



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

June 27, 2013

Mr. Joseph W. Shea
Vice President, Nuclear Licensing
Tennessee Valley Authority
1101 Market Street, LP 3D-C
Chattanooga, TN 37402-2801

**SUBJECT: BROWNS FERRY NUCLEAR PLANT - EMERGENCY PREPAREDNESS
INSPECTION REPORT 05000259, 260, 296/2013503**

Dear Mr. Shea:

On June 7, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed an emergency preparedness inspection at the Browns Ferry Nuclear Plant. The enclosed inspection report documents the inspection results that were discussed on June 7, 2013, with Mr. S. Bono and other members of plant 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). 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 Nos: 50-259, 50-260, and 50-296
License Nos: DPR-33, DPR-52, and DPR-68

Enclosure:
Inspection Report 05000259, 260, 296/2013503
w/Attachment: Supplemental Information

cc: (See page 2)

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NAME	M. Speck	W. Loo	K. Korth	D. Berkshire	B. Bonser		
DATE	6/ 26 /2013	6/ 12 /2013	6/ 12 /2013	6/ 11 /2013	6/ 27 /2013		
E-MAIL COPY	YES NO	YES NO	YES NO	YES NO	YES NO		

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Letter to Joseph W. Shea from Brian R. Bonser dated June 27, 2013.

SUBJECT: BROWNS FERRY NUCLEAR PLANT - NRC INTEGRATED INSPECTION
REPORT 05000259/2013, 05000260/2013 AND 05000296/2013

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos: 05000259, 05000260, and 05000296

License Nos: DPR-33, DPR-52, and DPR-68

Report Nos: 05000259/2013503, 05000260/2013503, and 05000296/2013503

Licensee: Tennessee Valley Authority

Facility: Browns Ferry Nuclear Plant, Units 1, 2, and 3

Location: Athens, AL 35611

Dates: June 3 – 7, 2013

Inspectors: Mark Speck, Senior Emergency Preparedness Inspector
W. Loo, Senior Health Physicist
D. Berkshire, Emergency Preparedness Inspector
Kelly Korth, Senior Reactor Technology Instructor

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

Enclosure

SUMMARY OF FINDINGS

IR 05000259, 05000260, 05000296/2013503; 06/03/2013 – 06/07/2013; Browns Ferry Nuclear Plant, Units 1, 2, and 3; Exercise and Baseline Inspection

The report covered an announced inspection by two emergency preparedness inspectors, one senior health physicist, and one senior reactor technology instructor. No findings were identified.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness

1EP1 Exercise Evaluation

a. Inspection Scope

Prior to the arrival onsite, the inspectors conducted an in-office review of the exercise objectives and scenario submitted to the U. S. Nuclear Regulatory Commission (NRC) using IP 71114.08, "Exercise Evaluation, Scenario Review," to determine if the exercise would adequately test major elements of the emergency plan as required by Title 10 of the *Code of Federal Regulations* (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 June 5, 2013, 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 Central Emergency Control Center (CECC).
- 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 June 6, 2013, to evaluate the licensee's self-assessment of its ERO performance during the exercise and 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 and scenario review on a biennial basis.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verificationa. Inspection Scope

The inspectors sampled licensee submittals relative to the Performance Indicators (PI) listed below for the period April 1, 2012, through March 31, 2013. 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, were 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.

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

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On June 7, 2013, the lead inspector presented the inspection results to Mr. S. Bono, General Manager of Site Operations, and other members of the plant staff. The inspectors confirmed that proprietary information was not provided during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

J. Addison, Manager of Drills and Exercises
S. Austin, Licensing Engineer
S. Bono, Plant Manager
M. Bryant, EP Specialist
T. Detchmندی, Watts Bar Nuclear Plant EP Manager
S. Honeywell, Engineering Director
J. Kulisek, Nuclear Assurance
W. Lee, Corporate EP Manager
J. Parshall, Manager, EP Program Planning and Implementation
M. Rasmussen, Site Emergency Director
P. Summers, Director of Safety and Licensing
B. Tidwell, Emergency Preparedness Manager (Acting)
D. Winton, Operations Unit Supervisor

ITEMS OPENED, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

1EP1 Exercise Evaluation

Procedures

EPDP-3, Emergency Plan Exercises and Preparedness Drills, Rev. 7
EPDP-5, Emergency Public Information, Rev. 1
EPIP-1, Emergency Plan Classification Procedure, Rev. 49
EPIP-3, Alert, Rev. 34
EPIP-4, Site Area Emergency, Rev. 33
EPIP-5, General Emergency, Rev. 43
EPIP-6, Activation and Operation of the Technical Support Center (TSC), Rev. 34
EPIP-7, Activation and Operation of the Operations Support Center, Rev. 30
EPIP-8, Personnel Accountability and Evacuation, Rev. 25
EPIP-15, Emergency Exposure, Rev. 9
CECC EPIP-1, Central Emergency Control Center (CECC) Operations, Rev. 56
CECC EPIP-9, CECC Emergency Environmental Radiological Monitoring, Rev. 49
CECC EPIP-19, Post Accident Core Damage Assessment, Rev. 19
NPG-SPP-03.1, Corrective Action Program, Rev. 6
NPG-SPP-03.1.4, Corrective Action Program Screening and Oversight, Rev. 12

Records and Data

2011, 2012, and 2013 Emergency Exercise and drill scenario documents
Control Room, Technical Support Center, Operations Support Center, Joint Information Center,
Central Emergency Control Center - Documentation packages (logs, event notification forms,
Protective Action Recommendations, Media releases, and Radiological Dose Assessments)

Corrective Action Program documents

SR 736090 Using AMS-4 samplers for habitability monitoring
 SR 736173 Incorrect number for Security for drills
 SR 737063 Missed Tech Spec calls in control simulator
 SR 737064 Simulator Command and Control improvements
 SR 737340 Two mechanical maintenance technicians assigned not REP trained
 SR 737371 Two RP techs assigned not SCBA qualified
 SR 737380 OSC critique process did not meet process expectations
 SR 737397 OSM did not lead simulator critique per EPDP
 SR 737400 Evaluate turnaround dose rates for emergency repair teams
 SR 737401 Relief crews not determined during exercise
 SR 737406 TVA press release improvement opportunities
 SR 737409 NRC notification could have been performed earlier
 SR 737412 Determine function of assembly and accountability pushbuttons in simulator
 SR 737415 Training improvements for TAT
 SR 737418 Process enhancement for TSC/OSC strategies and tactics
 SR 737420 Enhancements to EOI team dispatches from OSC
 SR 737425 Security drill on Unit 3 at same time as REP drill not planned
 SR 737426 Enhance EPIP-8 App. G for RP surveys following security roadblock setup
 SR 737431 Simulator CAMS not working
 SR 737432 TAT communications challenges
 SR 737704 QA TSC observations
 SR 737706 QA OSC observations

Section 40A1: Performance Indicator VerificationProcedures

NPG-SPP-02.02, Performance Indicator Program, Rev. 5
 EPDP-11, Emergency Preparedness Performance Indicators, Rev. 4
 EPDP-11, Emergency Preparedness Performance Indicators, Rev. 5
 EPDP-14, Evaluation and Changes to Alert and Notification System (ANS), Rev. 0
 EPIP-1, Emergency Plan Classification Procedure, Rev. 49
 Radiological Emergency Plan (Generic Part), Rev. 100
 TVA Nuclear Power Radiological Emergency Plan, Appendix A, Revision 100

Records and Data

Documentation of Performance Indicator data from April 1, 2012, through March 31, 2013, for DEP, ANS, and ERO

Corrective Action Program documents

PER 539394, Damage to Browns Ferry ANS Siren Number 24 Control Box
 PER 566341, ANS Siren Test of 6/11/12 Feedback from 4 Sirens was not in Normal Range
 PER 610953, Failure of BFN ANS Siren 95 During 9/1/12 Monthly Test
 PER 654555, Sirens and Microphones not Operating as Designed
 PER 655623, Failure of BFN ANS Siren 46 in 12/10/12 Full Test
 PER 726081, Siren Test not Heard in Training Center Auditorium

LIST OF ACRONYMS USED

ANS	Alert and Notification System
CECC	Central Emergency Control Center
DEP	Drill and Exercise Performance
DHS	Department of Homeland Security
ERO	Emergency Response Organization
FEMA	Federal Emergency Management Agency
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OSC	Operations Support Center
PI	Performance Indicator
RSPS	Risk Significant Planning Standard
TSC	Technical Support Center