



Progress Energy

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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

Ladies and Gentlemen:

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, doing business as Progress Energy Carolinas, Inc., provides the enclosed Annual Environmental (Non-Radiological) Operating Report for 2007.

If you have any questions regarding this information, please contact me at (919) 362-3137.

Sincerely,

D. H. Corlett
Supervisor – Licensing/Regulatory Programs
Harris Nuclear Plant

DHC/mgw

Enclosure

- c: Mr. P. B. O'Bryan (NRC Senior Resident Inspector, HNP)
Mr. V. M. McCree (NRC Acting Regional Administrator, Region II)
Ms. M. G. Vaaler (NRC Project Manager, HNP)

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**Carolina Power & Light Company,
doing business as Progress Energy Carolinas, Inc.**

**Shearon Harris Nuclear Power Plant
Unit 1**

**ANNUAL ENVIRONMENTAL
(NONRADIOLOGICAL)
OPERATING REPORT**

January 1, 2007 through December 31, 2007

**Facility Operating License No. NPF-063
Appendix B**

Docket No. 50-400

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, 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 (EPP) [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 through December 31, 2007.

On January 1, 2003, Carolina Power & Light Company adopted the brand name Progress Energy Carolinas, Inc. (PEC).

2.0 PLANT CONSISTENCY REQUIREMENTS

[EPP Section 3.0]

2.1 Plant Design and Operation

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

2.2 Reporting Related to the NPDES Permit

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

The North Carolina Department of Environment and Natural Resources (NCDENR) issued the NPDES renewed permit on February 9, 2007, with an effective date of March 1, 2007.

On October 3, 2007, the NCDWQ issued Pump and Haul Permit WQ00302281 to allow transfer of sewage from the HNP Sewage Treatment Plant (Outfall 002) to the Harris Energy & Environmental Sewage Plant (Outfall 007) during Refueling Outage 14 and sewage treatment plant maintenance. Reporting and termination requirements of the permit were met.

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 are considered important topics worthy of inclusion in this report.

3.1 Aquatic Biological Monitoring

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

The frequency for inspecting the Emergency Service Water (ESW) intake structure was changed to once every 3 years during 2003. The change was based on an engineering evaluation (Engineering Change 49074) of HNP's Generic Letter 89-13 Testing and Inspection Program. Inspection of an ESW intake bay occurred on August 28, 2007. This inspection indicated a stable Asiatic clam population.

No clogging events of HNP cooling water systems occurred during 2007 as a result of Asiatic clam infestation.

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

On Tuesday November 27, 2007, aquatic vegetation surveys of Harris Main Reservoir and the Auxiliary Reservoir were conducted.

Main Reservoir

As in past years, the survey identified Hydrilla in the main reservoir. However, the biomass was less compared to previous years. This is due to the drought conditions experienced during 2007. The abundance of creeping water primrose, a shallow-water emergent, was also less compared to previous years. No new species of aquatic plants were observed. Much of the shallow water areas formerly submerged prior to the drought were dry. These dry areas have been invaded by various terrestrial grasses and sedges. Once the lake level returns to normal, the submerged grasses and sedges are expected to decay "in place" and not result in any screen clogging issues at the Harris Plant intake structure.

Auxiliary Reservoir

No hydrilla was observed in the auxiliary cooling reservoir. The reservoir was free of any aquatic vegetation that might pose operational issues for the auxiliary intake screens. The dominant vegetation observed was *Eleocharis baldwinii*, a small grass-like submerged plant that poses no operational concern.

No impacts to HNP operations from aquatic vegetation occurred in 2007.

3.2 License Renewal

The Applicant's Environmental Report – Operating License Renewal Stage, Shearon Harris Nuclear Plant, Progress Energy, Unit 1, Docket No. 50-400, License No. NPF-63, Final November 2006 was submitted to the Nuclear Regulatory Commission (NRC) for review in 2007. The Applicant's Environmental Report was reviewed and the NRC staff's draft comments were published in December 2007.

No significant environmental impacts have been identified by these activities.

3.3 Combined Construction and Operating License Application Evaluations

Progress Energy Carolinas, Inc. is evaluating potential sites for two new nuclear plants on HNP property. Additional core samples were collected during 2007. An Erosion Control Plan for Land Clearing near Harris Plant was submitted to support the meteorological data collection for the application. These activities were coordinated with the NCDENR.

No impacts to HNP operations were caused by these activities

On February 19, 2008, Progress Energy filed a Combined Construction and Operating License (COL) application with the Nuclear Regulatory Commission (NRC) for two additional reactors at the Harris Plant site. This application is currently being reviewed by the NRC.

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 renewed the National Pollutant Discharge Elimination System (NPDES) permit (NC0039586) for the HNP on March 1, 2007. The permit includes the Harris Energy & Environmental Center (HE&EC) sewage treatment plant discharge as an outfall (007). By letter dated March 7, 2007, PEC notified the NRC of the permit renewal as required by EPP Section 3.2.

The permit requires that a state-certified laboratory perform the analyses on all non-field parameters analyzed for effluent samples. In accordance with this requirement, the HNP Environmental & Chemistry Laboratory was certified by the NCDWQ as a Wastewater Laboratory, effective January 1, 2007, and valid through December 31, 2007. In addition, during 2007 the Progress Energy Chemistry Laboratory at the HE&EC contracted with three NCDWQ-certified private laboratories, Tri-Test Laboratories, Environmental Conservation Laboratories, Inc. (ENCO) and Environmental Testing Solutions, Inc., to perform analyses.

4.1.1 Effluent Monitoring

Routine effluent monitoring was conducted and reported to the NCDWQ as required by the NPDES permit. During 2007, four NPDES discharge monitoring reports identified permit exceedances as discussed in Section 6.1.

4.1.2 NPDES Inspections

On October 25, 2007, a maintenance inspection was conducted at the Harris Energy & Environmental Center Sewage Plant Field Laboratory (Certificate Number 5145) by the NCDWQ. Two additional documents were requested as a result of the inspection. Both items were supplied by the laboratory.

On September 27, 2007, a compliance evaluation inspection was conducted at the Harris Nuclear Plant by the NCDWQ. No deficiencies were identified as a result of the inspection.

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 the audit are on file and available for inspection.

6.0 PLANT REPORTING REQUIREMENTS [EPP Section 5.4]

6.1 EPP Noncompliances

There were no EPP noncompliances identified during the reporting period.

NPDES exceedances for Outfall 002 were noted for Biological Oxygen Demand (BOD) in April, May, June and December 2007. Exceedances for Total Suspended Solids (TSS) were also noted in December 2007. These exceedance events were entered into HNP's Corrective Action Program for evaluation and corrective actions. A NCDENR Technical Assistance Specialist was contacted for assistance with the BOD exceedances which was subsequently attributed to cleaners used to disinfect personnel respirators.

These exceedances were reported to the NCDWQ via the monthly discharge monitoring reports as required by the NPDES permit. There was no significant environmental impact from these exceedances.

6.2 Changes in Station Design and Operation

There were no changes in station design or operation and there were no tests or experiments performed which involved a potentially significant unreviewed environmental question during 2007.

6.3 Non-routine Reports

There were no non-routine reports submitted in accordance with EPP Section 5.4.2 during 2007.

6.4 Other Reporting Requirements

There were no other EPP reportable events during 2007.