



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

November 16, 2011

Mr. Joseph W. Shea
(Acting) Vice President
Tennessee Valley Authority
1101 Market Street, LP 3R-C
Chattanooga, TN 37402-2801

**SUBJECT: WATTS BAR NUCLEAR PLANT - NRC EMERGENCY PREPAREDNESS
INSPECTION REPORT 05000390/2011501**

Dear Mr. Shea:

On October 21, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Watts Bar Nuclear Plant, Unit 1. The enclosed inspection report documents the inspection results, which were discussed on October 21, 2011, with Mr. D. Grissette and other members of licensee 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.: 50-390
License No.: NPF-90

Enclosure:
Inspection Report 05000390/2011501 w/Attachment: Supplemental Information

cc w/encl.: (See page 2)

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***See Previous Concurrence Page**

X PUBLICLY AVAILABLE NON-PUBLICLY AVAILABLE SENSITIVE X NON-SENSITIVE
ADAMS: X Yes ACCESSION NUMBER: **ML11322A122** X SUNSI REVIEW COMPLETE X FORM 665 ATTACHED

OFFICE	RII: DRS/PSB1	RII: DRS/PSB1	RII:DRP/BR6	RIII: DRS/PSB	RII: DRP/BR6	HQ: NSIR	
SIGNATURE	RA/MS	RA/BB	RA/SWS	RA VIA EMAIL	RA/VIA EMAIL	RA/VIA EMAIL	
NAME	M. SPECK	B. BONSER	S. SHAEFFER	J. BEAVERS	W. DESCHAIINE	S. LAVIE	
DATE	11/08/2011	11/16/2011	11/14/2011	11/08/2011	11/08/2011	11/08/2011	
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

cc w/encl:

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 05000390

License Nos.: NPF-90

Report No.: 05000390/2011501

Licensee: Tennessee Valley Authority

Facility: Watts Bar Nuclear Plant, Unit 1

Location: Spring City, TN

Dates: October 17, 2011, through October 21, 2011

Inspectors: M. Speck, Senior Emergency Preparedness Inspector
J. Beavers, Emergency Preparedness Inspector
S. LaVie, Senior Emergency Preparedness Specialist
W. Deschaine, Resident Inspector

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

Enclosure

SUMMARY OF FINDINGS

IR 05000390/2011501; 10/17-10/21/2011; Watts Bar Nuclear Plant, Unit 1; Exercise and Baseline Inspection.

The report covered an announced inspection by two emergency preparedness inspectors, an emergency preparedness specialist and one resident inspector. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

A. NRC-Identified and Self-Revealing Findings

No findings were identified.

B. Licensee-Identified Violations

None.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness

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). This inspection activity represents one sample on a biennial cycle.

The onsite inspection consisted of the following review and assessment:

- The adequacy of the licensee's performance in the biennial exercise conducted on October 19, 2011, regarding the implementation of the Risk Significant Planning Standards (RSPSs) 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 besides the RSPS, 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 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 October 20, 2011, to evaluate the licensee's self-assessment of its ERO performance during the exercise and to ensure compliance with 10 CFR 50 Appendix E. Section IV.F.2.g.

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

Enclosure

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 92, 93, 94, and 95 to the Tennessee Valley Authority Nuclear Radiological Emergency Plan were implemented. The licensee determined that in accordance with 10 CFR 50.54(q), 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 August 2010, and September 30, 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 the documents 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.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

a. Inspection Scope

Cornerstone: Emergency Preparedness

The inspectors sampled licensee submittals for the three performance indicators (PI) listed below. For each of the submittals, the inspectors reviewed the period from July 1, 2010, through June 30, 2011. 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 Indicator Guideline, Revision 6, were used to verify the basis in reporting for each data element.

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

The inspectors reviewed portions of the raw PI data developed from monthly performance indicator reports and discussed the methods for compiling and reporting the PIs with cognizant emergency preparedness personnel.

The inspectors also independently screened drill and exercise opportunity evaluations, drill participation reports, and drill evaluations. Selected reported values were calculated to verify their accuracy. The inspectors compared graphical representations from the most recent PI report to the raw data to verify that the data was correctly reflected in the report. Reviewed documents are listed in the Attachment to this report.

b. Findings

No findings were identified.

4OA6 Meetings, including Exit

On October 21, 2011, the lead inspector presented the inspection results to Mr. D. Grissette and other members of station management. The inspector confirmed that proprietary information was not provided during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

J. Addison, Manager, Drills and Exercises
R. Clark, Licensing Engineer
T. Detchemendy, Emergency Preparedness Manager
D. Grissette, Site Vice President
W. Lee, Corporate EP Manager
J. Parshall, Manager, EP Program Planning and Implementation
M. Skinner, EP Specialist
M. White, EP Specialist

LIST OF DOCUMENTS REVIEWED

1EP1 Exercise Evaluation

Procedures

EPDP-3, Emergency Plan Exercises and Preparedness Drills, Rev. 4
EPIP-1, Emergency Plan Classification Logic, Rev. 35
EPIP-3, Alert, Rev. 33
EPIP-4, Site Area Emergency, Rev. 32
EPIP-5, General Emergency, Rev. 38
EPIP-6, Activation and Operation of the Technical Support Center (TSC), Rev. 39
EPIP-7, Activation and Operation of the Operations Support Center, Rev. 31
EPIP-8, Personnel Accountability and Evacuation, Rev. 25
AOI-30.1, Plant Fires, Rev. 10
E-0, Reactor Trip or Safety Injection, Rev. 30
E-3, Steam Generator Tube Rupture, Rev. 23
ECA-3.1, SGTR and LOCA – Subcooled Recovery, Rev. 12
ECA-3.2, SGTR and LOCA – Saturated Recovery, Rev. 11
FR-S.1, Nuclear Power Generation/ATWS, Rev. 20

Records and Data

Control Room (Simulator), Technical Support Center, Operations Support Center, Central Emergency Control Center, Joint Information Center - Documentation packages (logs, event notification forms, Protective Action Recommendations, Media releases, and Radiological Dose/Core damage assessments).

Corrective Action – Problem Evaluation Reports

449122: Scaffolding inappropriately placed
 449777: Incomplete PAR
 449804: OSC Response to ATWS untimely
 449805: OSC manager did not document training exemptions
 449806: Simulator ICS failed
 449807: Equipment needed not readily available
 449809: Habitability not suspended in OSC
 449811: Fire response team failed to notify OSC
 449812: Meteorological data failed to load in simulator
 449813: Fire pre-plans not in simulator
 449829: Simulator phone problem
 449792: Dose assessment procedure enhancement
 449815: No plant announcements from simulator
 449816: Evaluate tools for core damage assessment
 449787: Controllers provided unearned drill data

1EP4 Emergency Action Level and Emergency Plan ChangesProcedures

EPDP-1, Procedures, Maps, and Drawings, Rev. 2

Records and Change Packages

NP-REP, Radiological Emergency Plan, Appendix C – Watts Bar Nuclear Plant, Rev. 92, and 94
 NP-REP, Radiological Emergency Plan, Rev. 95
 EPIP-1, Emergency Plan Classification Flowchart, Rev. 32, 33, 34 and 35
 EPIP-2, Notification of Unusual Event, Rev. 29
 EPIP-3, Alert, Rev. 32, 33
 EPIP-6, Activation and Operation of the Technical Support Center (TSC), Rev. 38, 39
 EPIP-05, General Emergency, Rev. 38
 EPIP-08, Personnel Accountability and Evacuation, Rev. 25

Corrective Action – Problem Evaluation Reports

PER 360041; TS limit for I-131 non-conservative

4OA1 Performance Indicator VerificationProcedures:

EPDP-11, Emergency Preparedness Performance Indicators, Rev. 0003
 EPIP-1, Emergency Plan Classification Logic, Rev. 0035
 Radiological Emergency Plan (Generic Part), Rev. 93
 TVA Nuclear Power Radiological Emergency Plan, Appendix C, Revision 94
 TRN- 30, Radiological Emergency Preparedness Training, Rev 0017

Records and Data

Documentation of Performance Indicator data from July 1, 2010, through June 30, 2011, for
DEP, ANS, and ERO

PNS Monthly and Bi-weekly Activation Results, July 1, 2010 – June 30, 2011

Drill and Exercise Performance records from 7/1/2010, through 6/30/2011

TVA Automated Training Information System, Training records for 13 ERO members

Documents

FEMA REP 10, Report of the Site's PNS (Prompt Notification System)

LIST OF ACRONYMS

ADAMS	Agency-wide Documents Access and Management System
ANS	Alert and Notification System
CECC	Central Emergency Control Center
CFR	Code of Federal Regulations
DEP	Drill/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
PARS	Publicly Available Records
PI	Performance Indicator
RSPSs	Risk Significant Planning Standards
TSC	Technical Support Center