



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
245 PEACHTREE CENTER AVENUE NE, SUITE 1200  
ATLANTA, GEORGIA 30303-1257

December 29, 2011

Mr. William Jefferson, Jr.  
Vice President  
Carolina Power & Light Company  
Shearon Harris Nuclear Plant  
5413 Shearon Harris Road  
New Hill, NC 27562

SUBJECT: SHEARON HARRIS NUCLEAR PLANT - NRC EMERGENCY PREPAREDNESS  
INSPECTION REPORT 05000400/2011501

Dear Mr. Jefferson:

On December 1, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Shearon Harris Nuclear. The enclosed inspection report documents the inspection results, which were discussed on December 1, 2011, with Mr. E. Kapopoulos and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if any, will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

*/RA/*

Brian Bonser, Chief  
Plant Support Branch 1  
Division of Reactor Safety

Docket No.: 50-400  
License No.: NPF-63

Enclosure:  
Inspection Report 05000400/2011-501  
w/Attachment: Supplemental Information

cc w/encl.: (See page 2)

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Distribution w/encl.  
See next page

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ADAMS:  Yes   ACCESSION NUMBER: ML113640097 \_\_\_\_\_    SUNSI REVIEW COMPLETE    FORM 665 ATTACHED

OFFICE	RII: DRS	RII: DRS	RII: DRS	RII: DRP	HQ
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DATE	12/29/2011	12/29/2011	12/29/2011	12/29/2011	12/29/2011
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(cc w/encl continued page 3)

cc w/encl (continued)

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Senior Resident Inspector

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Shearon Harris Nuclear Power Plant

U.S. NRC

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Letter to William Jefferson from Brian Bonser dated December 29, 2011.

SUBJECT: SHEARON HARRIS NUCLEAR PLANT - NRC EMERGENCY PREPAREDNESS  
INSPECTION REPORT 05000400/2011501

Distribution w/encl:

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**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Docket Nos.: 05000400

License Nos.: NPF-63

Report No.: 05000400/2011-501

Licensee: Carolina Power and Light Company

Facility: Shearon Harris Nuclear Plant, Unit 1

Location: New Hill, NC

Dates: November 28, 2011, through December 1, 2011

Inspectors: M. Speck, Sr. Emergency Preparedness Inspector  
P. Elkmann, Sr. EP Inspector  
W. Loo, Sr. Health Physics Inspector

Approved by: Brian Bonser, Chief  
Plant Support Branch 1  
Division of Reactor Safety

Enclosure

## SUMMARY OF FINDINGS

IR 05000400/2011-501; 11/28 – 12/01/2011; Shearon Harris Nuclear Power Plant; Exercise and Baseline Inspection.

The report covered an announced inspection by two regional emergency preparedness inspectors and one health physics inspector.

A. NRC-Identified and Self-Revealing Findings

None

B. Licensee-Identified Violations

None

## REPORT DETAILS

### 1. REACTOR SAFETY

Cornerstone: Emergency Preparedness (EP)

#### 1EP1 Exercise Evaluation

##### a. Inspection Scope

Prior to the inspection activity, the inspectors conducted an in-office review of the exercise objectives and scenario submitted to the NRC to determine if the exercise would test major elements of the emergency plan as required by 10 CFR 50.47(b)(14).

The onsite inspection consisted of the following review and assessment:

- The adequacy of the licensee's performance in the biennial exercise, conducted on November 29, 2011, was reviewed and assessed regarding the implementation of the Risk Significant Planning Standards (RSPS) in 10 CFR 50.47 (b)(4), (5), (9), and (10) which address emergency classification, offsite notification, radiological assessment, and protective action recommendations respectively.
- The overall adequacy of the licensee's emergency response facilities with regard to NUREG-0696, "Functional Criteria for Emergency Response Facilities and Emergency Plan commitments". The facilities assessed were the Control Room Simulator, Technical Support Center (TSC), Operations Support Center (OSC), and Emergency Operations Facility (EOF).
- Other performance areas, such as: the emergency response organization's (ERO) recognition of abnormal plant conditions; command and control, intra- and inter-facility communications; prioritization of mitigation activities; utilization of repair and field monitoring teams; interface with offsite agencies; and the overall implementation of the emergency plan and its implementing procedures.
- Past performance issues from NRC inspection reports, and Federal Emergency Management Agency (FEMA)/Department of Homeland Security (DHS) exercise reports to determine the effectiveness of corrective actions as demonstrated during this exercise to ensure compliance with 10 CFR 50.47(b)(14).
- The post-exercise critique process and the presentation to the licensee's senior management conducted on November 30, 2011, to evaluate the licensee's self-assessment of its Emergency Response Organization (ERO) performance during the exercise and to ensure compliance with 10 CFR 50, Appendix E, Subsection IV.F.2.g.

Enclosure



The inspector reviewed various documents which are listed in the Attachment. This inspection activity satisfied one inspection sample for the exercise evaluation on a biennial basis.

b. Findings

No findings were identified.

1EP4 Emergency Action Level and Emergency Plan Changes

a. Inspection Scope

Since the last NRC inspection of this program area, revisions 55, 56, and 57 of the Emergency Plan were implemented based on the licensee's determination, in accordance with 10 CFR 50.54(q), that the changes resulted in no decrease in the effectiveness of the Plan, and that the revised Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50. The inspectors conducted a sampling review of the implementing procedure changes made between January 1, 2010, and October 31, 2011, to evaluate for potential decreases in effectiveness of the Plan. However, this review was not documented in a Safety Evaluation Report and does not constitute formal NRC approval of the changes. Therefore, these changes remain subject to future NRC inspection in their entirety.

The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 04, "Emergency Action Level and Emergency Plan Changes." The applicable planning standard (PS), 10 CFR 50.47(b)(4) and its related 10 CFR 50, Appendix E requirements were used as reference criteria.

The inspectors reviewed various documents which are listed in the Attachment. This inspection activity satisfied one inspection sample for the emergency action level and emergency plan changes on an annual basis.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

a. Inspection Scope

The inspector sampled licensee submittals relative to the Performance Indicators (PIs) listed below for the period January 1, 2010, through September 30, 2011. To verify the accuracy of the PI data reported during that period, PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, was used to confirm the reporting basis for each data element.

### Emergency Preparedness Cornerstone

- Emergency Response Organization Drill/Exercise Performance (DEP)
- Emergency Response Organization Readiness (ERO)
- Alert and Notification System Reliability (ANS)

For the specified review period, the inspector examined data reported to the NRC, procedural guidance for reporting PI information, and records used by the licensee to identify potential PI occurrences. The inspector verified the accuracy of the DEP through review of a sample of drill and event records. The inspector reviewed selected training records to verify the accuracy of the ERO PI for personnel assigned to key positions in the ERO. The inspector verified the accuracy of the PI for ANS reliability through review of a sample of the licensee's records of periodic system tests. Licensee procedures, records, and other documents reviewed within this inspection area are listed in the Attachment.

The inspector reviewed various documents which are listed in the Attachment. This inspection activity satisfied one inspection sample for each of the three (3) Emergency Preparedness PIs, i.e., DEP, ERO, and ANS, on an annual basis.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On December 1, 2011, the lead inspector presented the inspection results to Mr. E. Kapopoulos and other members of his staff. The inspector confirmed that no proprietary information was provided during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee personnel

M. Burton, EP Specialist  
J. Caves, Licensing Engineer  
S. Fischer, EP Specialist  
D. Griffin, Training Manager  
E. Kapopoulos, Plant Manager  
J. Overly, Fukushima Response team member  
G. Simmons, EP Supervisor  
J. Stephenson, Fleet Emergency Preparedness Manager  
D. Stih, EP Specialist  
J. Warner, Outage and Scheduling Manager  
M. Wallace, Sr. Licensing Specialist  
J. White, EP Specialist

### **LIST OF DOCUMENTS REVIEWED**

#### 1EP1 Exercise Evaluation

##### Procedures

EMG-NGGC-0002, Offsite Dose Assessment, Rev. 1  
EP-EAL, Emergency Action Level, Rev. 9  
EPM-200, ERO Training Program, Rev. 11  
EPM-210, EP Drill and Exercise Program, Rev. 15  
EPM-601, Core Damage Assessment Technical Basis, Rev. 1  
PEP-110, Emergency Classification and Protective Action Recommendations, Rev. 19  
PEP-230, Control Room Operations, Rev. 19  
PEP-240, Activation and Operation of the Technical Support Center, Rev. 14  
PEP-241, Technical Support Center Emergency Ventilation System Operation, Rev. 0  
PEP-270, Activation and Operation of the Emergency Operations Facility, Rev. 22  
PEP-310, Notifications and Communications, Rev. 6  
PEP-330, Radiological Consequences, Rev. 9  
PEP-342, Core Damage Assessment, Rev. 4  
PEP-350, Protective Actions, Rev. 7  
PLP-201, Emergency Plan, Rev. 57

##### Records and Data

Control Room, Technical Support Center, Operations Support Center, Emergency Operations Center - Documentation packages (logs, event notification forms, Protective Action Recommendations, Media releases, and Radiological Dose Assessment)  
Exercise Scenario Timeline for the April 10, 2007, Biennial Exercise  
Exercise Scenario Timeline for the March 3, 2009, Biennial Exercise  
Evaluation Report for drills conducted 2009, 2010, and 2011

Corrective Action Documents

AR 501801, Drill deviation from scenario  
 AR 501810, 501703, WebEOC issues  
 AR 501683, ERFIS Failover  
 AR 501694, ERO qualifications expired  
 AR 501705, Chemistry and ENMON team not fully staffed  
 AR 501706, Radiological surveys not documented  
 AR 501709, MET data and WebEOC format human error trap  
 AR 501711, PAR process recommendation  
 AR 501712, Onsite RCS sampling evaluation  
 AR 501664, EOF machines not properly setup  
 AR 501704, Incorporate corporate fuels group into fuel damage assessment process  
 AR 501707, Need guidance for ENF comments  
 AR 501708, Need PAR >10 miles guidance  
 AR 501710, NRC site team improvements  
 AR 501484, Purchase survey meters  
 AR 501770, Update EPL-001 phone list

1EP4 Emergency Action Level (EAL) and Emergency Plan ChangesProcedures

REG-NGGC-0010, 10CFR50.59 and Selected Regulatory Reviews, Rev. 16

Change Packages

Action Request 00369271, Regulatory Review for PEP-260, Rev. 12  
 Action Request 00376041, Regulatory Review for PEP-250, Rev. 16  
 Action Request 00379121, Regulatory Review for EMG-NGG-0002, Rev. 1  
 Action Request 00379726, Regulatory Review for PEP-340, Rev. 16  
 Action Request 00384543, Regulatory Review for EPM-400, Rev. 14  
 Action Request 00388558, Regulatory Review for EMG-NGG-0005, Revision 0  
 Action Request 00388791, Regulatory Review for EP-EAL, Revision 8  
 Action Request 00388802, Regulatory Review for PEP-110, Revision 18  
 Action Request 00388989, Regulatory Review for PLP-201, Revision 55  
 Action Request 00411246, Regulatory Review for PEP-241, Revision 0  
 Action Request 00411701, Regulatory Review for EMG-NGG-0005, Revision 1  
 Action Request 00419157, Regulatory Review for EPM-201, Revision 7  
 Action Request 00419493, Regulatory Review for EP-EAL, Revision 9  
 Action Request 00420806, Regulatory Review for PLP-201, Revision 56  
 Action Request 00421047, Regulatory Review for PEP-110, Revision 19  
 Action Request 00426201, Regulatory Review for PEP-342, Revision 4  
 Action Request 00443092, Regulatory Review for EPM-400, Revision 15  
 Action Request 00445142, Regulatory Review for EPM-200, Revision 11  
 Action Request 00446928, Regulatory Review for PLP-201, Revision 57  
 Action Request 00484381, Regulatory Review for PEP-240, Revision 14

Section 4OA1: Performance Indicator VerificationProcedures

EMG-NGGC-0004, Maintenance of the Emergency Response Organization Notification System, Rev 1

EMG-NGGC-0005, Activation of the Emergency Response Organization Notification System, Rev. 1

REG-NGGC-0009, NRC Performance Indicators and Monthly Operating Report Data, Rev. 11  
PLP-201, Emergency Plan, Revision 57

Records and Data

DEP opportunities documentation from 1<sup>st</sup> Quarter 2010, through 3<sup>rd</sup> Quarter 2011

Drill and exercise participation records of ERO personnel from 1<sup>st</sup> Quarter 2010, through 3<sup>rd</sup> Quarter 2011

Progress Energy, Harris Nuclear Plant, Siren System Status Reports for January 2010, through September 2011

Siren test data from 1<sup>st</sup> Quarter 2010, through 3<sup>rd</sup> Quarter 2011

Various ERO Personnel Qualification and Participation records

Corrective Action Documents

446707 – Sirens C-05 and W-28 failed quarterly growl test

481275 – Alert and notification siren system communications failure

413880 – Siren C-13 partial activation during bi-weekly test

## LIST OF ACRONYMS

ANS	Alert and Notification System Reliability
DEP	Emergency Response Organization Drill/Exercise Performance
DHS	Department of Homeland Security
EP	Emergency Preparedness
EOF	Emergency Operations Facility
ERO	Emergency Response Organization
FEMA	Federal Emergency Management Agency
NRC	Nuclear Regulatory Commission
OSC	Operations Support Center
PI	Performance Indicator
RSPS	Risk Significant Planning Standards
TSC	Technical Support Center