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United States Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
ANNUAL ENVIRONMENTAL (NON-RADIOLOGICAL) OPERATING REPORT

Dear Sir or Madam:

In accordance with Section 5.4.1 of the Environmental Protection Plan issued as Appendix B to the Operating License (NPF-63) for the Harris Nuclear Plant, Carolina Power & Light Company provides the enclosed Annual Environmental (Non-Radiological) Operating Report for 2001.

Questions regarding this information may be referred to Mr. J. R. Caves at (919) 362-3137.

Sincerely,

James Holt
Manager, Support Services
Harris Nuclear Plant

MGW

Enclosure

- c: Mr. J. B. Brady (NRC Senior Resident Inspector, HNP)
Mr. J. M. Goshen (NRR Project Manager, HNP)
Mr. L. A. Reyes (NRC Regional Administrator, Region II)

SHEARON HARRIS NUCLEAR POWER PLANT

UNIT 1

**ANNUAL ENVIRONMENTAL
(NONRADIOLOGICAL)
OPERATING REPORT**

APPENDIX B

for

January 1- December 31, 2001

CAROLINA POWER & LIGHT COMPANY

Docket No. 50-400

Facility Operating License No. NPF-63

1.0 INTRODUCTION

Carolina Power & Light Company (CP&L) received a low-power Facility Operating License (No. NPF-53) and full-power Facility Operating License (No. NPF-63) for the Shearon Harris Nuclear Power Plant (SHNPP), Unit 1, from the U.S. Nuclear Regulatory Commission (NRC) on October 24, 1986, and January 12, 1987, respectively. Appendix B (the Environmental Protection Plan [nonradiological]) of the full-power license requires submittal of an Annual Environmental (nonradiological) Operating Report to the NRC describing the implementation of the plan during the previous year. The purpose of this document is to fulfill the requirement for the period January 1-December 31, 2001.

2.0 PLANT CONSISTENCY REQUIREMENTS [EPP Section 3.0]

2.1 Plant Design and Operation

The Harris Nuclear Plant (HNP) implemented a power uprate and steam generator replacement project during 2001 as approved by the NRC via Amendment No. 107 to Facility Operating License NPF-63 dated October 12, 2001. HNP's maximum core thermal power level increased from 2775 MWt to 2900 MWt. The project was determined not to have a significant adverse environmental impact. A more detailed discussion of changes in station design is located in Section 6.2. of this report.

There were no changes to plant design or operation which involved an unreviewed environmental question or change to the EPP.

2.2 Reporting Related to the National Pollutant Discharge Elimination System (NPDES) Permit

Required NPDES monitoring data were submitted to the North Carolina Division of Water Quality (NCDWQ) *via* monthly discharge monitoring reports and separate correspondence as warranted.

Results of a split toxicity sample collected during June 2001 from outfall 006 (HNP combined outfall) were sent to the NCDWQ during September. Results are due to the NCDWQ no later than 30 days after the reporting period for which the report is made. Therefore, the June split toxicity testing results for outfall 006 were sent to the NCDWQ late. A letter was received from the NCDWQ, dated August 24, 2001, reminding the facility of the reporting requirements. This event did not result in a Notice of Violation (NOV).

A toxicity sample collected for outfall 007 (Harris Energy & Environmental Center waste water treatment plant) on August 8, 2001 failed testing. It was determined that a reduction in pH resulting from a combination of an electrical malfunction in a sand filter pump, elevated ambient temperatures, and a high

volume of solids in the system's polishing lagoon caused the failure. The facility repaired the electrical malfunction and commenced periodic cleaning of solids from the polishing lagoon to prevent future events. The facility received an NOV from the NCDWQ, dated October 22, 2001, for the toxicity testing failure.

3.0 UNUSUAL OR IMPORTANT ENVIRONMENTAL EVENTS [EPP Section 4.1]

No occurrence of an unusual environmental event that would indicate or could result in a significant environmental impact causally related to plant operations occurred during the reporting period. No releases or exceedances of permit conditions caused any significant environmental impact. The existence of biofouling organisms (Asiatic clams, *Corbicula fluminea*) and the presence of troublesome aquatic vegetation (hydrilla, *Hydrilla verticillata*) in Harris Reservoir were considered important events worthy of inclusion in this report.

3.1 Aquatic Biological Monitoring

A. Inspections for Asiatic clams (*Corbicula fluminea*) in the Harris Nuclear Plant (HNP) Emergency Service Water System (e.g., intake structures)

Inspections of intake bays and screens were conducted via site procedure EPT-168 and were scheduled and implemented in conjunction with the Generic Letter 89-13 program. Inspections were conducted on three separate dates during 2001. An inspection of Bay 6 at the Emergency Service Water Screening Structure was conducted on March 19, 2001. Few live Asiatic clams were found (approximately 1-2 per square foot). A few native mussels (*Anadonta* spp. or *Utterbackia* spp.) were found outside the traveling screens at a density estimated to be 1 per square foot. Bay 6 at the Emergency Service Water Intake Structure was inspected on June 13, 2001. Relatively few clams were found. The density of living clams was estimated at 1 per square foot. One native mussel was found outside the traveling screen. Bay 8 at the main reservoir intake was inspected on August 22, 2001. Few Asiatic clams were found. Less than 100 were found in the entire bay. No native mussels were found. No clogging events of the HNP cooling water systems occurred during 2001 as a result of Asiatic clam infestation.

B. Monitoring for hydrilla (*Hydrilla verticillata*), a nonnative aquatic weed.

A visual survey for troublesome aquatic vegetation, particularly hydrilla, was conducted in the Harris Auxiliary Reservoir on October 15, 2001. The survey included traveling by boat along the reservoir and intake canal shorelines looking for topped-out stands of hydrilla as well as visiting shoreline locations where stands of hydrilla had previously grown. No hydrilla was observed in the auxiliary reservoir. These observations indicate that the stocking of grass carp effectively reduced the abundance of hydrilla.

A similar aquatic vegetation survey was conducted the same day, in areas just outside of and in the Harris Lake main intake canal. This survey indicated the presence of hydrilla growing in the main intake canal. Both shorelines of the main intake canal were covered with dense stands of water primrose. These stands appeared to be similar in density and coverage area to stands seen in previous years. Hydrilla in the intake canal and in the Thomas Creek area just outside the intake canal was relatively more abundant than during 2000 due to the mild winter and warm dry summer. Similar levels of hydrilla growth have been observed in the past with no effect on Harris Plant operation.

No impacts to Harris Nuclear Plant operations from aquatic vegetation occurred during 2001.

4.0 ENVIRONMENTAL MONITORING [EPP Section 4.2]

4.1 Aquatic Monitoring [EPP Section 4.2.1]

Under the authority of the Clean Water Act, the state of North Carolina issued an NPDES permit (NC0039586) for the HNP effective September 1, 1996, that remained in effect until July 31, 2001. Application for renewal of the NPDES permit was submitted to the state of North Carolina on January 24, 2001. This met regulatory requirements for submittal of the renewal application no later than 180 days prior to permit expiration and allows for continued discharge and coverage under the existing permit as stated in Part III, Section B, item 10 of the NPDES permit. The permit renewal has not been received from the state of North Carolina as of the issuance of this report. The NPDES permit includes the CP&L Harris Energy & Environmental Center (HE&EC) waste water treatment plant discharge as an outfall (007). This permit requires that the laboratory analyses performed on all non-field parameters analyzed for effluent samples be performed by a state-certified laboratory. In accordance with this requirement, the HNP Environmental & Chemistry Laboratory was certified by the North Carolina Department of Water Quality (NCDWQ) as a Wastewater Laboratory, effective January 1, 2001, and valid through December 31, 2002. In addition, during 2001 the CP&L Chemistry Laboratory at the Harris Energy & Environmental Center contracted with two NCDWQ-certified private laboratories, Aqua Tech Environmental Laboratories and Tri-Test Laboratories, to perform analyses.

The Toxicity Testing Laboratory at the CP&L HE&EC was certified by the NCDWQ for toxicity testing to support the HNP operations. This laboratory was certified to perform testing during 2001 under two consecutive Biological Laboratory certifications effective November 1, 2000, through November 1, 2001, and November 1, 2001, through November 1, 2002.

4.1.1 Effluent Monitoring

Routine effluent monitoring was conducted and reported to the NCDWQ as required by the NPDES permit. One reportable NPDES event occurred during 2001. The event was a toxicity testing failure at outfall 007 that occurred on August 8, 2001 due to a combination of an electrical malfunction in a sandfilter pump, elevated ambient temperatures, and a high volume of solids in the system's polishing lagoon. A report of this event was included in the Discharge Monitoring Report submittal provided to the NCDWQ for the month of August 2001, dated September 26, 2001. A discussion of this event is located in Section 2.2 of this report.

4.2 Terrestrial Monitoring [EPP Section 4.2.2]

Terrestrial monitoring is not required.

4.3 Noise Monitoring [EPP Section 4.2.3]

Noise monitoring is not required.

5.0 EPP AUDIT [EPP Section 5.1]

An audit conducted by an independent corporate entity was performed to verify the completeness and accuracy of the conditions and activities described in this annual environmental operating report. The results of that audit are summarized in the attached letter.

6.0 PLANT REPORTING REQUIREMENTS [EPP Section 5.4]

6.1 EPP Noncompliance's

There were no EPP noncompliance's identified during the reporting period. A discussion of NPDES noncompliance issues is located in Section 2.2 of this report.

6.2 Changes in Station Design

A power uprate and steam generator replacement project was implemented during 2001. Replacing the steam generators and changing the temperature average for the reactor coolant system increased the net electric output. The maximum core thermal power level increased from 2775 MWt to 2900 MWt. An environmental review of the power uprate and steam generator replacement was conducted that included impact assessments of water consumption, thermal discharge from the cooling tower blowdown, cooling tower drift, impacts on the auxiliary reservoir, nonradiological effluents, routine releases of radiological effluents, noise impacts,

and terrestrial impacts. Impacts were determined to be well within the limits evaluated by the Final Environmental Study (FES). Therefore, the project was determined not to have a significant adverse environmental impact.

A storage facility for the old steam generators was constructed onsite. No additional environmental permits were required since less than one acre of land was disturbed for the storage area.

Condenser tube replacement was also conducted during 2001. The copper-nickel (CuNi) condenser tubes were replaced with Sea-Cure alloyed tubes. CuNi tubing removed from the condensers was recycled. The total weight of the CuNi condenser tubes sent to the Ansam facility for recycling was 960,380 lbs.

There were no other changes in plant design or operation and there were no other tests or experiments performed which involved a potentially significant unreviewed environmental question during the reporting period.

6.3 Non-routine Reports

There were no non-routine reports submitted in accordance with EPP Section 5.4.2.



March 26, 2002

Ms. Victoria K. Will
Director - Environmental Services Section
Technical Services Department

Dear Ms. Will:

A review of the Harris Nuclear Plant Unit 1 (HNP) Annual Environmental (Nonradiological) Operating Report was recently completed. The report is issued annually to comply with the reporting requirements of the U.S. Nuclear Regulatory Commission (NRC) established in Appendix B, Environmental Protection Plan (Nonradiological), of the HNP Facility Operating License No. NPF-63. The objective of the review was to assess the accuracy and completeness of the report for the period January 1, 2001 through December 31, 2001.

The scope of our work was limited to a review of the supporting documents related to the Report and interviews with HNP and Environmental Services personnel. Based on the audit procedures performed, the Annual Environmental (Nonradiological) Operating Report appears to be complete, accurate, and in compliance with NRC reporting requirements.

We appreciate the excellent cooperation received from Environmental Services and HNP personnel. If you have any questions concerning this report, please do not hesitate to contact us.

Sincerely,

A handwritten signature in cursive script that reads 'Kristin M. Beck'.

Kristin M. Beck
Senior Auditor

A handwritten signature in cursive script that reads 'Jon F. Kerin'.

Jon F. Kerin
Audit Manager

/kmb

c: Mr. R. J. Duncan II
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