

APR 2 7 2010

SERIAL: HNP-10-044

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

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

Ladies and Gentlemen:

In accordance with Section 5.4.1 of the Environmental Protection Plan issued as Appendix B to the Renewed 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 (Nonradiological) Operating Report for 2009.

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. J. D. Austin (NRC Senior Resident Inspector, HNP) Mr. L. A. Reyes (NRC Regional Administrator, Region II) Ms. M. G. Vaaler (NRC Project Manager, HNP)

Progress Energy Carolinas, Inc. Harris Nuclear Plant P. O. Box 165 New Hill, NC 27562

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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, 2009 through December 31, 2009

Renewed Facility Operating License No. NPF-63 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. The NRC issued a Renewed Facility Operating License (No. NPF-63) on December 17, 2008, extending operations until October 24, 2046. Appendix B (the Environmental Protection Plan (EPP) [nonradiological]) of the renewed operating 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, 2009.

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.

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. <u>Inspections for Asiatic clams (Corbicula fluminea) in the Harris Nuclear Plant</u> 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. Inspections of ESW intake bays occurred on July 14, 2009, July 30, 2009, and August 11, 2009. These inspections indicated a stable Asiatic clam population.

No clogging events of HNP cooling water systems occurred during 2009 as a result of Asiatic clam infestation.

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

Main Reservoir

Hydrilla was found throughout the main reservoir during the 2009 survey. However, the biomass was less compared to previous years. This is predominately due to the drought conditions experienced during the growing season in 2009. 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. Various terrestrial grasses and sedges were observed in these dry areas. As the lake has returned to normal water level, the submerged grasses and sedges are expected to decay "in place" and should not cause any screen clogging issues at the Harris Plant intake structure.

Auxiliary Reservoir

No *hydrilla* was observed in the auxiliary cooling reservoir during the 2009 survey. No aquatic vegetation that might pose operational issues for the auxiliary intake screens were observed during the survey. The dominant vegetation observed was *Eleochris baldwinii*, a small grass-like submerged plant that poses no operational concern. Water primrose (*Ludwigia spp.*) was also present but in small amounts.

No impacts to HNP operations from aquatic vegetation occurred in 2009.

3.2 Combined Construction and Operating License Application Evaluations

Progress Energy Carolinas, Inc. continues to perform engineering and natural resource evaluations related to potential future development of two new nuclear power generation units at the HNP site. The NRC is currently reviewing the Combined Construction and Operating License (COL) application submitted by Progress Energy on February 19, 2008.

In 2009 several field studies related to the COL were performed or initiated. Full delineation of wetlands as well as characterization and quantification of stream impacts within the expected project area were completed to support future permitting activities. In-stream Flow studies, including fish, benthic and mussel surveys, were initiated in Buckhorn Creek and a section of the Cape Fear River to evaluate habitats and potential impacts from changes in flow. These studies will be continued during 2010. The natural resource studies are being coordinated with the NRC, US Army Corps of Engineers, North Carolina Department of Environment and Natural Resources (NCDENR), US Fish & Wildlife Service, and NC Wildlife Resources Commission.

The Phase IA archaeological survey of the project area was completed in 2009.

An Erosion Control Plan for Land Clearing near Harris Plant was approved in 2007 to support the meteorological data collection for the application. During an inspection on August 6, 2009, NCDENR personnel found the area to be in compliance and have subsequently closed out the plan.

No significant environmental impacts have been caused or identified by these activities.

3.3 New Firing Range

An Erosion Control Plan for Land Clearing at the Harris Plant was submitted to support the construction of a new firing range for security guard training. These activities were coordinated with the NCDENR. Land clearing and construction activities continued in 2009.

No significant environmental impacts have been caused or identified by these activities.

3.4 New Generator Rewind Building

An Erosion Control Plan for Land Clearing at the Harris Plant was submitted to support the construction of a new building to rewind an electrical generator. These activities were coordinated with the NCDENR. Land clearing and construction activities continued in 2009.

No significant environmental impacts have been caused or identified by these activities.

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).

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 North Carolina Division of Water Quality (NCDWQ) as a Wastewater Laboratory, effective January 1, 2009, and valid through December 31, 2009. In addition, during 2009 the Progress Energy Chemistry Laboratory at the HE&EC contracted with two NCDWQ-certified private 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.

4.1.2 NPDES Inspections

On February 24, 2009, a laboratory compliance inspection was conducted at the Harris Nuclear Plant by the NCDENR-DWQ. No deficiencies were identified as a result of the inspection

On April 7, 2009, a NPDES compliance inspection was conducted at the Harris Nuclear Plant by the NCDENR-DWQ. No deficiencies were identified as a result of the inspection.

4.1.3 Other Inspections

On April 13, 2009, and August 6, 2009, NCDENR personnel inspected the erosion control areas that were currently active. No deficiencies were identified as a result of these inspections

4.2 Terrestrial Monitoring

[EPP Section 4.2.2]

Terrestrial monitoring is not required.

4.3 Noise Monitoring

Noise monitoring is not required.

5.0 EPP AUDIT

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

6.1 EPP Noncompliances

There were no EPP noncompliances identified during the reporting period.

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 2009.

6.3 Non-routine Reports

There were no non-routine reports submitted in accordance with EPP Section 5.4.2 during 2009.

6.4 Other Reporting Requirements

There were no other EPP reportable events during 2009.

[EPP Section 5.1]

[EPP Section 5.4]