



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

July 29, 2014

Mr. George T. Hamrick
Vice President
Brunswick Steam Electric Station
P.O. Box 10429
Southport, NC 28461

**SUBJECT: BRUNSWICK STEAM ELECTRIC STATION – U.S NUCLEAR REGULATORY
COMMISSION EMERGENCY PREPAREDNESS INSPECTION REPORT
05000325/2014502 AND 05000324/2014502**

Dear Mr. Hamrick:

On July 24, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Brunswick Steam Electric Station. The enclosed inspection report documents the inspection results that were discussed on July 24, 2014, with you and 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.

No findings were identified during this inspection.

In accordance with Title 10 of the *Code of Federal Regulations* (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 Agencywide Documents Access and Management System (ADAMS), 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 Nos. 50-324, 50-325
License Nos. DPR-62, DPR-71

Enclosure:
Inspection Report 05000324/2014502
and 05000325/2014502
w/Attachment: Supplementary Information

cc: Distribution via Listserv

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ADAMS: Yes ACCESSION NUMBER: ML14210A393 SUNSI REVIEW COMPLETE FORM 665 ATTACHED

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos: 05000324 and 05000325

License Nos: DPR-62 and DPR-71

Report Nos: 05000324/2014502 and 05000325/2014502

Licensee: Carolina Power and Light Company

Facility: Brunswick Steam Electric Station, Units 1 and 2

Location: Southport, NC

Dates: July 21 – 25, 2014

Inspectors: S. Sanchez, Senior Emergency Preparedness Inspector
M. Speck, Senior Emergency Preparedness Inspector
C. Fontana, Emergency Preparedness Inspector
W. Loo, Senior Radiation Protection Inspector
J. Shehee, Senior Physical Security Inspector

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

Enclosure

SUMMARY

Inspection Report (IR) 05000324/2014502 and 05000325/2014502; 07/21/2014 – 07/25/2014; Brunswick Steam Electric Station, Unit 1 and 2; Emergency Preparedness Baseline Inspection

The report covered an announced inspection by three emergency preparedness inspectors, one radiation protection inspector, and one physical security inspector. No findings were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

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, Revisions 84 and 85 were made to the Brunswick Radiological Emergency Plan (REP). The licensee implemented several changes to emergency plan implementing procedures and determined that, in accordance with 10 CFR 50.54(q), the changes made in these revisions resulted in no reduction in the effectiveness of the Plan, and that the Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50. The inspectors reviewed a sampling of the implementing procedure changes made between September 2013 and July 2014, to evaluate for potential reductions in the effectiveness of the Plan. However, this review was not documented in a Safety Evaluation Report (SER) 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 standards of 10 CFR 50.47(b), and its related requirements in 10 CFR 50, Appendix E, were used as reference criteria.

The inspectors reviewed various documents that 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 of the *Code of Federal Regulations* (10 CFR) 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 July 22, 2014, 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 an HA event, and adequately protect public 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 July 22, 2014, 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, Joint Information Center (JIC), simulated Central Alarm and Secondary Alarm Stations, Incident Command Post (ICP), and the Alternate Emergency Facility (AEF).
- A review of other performance areas, such as: the ERO's 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 July 22, 2014, exercise to ensure compliance with 10 CFR 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 valuation 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 July 1, 2013, through March 31, 2014. To verify the accuracy of the PI data reported during that period, PI definitions and guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, 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 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 DEP through review of a sample of drill and event records. The inspectors reviewed selected training records to verify the accuracy of the ERO PI 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. Licensee procedures, records, and other documents reviewed within this inspection area are listed in the Attachment.

This inspection activity satisfied one inspection sample for each of the three Emergency Preparedness PIs (i.e., DEP, ERO, and ANS) on an annual basis.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On July 24, 2014, the lead inspector presented the inspection results to Mr. G. Hamrick, Site Vice President, and other members of the plant staff. The inspectors confirmed that proprietary information was not provided during the inspection.

ATTACHMENT: SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

M. Austin, Corporate Emergency Preparedness
R. Bartalone, Armed Security Officer
C. Bergwald, Emergency Preparedness Specialist
M. Bridges, Security Shift Supervisor
A. Brittan, Director Security
K. Cady, Emergency Preparedness Specialist
E. Conway, Manager-Security Shift Operations
K. Crocker, Supervisor Emergency Preparedness
P. Dubrouillet, Manager Technical Services
G. Galloway, Supervisor Nuclear Oversight
L. Grzeck, Supervisor Licensing/Regulatory Programs
G. Hamrick, Site Vice President
B. Houston, Superintendent Radiation Protection
J. Kessel, Emergency Preparedness Specialist
M. Kinney, Emergency Preparedness Specialist
J. Krakuszeski, Plant General Manager
A. Padleckas, Manager Shift Operations
A. Pope, Manager Organizational Effectiveness
K. Sawyer, Emergency Preparedness Specialist
R. Treadway, Response Team Leader
E. White, Emergency Preparedness Specialist
R. Wiemann, Manager System Engineering
E. Wills, Director of Site Operations
R. Zambo, Licensing

ITEMS OPENED, CLOSED, DISCUSSED AND UPDATED

None

LIST OF DOCUMENTS REVIEWED

1EP4 EAL and Emergency Plan Changes

Procedures

0PEP-02.1.1; Emergency Control – Notification of Unusual Event, Alert, Site Area Emergency, and General Emergency, Rev. 24
0PEP-02.2.1; Emergency Action Level Technical Bases, Rev. 5
0PEP-02.6.12; Activation and Operation of the Operational Support Center (OSC), Revision 42
0PEP-02.6.20; Dose Projection Coordinator, Rev. 26
0PEP-02.6.21; Emergency Communicator, Rev. 71
0PEP-02.6.26; Activation and Operation of the Technical Support Center (TSC), Rev. 34
0PEP-02.6.27; Activation and Operation of the Emergency Operations Facility (EOF), Rev. 34
0PEP-02.6.28; Off-site Protective Action Recommendations, 12

OPEP-03.4.8; Offsite Dose Projections for Monitored Releases, Rev. 2
 OPEP-03.5.5; Environmental Monitoring and Plume Tracking, Rev. 8
 OPEP-03.6.3; Estimate of the Extent of Core Damage Under Accident Conditions, Rev. 18
 OPEP-03.7.7; Onsite Radiological Controls, Rev. 5
 OPEP-03.8.2; Personnel Accountability and Evacuation, Rev. 23

Records and Data

Control Room, Technical Support Center, Operational Support Center, Emergency Operations Facility, Joint Information Center, Central Emergency Response Center - Documentation packages (logs, event notification forms, Protective Action Recommendations, Media releases, and Radiological Dose Assessments), 2012, 2013, and 2014 Emergency Exercise and drill scenario documents

1EP7 Exercise Evaluation

Procedures

OERP, Radiological Emergency Response Plan, Rev. 85
 OAOP-40.0, Security Events, Rev. 30
 OPEP-02.1.1, Emergency Control – Notification of Unusual Event, Alert, Site Area Emergency, and General Emergency, Rev. 24
 OPEP-02.6.21; Emergency Communicator, Rev. 72
 OPEP-02.6.29, Activation and Operation of the Joint Information Center (JIC), Rev. 25
 OPEP-02.6.30; Alternate Emergency Facility Operation, Rev. 6
 OPEP-04.3, Performance of Training, Exercises, and Drills, Rev. 25
 EMG-NGGC-0005, Activation of the Emergency Response Organization Notification System, Rev. 6
 SEC-NGGC-2170, Security Event Procedures, Revision 3
 Brunswick Physical Security Plan, Revision 6
 OSI-14. Law Enforcement Response Plan, Revision 19
 OSI-19, Safeguards Contingency Events, Revision 27
 Brunswick County NC, Sheriff Department MOU dated, July 17, 2014

Corrective Action Program Documents:

699730, OAOP-40 security event implementation
 699734, Security control cell
 699739, OAOP-40 implementation
 699747, PA announcements during HAB exercise
 699751, Control room simulator count of adversaries
 699757, OPEP-02.1.1 revision
 699758, OPEP-02.6.12 revision
 699760, OPEP-02.6.26 revision
 699761, OPEP-02.6.27 revision
 699762, OPEP-02.6.29 revision
 699763, OPEP-02.6.30 revision

1EP8 Exercise Evaluation – Scenario Review

Records and Data

Brunswick Nuclear Station 2014 Hostile Action Based Exercise Scenario

Section 4OA1: Performance Indicator VerificationProcedures

AD-EP-ALL-0001, Emergency Preparedness Key Performance Indicators, Rev. 0
 AD-EP-ALL-0002, NRC Regulatory Assessment Performance Indicator Guideline Emergency Preparedness Cornerstone, Rev. 0
 OPEP-04.3; Performance of Training, Exercises, and Drills, Rev. 25

Records and Data

DEP opportunities documentation for 3rd and 4th quarter 2013 and 1st quarter 2014
 Siren test data for 3rd and 4th quarter 2013 and 1st quarter 2014
 ERO training records for 3rd and 4th quarter 2013 and 1st quarter 2014

Corrective Action Program Documents:

679125, Siren B32 RTU Communications Failure
 679129, Siren Radio Interference Problem
 666886, EAL basis guidance
 655296, Electronic dosimeters not available at RWP login station
 665375, EAL classification for fire in H1 area
 654945, Delay notification due to improper procedure
 663825, Vague information
 553892, EP exercise – incorrect dose values on ENF form
 551620, ERO drill July 25, EOF missed objective element 24
 553814, OOI – 01.07, Notifications, Attachment 3, Event Notification
 591653, Turbine building ventilation during EAL entry
 622081, Coordination and timely dispatch of ASC missions
 625793, DEP opportunity for LOCT evaluated scenarios
 626921, Vague guidance in PLP-37
 629718, EP drill – OSC drill performance evaluator critique
 631147, Change to OPEP-04.6 did not align with kit update
 699737, EP performance indicator review

LIST OF ACRONYMS USED

AEF	Alternate Emergency Facility
ANS	Alert and Notification System
DEP	Drill and Exercise Performance
DHS	Department of Homeland Security
ERO	Emergency Response Organization
FEMA	Federal Emergency Management Agency
HA	Hostile Action
ICP	Incident Command Post
IP	Inspection Procedure
JIC	Joint Information Center
NEI	Nuclear Energy Institute
PIs	Performance Indicators
RSPS	Risk Significant Planning Standard
SER	Safety Evaluation Report