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 50-401 Shearon Harris Nuclear Power Plant, Unit 2, Carolina 05000401
 50-402 Shearon Harris Nuclear Power Plant, Unit 3, Carolina 05000402
 AUTH. NAME AUTHOR AFFILIATION
 MILLS, W.C. North Carolina, State of
 RECIP. NAME RECIPIENT AFFILIATION
 KEBLUSEK, S. Assistant Director for Environmental Projects

SUBJECT: Forwards draft NPDES permit. Revised draft will be resubmitted to EPA.

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	07	I&E	2	2	09	ENVN SPEC BR	1	1	
	10	CST BNFT ANL	1	1	12	GEOSCIEN BR	1	1	
	13	HYDRO-METEOR	1	1	14	ACDENT ANALY	1	1	
	15	EFLT TRT SYS	1	1	16	RAD ASMT BR	1	1	
	19	DIR DSE	1	1	AD	ENVIRON TECH	1	0	
		AD SITE ANALY	1	0	OELD		1	0	
EXTERNAL:	03	LPDR	1	1	04	NSIC	1	1	
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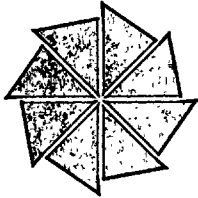
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North Carolina Department of Natural Resources & Community Development

James B. Hunt, Jr., Governor

Howard N. Lee, Secretary

DIVISION OF ENVIRONMENTAL MANAGEMENT

February 27, 1980

Ms. Suzanne Keblusek
U.S. Nuclear Regulatory Commission
Environmental Projects Branch
Washington, D.C. 20555

Subject: Draft NPDES Permit
Carolina Power and Light Company
Shearon Harris Nuclear Plant
Wake County

Dear Ms. Keblusek:

Please find attached one copy of the draft permit for Shearon Harris Plant. We are in the process of revising this draft for resubmission to EPA. It is hoped that the permit can issue without substantial change from this draft. If we may be of further assistance, please advise.

Sincerely,

William C. Mills
William C. Mills
Supervisor
Discharge Permits Unit

WCM/cj

Attachment

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STATE OF NORTH CAROLINA
DEPARTMENT OF NATURAL RESOURCES & COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT

PERMIT

To Discharge Wastewater Under The NATIONAL
POLLUTANT DISCHARGE ELIMINATION SYSTEM

DRAFT

In compliance with the provisions of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended,

Carolina Power and Light Company

is hereby authorized to discharge wastewater from a facility located at

Shearon Harris Nuclear Power Plant

to receiving waters Shearon Harris Reservoir on Buckhorn Creek

in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, and III hereof.

This permit shall become effective

This permit and the authorization to discharge shall expire at midnight
on September 30, 1980.

Signed this day of

DRAFT

~~A. F. McRorie~~, Director
Division of Environmental Management
By Authority of the Environmental
Management Commission

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SUPPLEMENT TO PERMIT COVER SHEET

Carolina Power and Light Company

is hereby authorized to: (include only appropriate items)

1. Enter into a contract for construction of wastewater treatment facilities
2. Make an outlet into Shearon Harris Reservoir on Buckhorn Creek
3. Construct and operate a facilities to control pollutants from cooling tower blowdown, sanitary sewage treatment plant, metal cleaning and low volume wastes in accordance with applicable effluent limits located at Shearon Harris Nuclear Power Plant subject to Part III, condition No. C. of this Permit, and
4. Discharge from said treatment works into the Shearon Harris Reservoir which is classified Class "C". Buckhorn Creek

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A. (). EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning at first discharge and lasting until expiration
 permittee is authorized to discharge from outfall(s) serial number(s). 001 cooling tower blowdown to
 Such discharges shall be limited and monitored by the permittee as specified below: the Shearon Harris
 Reservoir

Effluent Characteristics	Discharge Limitations		Monitoring Requirements			
	Kg/day (lbs/day)		Other Units (Specify)		Measurement	Sample
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.	Frequency	Type
Flow			1/	60 mgd	Continuous	Recorder
Temperature			1/		1/	1/
Zinc			1.0 mg/l	1.0 mg/l	1/ week	Grab
Total Chromium			0.2 mg/l	0.2 mg/l	1/ week	Grab
Phosphorus			5 mg/l	5 mg/l	1/ week	Grab
Free available Chlorine	2/					

1/ Discharge of blowdown from the cooling system shall be limited to the minimum discharge of recirculating water necessary for the purpose of discharging materials contained in the process, the further build-up of which would cause concentrations or amounts exceeding limits of established engineering practice. Discharge temperature shall not exceed the lowest temperature of the recirculating cooling water prior to the addition of make-up. The discharge shall not result in the violation of Class "C" water quality standards outside of a mixing zone of 200 acres around the point of discharge. The temperature within the mixing zone shall not exceed 95°F at any time. Monitoring adequate to demonstrate compliance with these conditions shall be proposed by the permittee and, upon approval of the proposal, the results submitted with the monthly monitoring reports. The permittee may discharge cooling water to the auxillary reservoir in compliance with Part III-E of this permit.

2/ Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant discharge free available or total residual chlorine at any one time unless the permittee can demonstrate to the Director, Division of Environmental Management that the unit in question cannot operate at or below this level of chlorination.

*Effluent prior to mixing with any other waste stream.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly on a grab sample of the effluent

There shall be no discharge of floating solids or visible foam in other than trace amounts.

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A. (). EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on initiation of discharge and lasting until expiration
 permittee is authorized to discharge from outfall(s) serial number(s). 002 Sanitary waste treatment
 Such discharges shall be limited and monitored by the permittee as specified below: plant discharge to Shear
 Harris reservoir on Buckhorn Creek

Effluent Characteristics

Discharge Limitations

Monitoring Requirements

Creek

	<u>Kg/day (lbs/day)</u>		<u>Other Units (Specify)</u>		<u>Measurement Frequency</u>	<u>Sample Type</u>	<u>Sample * Location</u>
	<u>Daily Avg.</u>	<u>Daily Max.</u>	<u>Daily Avg.</u>	<u>Daily Max.</u>			
Flow			0.05 MGD	0.075 MGD	Continuous	Recorder	I. or E
BOD			30 mg/l	45 mg/l	Monthly	Composite	E
TSS			30 mg/l	45 mg/l	Quarterly	Composite	E

* I-Influent, E-Effluent

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units
 and shall be monitored monthly on a grab sample of the effluent.

There shall be no discharge of floating solids or visible foam in other than trace amounts outside of an area 5 meters
 from the point of discharge.

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A. (). EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning upon initiation of discharge and lasting until expiration permittee is authorized to discharge from outfall(s) serial number(s). 003 metal cleaning wastes Such discharges shall be limited and monitored by the permittee as specified below: discharged to Sheron Harris Reservoir on Buckhorn Creek

Effluent Characteristics

Discharge Limitations

Monitoring Requirements

	<u>Kg/day (lbs/day)</u>		<u>Other Units (Specify)</u>		<u>Measurement Frequency</u>	<u>Sample Type</u>	<u>Sample Location</u>
	<u>Daily Avg.</u>	<u>Daily Max.</u>	<u>Daily Avg.</u>	<u>Daily Max.</u>			
Flow			0.8		During discharge	1/	E*
TSS			30 mg/l	100 mg/l	Daily during discharge	Grab	E
Oil & Grease			15 mg/l	20 mg/l	Daily during discharge	Grab	E
Cooper, Total			1.0 mg/l	1.0 mg/l	Daily during discharge	Grab	E
Iron, Total			1.0 mg/l	1.0 mg/l	Daily during discharge	Grab	E

*Effluent prior to mixing with any other waste stream

1/ Commensurate with treatment system installed

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily during discharge on a grab sample of the effluent.

There shall be no discharge of floating solids or visible foam in other than trace amounts outside of an area 5 meters from the point of discharge.

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A. (). EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning upon initiation of discharge and lasting until expiration permittee is authorized to discharge from outfall(s) serial number(s). 004 low volume wastes discharged Such discharges shall be limited and monitored by the permittee as specified below: to Shearon Harris

Reservoir on Buckhorn Creek

Effluent Characteristics

Discharge Limitations

Monitoring Requirements

	<u>Kg/day (lbs/day)</u>		<u>Other Units (Specify)</u>		<u>Measurement Frequency</u>	<u>Sample Type</u>	<u>Sample Location</u>
	<u>Daily Avg.</u>	<u>Daily Max.</u>	<u>Daily Avg.</u>	<u>Daily Max.</u>			
Flow			3.0 MGD	4.5 MGD	1/	1/	1/
TSS			30 mg/l	100 mg/l	Weekly	Grab	Efflu *
Oil & Grease			15 mg/l	20 mg/l	Weekly	Grab	E

1/ Commensurate with treatment system installed

*Effluent prior to mixing with any other waste stream

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored weekly on a grab sample of the effluent

There shall be no discharge of floating solids or visible foam in other than trace amounts outside of an area 5 meter from the point of discharge.

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A. (). EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning upon initiation of discharge and lasting until expiration
 permittee is authorized to discharge from outfall(s) serial number(s). 005 Point Source run-off
 Such discharges shall be limited and monitored by the permittee as specified below: from construction

Effluent CharacteristicsDischarge LimitationsMonitoring Requirements

<u>Kg/day (lbs/day)</u>		<u>Other Units (Specify)</u>		<u>Measurement</u>	<u>Sample</u>	<u>Sample</u>
<u>Daily Avg.</u>	<u>Daily Max.</u>	<u>Daily Avg.</u>	<u>Daily Max.</u>	<u>Frequency</u>	<u>Type</u>	<u>Location</u>

Point source run-off from construction is permitted in compliance with a sedimentation and erosion control plan approved by the Land Quality Section of the Division of Earth Resources.

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B. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

Not Applicable.

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2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

Act used herein means the Federal Water Pollution Control Act, As amended.
DEM used herein means the Division of Environmental Management of the
Department of Natural and Economic Resources.
"EMC" used herein means the North Carolina Environmental Management
Commission.

C. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Reporting

Monitoring results obtained during the previous month(s) shall be summarized for each month and reported on a Monthly Monitoring Report Form (DEM No. MR 1.0, 1.1, 1.2, and 1.3) postmarked no later than the 45th day following the completed reporting period. The first report is due on . The DEM may require reporting of additional monitoring results by written notification. Signed copies of these, and all other reports required herein, shall be submitted to the following address:

Division of Environmental Management
Water Quality Section
Post Office Box 27687
Raleigh, North Carolina 27611

3. Definitions

- a. The "daily average" discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days sampled during the calendar month when the measurements were made.
- b. The "daily maximum" discharge means the total discharge by weight during any calendar day.

4. Test Procedures

Test procedures for the analysis of pollutants shall conform to The EMC regulations published pursuant to N. C. G. S. 143-215.63 et seq.. The Water and Air Quality Reporting Act, Section 304(g), 13 USC 1314, of the Federal Water Pollution Control Act, As Amended, and Regulation 40 CFR 136.

5. Recording Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling;
- b. The dates the analyses were performed;
- c. The person(s) who performed the analyses;
- d. The analytical techniques or methods used; and
- e. The results of all required analyses.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Monthly Monitoring Report Form (DEM MR 1.0, 1.1, 1.2, and 1.3). Such increased monitoring frequency shall also be indicated. The DEM may require more frequent monitoring or the monitoring of other pollutants not required in this permit by written notification.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained by the permittee for a minimum of three (3) years, or longer if requested by the State Division of Environmental Management or the Regional Administrator of the Environmental Protection Agency.

A. MANAGEMENT REQUIREMENTS

1. Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants must be reported by submission of a new NPDES application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the DEM of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

2. Non compliance Notification

If, for any reason, the permittee does not comply with or will be unable to comply with any effluent limitation specified in this permit, the permittee shall provide the Division of Environmental Management with the following information, in writing, within five (5) days of becoming aware of such condition:

- a. A description of the discharge and cause of noncompliance; and
- b. The period of noncompliance, including exact dates and times; or, if not corrected; the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to navigable waters resulting from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Bypassing

Any diversion from or bypass of facilities necessary to maintain compliance with the terms and conditions of this permit is prohibited, except (i) where

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unavoidable to prevent loss of life or severe property damage, or (ii) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit. The permittee shall promptly notify the Water Quality Section of DEM in writing of each such diversion or bypass.

6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the State or navigable waters of the United States.

7. Power Failures

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

- a. In accordance with the Schedule of Compliance contained in Part I, provide an alternative power source sufficient to operate the wastewater control facilities;

or, if such alternative power source is not in existence, and no date for its implementation appears in Part I,

- b. Halt, reduce or otherwise control production and/or all discharges from wastewater control facilities upon the reduction, loss, or failure of the primary source of power to said wastewater control facilities.

8. Onshore or Offshore Construction

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

Permit No. NC

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Director of the Division of Environmental Management, the Regional Administrator, and/or their authorized representatives, upon the presentations of credentials:

- a. To enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any discharge of pollutants.

2. Transfer of Ownership or Control

This permit is not transferable. In the event of any change in control or ownership of facilities from which the authorized discharge emanates or is contemplated, the permittee shall notify the prospective owner or controller by letter of the existence of this permit and of the need to obtain a permit in the name of the prospective owner. A copy of the letter shall be forwarded to the Division of Environmental Management.

3. Availability of Reports

Except for data determined to be confidential under N. C. G. S. 143-215.3(a)(2) or Section 308 of the Federal Act, 33 USC 1318, all reports prepared in accordance with the terms shall be available for public inspection at the offices of the Division of Environmental Management. As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in N. C. G. S. 143-215.6(b)(2) or in Section 309 of the Federal Act.

4. Permit Modification

After notice and opportunity for a hearing pursuant to N. C. G. S. 143-215.1(b)(2) and G. S. 143-215.1(e) respectively, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any terms or conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

5. Toxic Pollutants

Notwithstanding Part II, B-4 above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

6. Civil and Criminal Liability

Except as provided in permit conditions on "Bypassing" (Part II, A-5) and "Power Failures" (Part II, A-7), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance pursuant to N. C. G. S. 143-215.6 or Section 309 of the Federal Act, 33 USC 1319.

7. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under N. C. G. S. 143-215.75 et seq. or Section 311 of the Federal Act, 33 USC 1321.

8. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

9. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

10. Expiration of Permit

Permittee is not authorized to discharge after the expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information, forms, and fees as are required by the agency authorized to issue permits no later than 180 days prior to the expiration date. Any discharge without a permit after the expiration will subject the permittee to enforcement procedures as provided in N. C. G. S. 143-215.6 and 33 USC 1251 et seq..

B. Previous Permits

All previous State water quality permits issued to this facility, whether for construction or operation or discharge, are hereby revoked by issuance of this permit. The conditions, requirements, terms, and provisions of this permit authorizing discharge under the National Pollutant Discharge Elimination System governs discharges from this facility.

C. Construction

No construction of wastewater treatment facilities or additions thereto shall be begun until Final Plans and Specifications have been submitted to the Division of Environmental Management and written approval and Authorization to Construct has been issued. If no objections to Final Plans and Specifications has been made by the DEM after 30 days following receipt of the plans or issuance of this permit, whichever is latter, the plans may be considered approved and construction authorized.

D. Certified Operator

Pursuant to Chapter 90A of North Carolina General Statutes, the permittee shall employ a certified wastewater treatment plant operator in responsible charge of the wastewater treatment facilities. Such operator must hold a certification of the grade equivalent to the classification assigned to the wastewater treatment facilities.

Part III - E

Heated water discharge to the Auxillary Reservoir

In order to insure that the Auxillary reservoir is available for its' designed use at all times the permittee may circulate heated water through the auxillary reservoir to prevent ice formation at any time that the surface water temperature is below 35°F provided that the surface water temperature in the auxillary reservoir is not raised more than 5°F above ambient temperature and in no case is raised to more than 40°F.

Part III - F

There shall be no discharge of polychlorinated biphenyls (PCB's) from this site.

Part III - G

Withdrawal from the Cape Fear River

Withdrawals from the Cape Fear River, shall be limited to 25% of the flow in the river except that no withdrawals shall be made from the river when the flow is 600 cfs or less nor which will reduce the flow in the river to less than 600 cfs as measured at the USGS Lillington Gauge.