phillips, H. A., 1966. "Lower Yadkin and Catawba River Reservoirs - 1965 Surveys." Unpublished report, North Carolina Wildlife Resources Commission, Raleigh, North Carolina.
10. Phillips, H. A., 1969. "Fisheries Investigation in Lakes and Streams." Science Wildlife Resources Dept. Annual Progress Report.
11. Map showing depth contours of the cooling water impoundments for the Harris Nuclear Station.
12. Seven and one half minute series USGS quadrangle topographic map(s) including Shearon Harris site.

