



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

November 19, 2015

Mr. Benjamin C. Waldrep
Site Vice President
Shearon Harris Nuclear Power Plant
5413 Shearon Harris Road
New Hill, NC 27562-0165

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT – U.S. NUCLEAR REGULATORY
COMMISSION EMERGENCY PREPAREDNESS INSPECTION REPORT
05000400/2015502

Dear Mr. Waldrep:

On October 30, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Shearon Harris Nuclear Power Plant, Unit 1. The enclosed inspection report (IR) documents the inspection results that were discussed on October 30, 2015, with you and other members of your staff.

No findings were identified during this inspection.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public inspections, exemptions, requests for withholding," of the NRC's "Agency Rules of Practice and Procedure," 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 Agencywide Documents Access and Management System (ADAMS); accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

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

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

Enclosure:
IR 05000400/2015502
w/Attachment: Supplementary Information

cc: Distribution via Listserv

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ADAMS: Yes ACCESSION NUMBER: ML15323A330 SUNSI REVIEW COMPLETE FORM 665 ATTACHED

OFFICE	RII:DRS/PSB1	RII:DRS/PSB1	RII:DRS/PSB1	RII:DRP/BR4	RII:DRS/PSB2	RII:DRS/PSB1	
SIGNATURE	BRB1 for SPS	CAF2 via e-mail	WTL via e-mail	JDA via e-mail	BBD for JOB2	BRB1	
NAME	S. Sanchez	C. Fontana	W. Loo	J. Austin	J. Brown	B. Bonser	
DATE	11/ 19 /2015	11/ 18 /2015	11/ 19 /2015	11/ 17 /2105	11/ 19 /2015	11/ 19 /2015	
E-MAIL COPY	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	

OFFICIAL RECORD COPY

Letter to Benjamin Waldrep from Brian Bonser dated November 19, 2015

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT – U.S. NUCLEAR REGULATORY
COMMISSION EMERGENCY PREPAREDNESS INSPECTION REPORT
05000400/2015502

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No: 05000400

License No: NPF-63

Report No: 05000400/2015502

Licensee: Duke Energy Progress, Inc.

Facility: Shearon Harris Nuclear Power Plant, Unit 1

Location: New Hill, NC

Dates: October 26–30, 2015

Inspectors: Steven Sanchez, Senior Emergency Preparedness Inspector
Christopher Fontana, Emergency Preparedness Inspector
Jonathan Brown, Physical Security Inspector
Wade Loo, Senior Health Physicist
Joseph Austin, Senior Resident Inspector

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

Enclosure

SUMMARY

Inspection Report (IR) 05000400/2015502; 10/26/2015 – 10/30/2015; Shearon Harris Nuclear Power Plant, Unit 1; Exercise and Baseline Inspection

This report covers an announced inspection by two emergency preparedness inspectors, one physical security inspector, one senior health physicist, and one senior resident inspector. No findings of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5.

No findings were identified during this inspection.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness

1EP4 Emergency Action Level and Emergency Plan Changes

a. Inspection Scope

Since the last NRC inspection of this program area, several revisions were made to the Radiological Emergency Plan, and associated implementing procedures. The licensee determined that, in accordance with 10 CFR 50.54(q), the Plan continued to meet the requirements of 10 CFR 50.47(b), and Appendix E to 10 CFR Part 50. The inspectors reviewed the changes and sampled implementing procedure changes made between September 2014 and July 2015 to evaluate for potential reductions in the effectiveness of the Plan. As this review was not documented in a Safety Evaluation Report, and does not constitute formal NRC approval of the changes, these changes remain subject to future NRC inspection in their entirety.

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

The inspectors reviewed various documents, which are listed in the Attachment to this report. 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.

1EP7 Exercise Evaluation – Hostile Action Event

a. Inspection Scope

Title 10 CFR Part 50, Appendix E, Section IV.F.2.j, requires, in part, that nuclear power reactor licensees, in each 8-calendar-year exercise cycle, provide the opportunity for their emergency response organization (ERO) to demonstrate proficiency in the key skills necessary to respond to a hostile action (HA) directed at the plant site. The licensee designed the October 27, 2015, exercise to satisfy that requirement, and the NRC inspected the HA event exercise to assess the licensee's ability to effectively implement their emergency plan during a HA event, and adequately protect public's health and safety.

The exercise evaluation consisted of the following reviews and assessments:

- The adequacy of the licensee's performance in the biennial exercise, conducted on October 27, 2015, was reviewed and assessed regarding the implementation of the

Risk-Significant Planning Standards in 10 CFR 50.47(b)(4), (5), (9), and (10), which addresses 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, Central Alarm Station, Incident Command Post, the Alternate Assembly Area, and the Emergency Operations Facility.
- A review of other performance areas, such as the ERO recognition of abnormal plant conditions; command and control, including interactions with site security staff, intra- and inter-facility communications; prioritization of mitigation activities; utilization of repair and field monitoring teams; interface with offsite agencies, including local law enforcement agencies; staffing and procedure adequacy; 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 adequacy of the licensee's post-exercise critiques, to evaluate licensee self-assessment of its ERO performance during the October 27, 2015, exercise to ensure compliance with 10 CFR Part 50, Appendix E, Subsection IV.F.2.g.

The inspectors 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.

1EP8 Exercise Evaluation – Scenario Review

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 using IP 71114.08, "Exercise Evaluation - Scenario Review," to determine if the exercise would test major elements of the emergency plan as required by 10 CFR 50.47(b)(14).

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

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

a. Inspection Scope

The inspectors sampled licensee submittals relative to the performance indicators (PIs) listed below for the period January 1, 2014, through June 30, 2015. To verify the accuracy of the PI data reported during that period, PI definitions and guidance contained in Nuclear Energy Institute 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, was used to confirm the reporting basis for each data element.

Emergency Preparedness Cornerstone

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

For the specified review period, the inspectors examined data reported to the NRC, procedural guidance for reporting PI information, and records used by the licensee to identify potential PI occurrences. The inspectors verified the accuracy of the PIs for ERO and DEP through review of a sample of drill and event records. The inspectors reviewed selected training records to verify the accuracy of the PI for ERO drill participation for personnel assigned to key positions in the ERO. The inspectors verified the accuracy of the PI for ANS reliability through review of a sample of the licensee's records of periodic system tests. The inspectors also interviewed the licensee's personnel who were responsible for collecting and evaluating the PI data. Licensee procedures, records, and other documents reviewed within this inspection area are listed in the Attachment. This inspection satisfied three inspection samples for PI verification on an annual basis.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On October 30, 2015, the inspection team presented the inspection results to Mr. Benjamin Waldrep and other members of the plant staff. The inspectors confirmed that no proprietary information was provided during the inspection.

ATTACHMENT: SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

M. Austin–Emergency Preparedness Corporate Functional Area Manager
S. Cahill–Manager, Maintenance
J. Caves–Manager, Nuclear Regulatory Affairs
K. Clemmer–Director, Engineering Projects
D. Corlett–Manager, Environmental Controls
J. Dufner–Plant Manager
D. Earp–Senior Nuclear Engineer
M. Epstein–Emergency Preparedness
L. Faulk–Director, Nuclear Plant Security
D. Griffith–Manager, Nuclear Training
T. Hamilton–Plant General Manager
J. Keltner–Manager, Chemistry
C. Kidd–Director, Engineering
D. MacDougall–(Acting) Manager, Operations
T. Maness–Senior Project Director
B. McCabe–Manager, Nuclear Oversight
B. Nanney–Manager, Fleet Emergency Preparedness
S. O’Connor–General Manager, Nuclear Engineering
M. Parker–Manager, Nuclear Radiation Protection
D. Schroeder–Director, Hess Nuclear Engineering
J. Sharlow–Senior Emergency Preparedness Specialist
G. Simmons–Manager, Emergency Preparedness
T. Toler–Superintendent, Nuclear Oversight
B. Waldrep–Site Vice President
T. White–Fleet Emergency Preparedness
F. Womack–Manager, Work Management

ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED

None

LIST OF DOCUMENTS REVIEWED

1EP4 Emergency Action Level and Emergency Plan Changes

Procedures

AD-EP-ALL-0602, Emergency Plan Change Screening and Effectiveness Evaluations 10 CFR 50.54(q), Rev. 0
EP-EAL, Emergency Action Level, Rev. 12, 13, 14, and 15
PLP-201, Emergency Plan, Rev. 62, 63, and 64
EPM-201, Emergency Preparedness Staff Training Program, Rev. 8

Records and Data

EREG #675018, 50.54(q)(3) Screening Sheet for EP-EAL Rev. 12, dated 3/26/2014
 EREG #675018, 50.54(q)(3) Evaluation Sheet for EP-EAL Rev. 12, dated 3/26/2014
 EREG #692057, 50.54(q)(3) Screening Sheet for PLP-201 Rev. 62, dated 6/9/2014
 EREG #692057, 50.54(q)(3) Evaluation Sheet for PLP-201 Rev. 62, dated 6/16/2014
 EREG #718892, 50.54(q)(3) Screening Sheet for PLP-201 Rev. 63, dated 11/26/2014
 EREG #718892, 50.54(q)(3) Evaluation Sheet for PLP-201 Rev. 63, dated 11/28/2014
 EREG #742939, 50.54(q)(3) Screening Sheet for EP-EAL Rev. 15, dated 9/24/2015
 EREG #742939, 50.54(q)(3) Evaluation Sheet for EP-EAL Rev. 15, dated 9/24/2015
 EREG #744336, 50.54(q)(3) Screening Sheet for PLP-201 Rev. 64, dated 4/24/2014
 EREG #744336, 50.54(q)(3) Evaluation Sheet for PLP-201 Rev. 64, dated 4/25/2014

Corrective Action Program Documents

AR 752555, Procedure processing issues
 AR 1970302, Incorrect master document for EP-EAL R12 in controlled documents
 AR 1969029, Incorrect procedure revisions in EOF library

1EP7 Exercise EvaluationProcedures

AD-EP-ALL-0802, Conducting Drills and Exercises, Rev. 0
 AD-EP-ALL-0803, Evaluation and Critique of Drills and Exercises, Rev. 0
 PEP-20, Activation and Operation of the Technical Support Center, Rev. 21
 PEP-110, Emergency Classification and Protective Action Recommendations, Rev. 25
 PEP-230, Control Room Operations, Rev. 25
 PEP-270, Activation and Operation of the Emergency Offsite Facility, Rev. 31
 PEP-310, Notifications and Communications, Rev. 34
 SP-011, Security Investigations, Rev. 5
 SP-014, Surveillance Compensatory Measures, Rev. 17
 SP-016, Support from Offsite Agencies, Rev. 7
 SP-023, Defensive Strategy, Rev. 11

Records and Data

Harris Nuclear Plant, Duke Energy, Emergency Response Organization, 15-10, Hostile Action Based Exercise Manual

Corrective Action Program Documents

AR 1969052, Two Man Rule
 AR 1969055, Correct Verbiage for All Clear
 AR 1969059, Emergency Communicator Performance During 15-10 EP HAB
 AR 1969069, EP Drill 15-10 Damage Control Mission Priority
 AR 1969071, Evaluate the Need to De-Sensitize Plant Equipment Pages
 AR 1969072, Use of Non-exercise Related Materials During Exercise
 AR 1969080, Replacement Exercise Participant Not Qualified
 AR 1969721, ERO Drill 15-10 Alert Declared Unexpected as Part of Drill
 AR 1969774, Add Clarifying Data to EREG #692057
 AR 1969965, Communication Improvements From Security Force
 AR 1969976, Exercise Staffing Difficulty
 AR 1970258, EP Drill 15-10 Alert HA4.1 Declared in Error
 AR 1970327, Enhancement Opportunity For ERO Drill/Tabletop Scenarios

AR 1970331, Administrative Detail on Drill Objective Documentation
 AR 1970332, ERONS Upgrade Extent of Condition
 AR 1970337, Harris 15-10 HAB Exercise Scenario Was Characterized As SRI
 AR 1970338, EP drill 15-10 Alternate Assembly Area Status Boards
 AR 1970339, EP drill 15-10 Interaction Between Controllers and Players
 AR 1970340, NRC Minor Violation – EP-EAL Revision Issue

1EP8 Exercise Evaluation – Scenario Review

Procedures

AD-EP-ALL-0801, Design and Development of Drills and Exercises, Rev. 0
 AD-EP-ALL-0802, Conducting Drills and Exercises, Rev. 0
 AD-EP-ALL-0803, Evaluation and Critique of Drills and Exercises, Rev. 0

Section 4OA1: Performance Indicator Verification

Procedures

AD-EP-ALL-0002, NRC Regulatory Assessment Performance Indicator Guideline Emergency Preparedness Cornerstone, Rev. 1
 AD-PI-ALL-0100, Corrective Action Program, Rev. 3
 PD-EP-ALL-0800, Drills & Exercises Program, Rev. 0
 REG-NGGC-009, Alert and Notification System Reliability, January – December 2014, Rev. 12
 REG-NGGC-009, Alert and Notification System Reliability, January – June 2015, Rev. 12

Records and Data

DEP opportunities documentation for first, second, third and fourth quarters 2014; first, second quarters 2015
 Siren test data for first, second, third, and fourth quarters 2014; first and second quarters 2015
 Drill and exercise participation records of ERO personnel for first, second, third, and fourth quarters 2014; first and second quarters 2015

Corrective Action Program Documents

AR 1968495, DEP documentation errors
 AR 1968843, Three phones & JIC Director printer not working
 AR 1969023, EC had individual on the phone at 0845; roll call for SAE started at 0855
 AR 1969050, ERDs information not being received
 AR 1969059, EC struggled with ERONS