

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED
USNRC

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD -6 P1:26

In the Matter of)

CAROLINA POWER & LIGHT COMPANY)
AND NORTH CAROLINA EASTERN)
MUNICIPAL POWER AGENCY)

(Shearon Harris Nuclear Power Plant,)
Units 1 & 2))

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

Docket Nos. 50-400 OL
50-401 OL

AFFIDAVIT OF WILLIAM T. HOGARTH
IN SUPPORT OF SUMMARY DISPOSITION OF
EDDLEMAN CONTENTION 83/84 (CHEMICAL DISCHARGES)

STATE OF NORTH CAROLINA)
COUNTY OF WAKE)

WILLIAM T. HOGARTH, being duly sworn according to law, deposes and says as follows:

1. I am Manager-Environmental Technology Section of Carolina Power & Light Company, and give this affidavit in support of Applicants' Motion for Summary Disposition of Eddleman Contention 83/84. I have personal knowledge of the matters set forth herein and believe them to be true and correct to the best of my information, knowledge, and belief. A summary of my professional qualifications and experience is attached as Exhibit "A" hereto.

2. Eddleman Contention 83/84 (Chemical Discharges) alleges that the Applicants have not adequately assessed the environmental effects of the SHNPP chemical discharges. The purpose of this affidavit is to summarize Applicants' environmental assessments of SHNPP chemical discharges in support of Applicants' summary disposition motion.

3. The Applicants have followed applicable guidelines and regulations established pursuant to federal and North Carolina law in evaluating the effects of chemical discharges in the Environmental Report - Construction Permit Stage and the Environmental Report - Operating License Stage.

4. The NRC established guidelines (Reg. Guide 4.2, Rev. 2, NUREG-0099) for applicants to follow in preparing environmental reports to ensure that adequate environmental assessments are performed. As recommended, Applicants' ER measures expected discharges from the Harris plant against federal and state effluent standards — namely, the North Carolina water quality standards for Class C waters and the NPDES permit requirements. See ER Table 3.6.2-2; see also ER §§ 3.6, 5.3 and 5.4.

5. The effluent concentrations the Applicants expect to discharge are below or are equal to the NPDES "average" — rather than the "maximum" concentration limitations. For example, the NPDES requirement for free available chlorine (FAC) is an average concentration of 0.2 mg/l and a maximum of 0.5 mg/l. Discharge of total residual chlorine (TRC) — of which only a small fraction will be FAC — is not expected to exceed 0.2 mg/l. The level of TRC which Applicants expect to discharge is that recommended by the NRC Staff in the RFES-CP. FAC in the discharges at Harris is actually expected to be below detectable limits. In order to ensure compliance with their own operational plans as well as NPDES permit requirements, the Applicants have made provisions for effluent hold up and sampling prior to release to the blowdown line for all wastes requiring treatment to meet EPA effluent guidelines or state water quality standards.

6. The Applicants also modeled the dilution and mixing of discharges, as recommended in Reg. Guide 4.2. The model assumed the mixing zone to be a 120 acre surface area. (E.R. Section 5.3.2). TRC will be degraded to 0.01 mg/l, well within this mixing zone. The NPDES permit requirements allow a larger mixing zone (200 acres). The expected 0.01 mg/l meets the most restrictive criteria for a fresh warm water fishery (Quality Criteria for Water, 1976, EPA-440/9-76-023). Applicants and the NRC Staff have determined that TRC and other discharges

were determined by Applicants to pose a minimal risk to the environment due to rapid mixing and dilution, as well as by the NRC Staff. See DES at 5-3 to 5-9.

7. Based on compliance with EPA effluent limitations and the dilution and mixing effects, the Applicants have concluded that the expected discharges will have no significant overall risk to environment. The NRC staff in its independent assessment of impacts (DES) have concurred with the Applicants' findings of minimal impact. DES Section 5.3.1.2.2.

9. In conclusion, the Applicants have adequately assessed the environmental impacts of its chemical and wastewater discharges from SHNPP, as required by law (NEPA and FWPCA) and under the regulations, guidelines and recommendations of the NRC and the EPA.

This the 31st day of August, 1983.

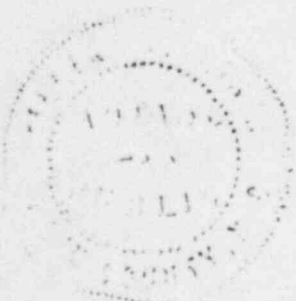
William T. Hogarth
WILLIAM T. HOGARTH

Sworn to and Subscribed before me, this the 31st day of August, 1983.

William T. Bryson
Notary Public

My Commission Expires:

8/8/87



WILLIAM T. HOGARTH

Social Security No.:

Current Position: Manager
 Environmental Technology Section
 Carolina Power & Light Company
 Harris Energy & Environmental Center
 Route 1, Box 327
 New Hill, North Carolina 27562
 Telephone: (919) 362-3276

Home Address:

I. Personal Data

Date of Birth:, 1927
Place of Birth: Jarratt, Virginia

II. Education

B.S.--University of Richmond, Richmond, Virginia--1963
M.S.--University of Richmond, Richmond, Virginia--1965
Ph.D.--North Carolina State University, Raleigh, North Carolina--1976
Program for Technical Managers--University of North Carolina--1983

III. Experience in Higher Education

Coordinator of General Biology Labs--University of Richmond

Laboratory Assistant in Comparative Anatomy, Ichthyology, and
Ecology--University of Richmond

Graduate Research Assistant--Roanoke-Albemarle Striped Bass Project--
North Carolina State University--1966-1972

Graduate Research Assistant--Chowan River Project--North Carolina
State University--1966-1970

Research Assistant--Dolphin Aquaculture Project--North Carolina State
University--1970-1972

IV. Honors

Williams Fellowship--University of Richmond

President--Beta Beta Beta--University of Richmond

Grant from Virginia Academy of Science for M.S. Research--
University of Richmond

Treasurer--Phi Sigma Society--North Carolina State University

Sport Fishing Institute Grant for Ph.D. Research

Grant from North Carolina Wildlife Society

V. Field Experience

1963-1965--Sampling of James River tributaries in connection with
M.S. research.

1965--Chesapeake Biological Laboratory--seven months--striped bass
project.

1966-1972--Graduate student in charge of Roanoke-Albemarle striped
bass project.

1966-1970--Periodic sampling of Chowan, Nottoway, and Blackwater
Rivers.

1970-1972--Dolphin Aquaculture-Sea Grant Project--Hatteras, Bimini
and Key West, Florida.

1966--Project on RV Eastward to determine feasibility of long-line
fishing off Jamaica.

1967--Fishing expedition off San Juan to determine species abundance
using long-line gear.

1973--Consultant to Roanoke-Albemarle project (March-May)--
Collecting data on spawning migration of striped bass and preparing
annual report.

1972-1980--Carolina Power & Light (CP&L) Company biologist -
Project Manager of Cape Fear Estuary Study--\$8 million
comprehensive study by CP&L, University of North Carolina, North
Carolina State University, and outside investigators to determine
impact of once-through power plant cooling system on Cape Fear
Estuary aquatic populations.

VI. Society Memberships

American Fisheries Society
American Society of Ichthyologists and Herpetologists
North Carolina Academy of Science
Society of Power Industry Biologists

VII. Current Technical Committees

Southeastern Electric Exchange Environmental Committee--Vice
Chairman
Electric Power Research Institute Task Force on Environment
North Carolina Wildlife Resources Commission--Striped Bass Steering
Committee
University of North Carolina--Water Resources Research Institute--
Advisory Committee

VIII. Certification

Certified Fisheries Scientist--American Fisheries Society

IX. Current Responsibilities

As the Manager of the Environmental Technology Section, I am responsible for the formulation and implementation of a broad variety of biological and scientific programs necessary to identify and quantify actual and potential environmental impacts associated with the construction and operation of fossil, hydro, and nuclear power plants. Responsibilities include providing (1) reports to various regulatory agencies identifying the environmental impacts related to Company operations and (2) special technical expertise to the Company in support of various Company activities. This expertise is provided by a staff of 47 professional engineers and scientists and 37 technicians. Working in four laboratories at the Harris Energy & Environmental Center, this staff provides support in materials sciences, analytical chemistry, air quality, and biological areas.

As Manager - Environmental Technology, I am also responsible annually for the planning and development of the annual operations and maintenance and construction budgets for the section. I modify the scope of the budget as required to ensure that required programs are adequately funded and contingency funds are available for anticipated studies for the ensuing year. The budget for 1982 is over \$4 million.

Regulatory requirements are the basis for most environmental programs and studies conducted by the section. Satisfactory Company compliance with these requirements, at minimum cost, requires frequent and positive interaction with these regulatory agencies. The Manager - Environmental Technology maintains close working relationships with the Environmental Protection Agency, the United States Fish & Wildlife Service, the National Marine Fisheries Service, the Nuclear Regulatory Commission, and various divisions of the North Carolina Department of Natural & Economic Resources and the South

Carolina Department of Health & Environmental Control to achieve satisfactory compliance.

As Manager - Environmental Technology, I am challenged to identify, as early as possible, potential problems and/or opportunities in Company environmental compliance; to analyze and evaluate compliance alternatives considering not only ecology but also engineering, construction, generation, legal opinions, and regulatory behavior; and to effectively manage the inherent potential for misunderstood communications between biologists and engineers.

X. Publications and Technical Reports

Hogarth, W. T. and W. S. Woolcott. 1966. The Mountain Stripeback Darter, Percina notogramma montuosa, N. sp. from Upper James River, Virginia. Chesapeake Science, 7(2):101-109.

Merriner, J. V., W. T. Hogarth and W. A. Foster. 1970. Occurrence of the Common Snook, Centropomus undecimalis (Block) (Pisces-Centropomidae) in North Carolina waters. The Journal of the Elisha Mitchell Scientific Society. 86(4):194-195.

Hassler, W. W., W. T. Hogarth and L. L. Liner, III. The status and abundance of the Striped Bass in the Roanoke River, North Carolina, for 1966.

Hassler, W. W., W. T. Hogarth, L. L. Liner, III and H. S. Millsaps, Jr. The status and abundance of the Striped Bass in the Roanoke River, North Carolina, for 1967.

Hassler, W. W., W. T. Hogarth and C. R. Stroud, Jr. The status and abundance of the Striped Bass in the Roanoke River, North Carolina, for 1968.

Hassler, W. W. and W. T. Hogarth. The status, abundance, and exploitation of the Striped Bass in the Tar River, North Carolina, for 1969.

Hassler, W. W., W. T. Hogarth and C. S. Manooch. The status, abundance, and exploitation of the Striped Bass in the Roanoke River and Albemarle Sound, North Carolina, for 1970.

Hassler, W. W., W. T. Hogarth and C. S. Manooch. The status, abundance, and exploitation of the Striped Bass in the Roanoke River and Albemarle Sound, North Carolina, for 1971.

Hassler, W. W., W. T. Hogarth and C. S. Manooch. The status, abundance, and exploitation of the Striped Bass in the Roanoke River and Albemarle Sound, North Carolina, for 1972.

Hassler, W. W. and W. T. Hogarth. 1977. The growth and culture of Dolphin, Coryphaena hippurus, in North Carolina. Acquaculture, 12 (1977).

Hogarth, W. T. Biology of the Wahoo, Acanthocybium solandri, off the North Carolina coast (in preparation).

Schwartz, Frank J., W. T. Hogarth and M. L. Weinstein. Marine and freshwater fishes of the Cape Fear Estuary, North Carolina, and their distribution in relation to environmental factors. *Brimleyana* No. 7:17-37. July 1981.

Manooch, Charles S. III, and W. T. Hogarth. Stomach contents and giant Nematodes from wahoo, Acanthocybium solanderi, collected along the South Atlantic and Gulf coasts of the United States. *Bulletin of Marine Science*, 33(2):197-212, 1983.

XI. Reports Responsible for at Carolina Power & Light Company

Impingement Report--Brunswick Steam Electric Plant. January 1974-January 1975.

Brunswick Steam Electric Plant Borrow Pit Studies. 1975.

H. B. Robinson 316 (a) and (b) Demonstration. 1976.

H. F. Lee 316 Demonstration. 1978.

Cape Fear 316 Demonstration. 1977.

Brunswick Steam Electric Plant--Cape Fear Studies. A 20-volume report set on the effects of the operation of the once-through cooling system on the Cape Fear Estuary aquatic populations.

Bioassay Studies--Roxboro Steam Electric Plant.

Trace Element Studies--CP&L System.

Many other reports concerned with site selection studies and biological monitoring programs.

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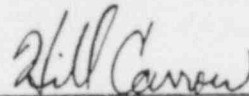
CAROLINA POWER & LIGHT COMPANY)
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POWER AGENCY)

(Shearon Harris Nuclear Power Plant,)
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)
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CERTIFICATE OF SERVICE

I hereby certify that copies of "Applicants' Motion for Summary Disposition of Eddleman Contention 83/84," "Statement of Facts Material to Eddleman 83/84 As To Which There Is No Genuine Issue To Be Heard," "Affidavit of William T. Hogarth in Support of Summary Disposition of Eddleman Contention 83/84 (Chemical Discharges)" were served this 1st day of September, 1983 by deposit in the United States mail, first class, postage prepaid, to the parties on the attached Service List.



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Dated: September 1, 1983

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