



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
61 FORSYTH STREET, SW, SUITE 23T85  
ATLANTA, GEORGIA 30303-8931

September 22, 2006

Tennessee Valley Authority  
ATTN: Mr. Karl W. Singer  
Chief Nuclear Officer and  
Executive Vice President  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT - NRC INSPECTION REPORT  
05000390/2006009

Dear Mr. Singer:

On September 7, 2006, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Watts Bar Nuclear Plant. The enclosed inspection report documents the inspection results, which were discussed on September 7, 2006, with Mr. M. Skaggs 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 of significance were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure 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 Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Should you have any questions concerning this letter, please contact us.

Sincerely,

**\RAI\**

Brian R. Bonser, Chief  
Plant Support Branch 2  
Division of Reactor Safety

Docket Nos. 50-390  
License No. NPF-90

Enclosure: (See page 2)

TVA

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Enclosure: NRC Inspection Report 05000390/200609  
w/Attachment: Supplemental Information

cc w/encl:

Ashok S. Bhatnagar  
Senior Vice President  
Nuclear Operations  
Tennessee Valley Authority  
Electronic Mail Distribution

Larry S. Bryant, General Manager  
Nuclear Engineering  
Tennessee Valley Authority  
Electronic Mail Distribution

Michael D. Skaggs  
Site Vice President  
Watts Bar Nuclear Plant  
Tennessee Valley Authority  
Electronic Mail Distribution

Preston D. Swafford  
Senior Vice President  
Nuclear Support  
Tennessee Valley Authority  
Electronic Mail Distribution

General Counsel  
Tennessee Valley Authority  
Electronic Mail Distribution

John C. Fornicola, Manager  
Nuclear Assurance and Licensing  
Tennessee Valley Authority  
Electronic Mail Distribution

Glenn W. Morris, Manager  
Corporate Nuclear Licensing and  
Industry Affairs  
Tennessee Valley Authority  
Electronic Mail Distribution

(cc w/encl cont'd - See page 3)

(cc w/encl cont'd)

Paul L. Pace, Manager  
Licensing and Industry Affairs  
Watts Bar Nuclear Plant  
Tennessee Valley Authority  
Electronic Mail Distribution

Jay Laughlin, Plant Manager  
Watts Bar Nuclear Plant  
Tennessee Valley Authority  
Electronic Mail Distribution

County Executive  
Rhea County Courthouse  
375 Church Street, Suite 215  
Dayton, TN 37321-1300

County Mayor  
P. O. Box 156  
Decatur, TN 37322

Lawrence E. Nanney, Director  
TN Dept. of Environment & Conservation  
Division of Radiological Health  
Electronic Mail Distribution

Ann Harris  
341 Swing Loop  
Rockwood, TN 37854

James H. Bassham, Director  
Tennessee Emergency Management Agency  
Electronic Mail Distribution

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 50-390

License No.: NPF-90

Report No: 05000390/2006008

Licensee: Tennessee Valley Authority

Facility: Watts Bar Nuclear Power Plant

Location: 1260 Nuclear Plant Road  
Spring City, TN 37381

Dates: Sept 5-8, 2006

Inspector: Lee Miller, Senior Emergency Preparedness Inspector  
Section 1EP2,1EP3, 1EP4, 1EP5, 4OA1

Approved by: Brian R. Bonser, Chief  
Plant Support Branch 2  
Division of Reactor Safety

Enclosure

## SUMMARY OF FINDINGS

IR 05000390/2006009; 09/5-8/2006; Watts Bar Nuclear Power Plant, Units 1; Baseline Inspection

The report covered an announced inspection by a team of one emergency preparedness inspector. The Nuclear Regulatory Commission's (NRC) program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Emergency Preparedness

None

B. Licensee-Identified Violations

None

## REPORT DETAILS

### 1. REACTOR SAFETY

Cornerstone: Emergency Preparedness

#### 1EP2 Alert and Notification System Testing

##### a. Inspection Scope

The inspectors evaluated the adequacy of licensee methods for testing the alert and notification system in accordance with NRC Inspection Procedure 71114, Attachment 02, "Alert and Notification System (ANS) Testing". The applicable planning standard 10 Code of Federal Regulation (CFR) Part 50.47(b)(5) and its related 10 CFR Part 50, Appendix E, Section IV.D requirements were used as reference criteria. The criteria contained in NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1, was also used as references.

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

##### b. Findings

No findings of significance were identified.

#### 1EP3 Emergency Response Organization (ERO) Augmentation

##### a. Inspection Scope

The inspectors reviewed the ERO augmentation staffing requirements and the process for notifying the ERO to ensure the readiness of key staff for responding to an event and timely facility activation. The results of the April 20, 2006, unannounced off-hours augmentation drill was reviewed. The inspectors conducted a review of the backup notification systems. The qualification records of key position ERO personnel was reviewed to ensure all ERO qualifications were current. A sample of problems identified from augmentation drills or system tests performed since the last inspection were reviewed to assess the effectiveness of corrective actions.

The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 03, "Emergency Response Organization (ERO) Augmentation Testing." The applicable planning standard, 10 CFR 50.47(b)(2) 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 to this report.

##### b. Findings

No findings of significance were identified.

#### 1EP4 Emergency Action Level (EAL) and Emergency Plan Changes

##### a. Inspection Scope

The inspectors evaluated the associated 10 CFR 50.54(q) reviews associated with non-administrative emergency plan, implementing procedures and EAL changes. The Radiological Emergency Plan (Generic part Revision 82 and the Appendix C Watts Bar Nuclear Plant, Revision 80) were reviewed and covered the period from June 9, 2006 to August 5, 2006.

The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 01, "Emergency Action Level and Emergency Plan Changes." The applicable planning standard, 10 CFR 50.47(b)(4) and its related 10 CFR 50, Appendix E requirements were used as reference criteria. The criteria contained in NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1, NUMARC/NESP-007, "Methodology for Development of Emergency Action Levels", Revision 2, Regulatory Guide 1.101 were also used as references.

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

##### b. Findings

No findings of significance were identified.

#### 1EP5 Correction of Emergency Preparedness (EP) Weaknesses and Deficiencies

##### a. Inspection Scope

The inspectors reviewed the corrective actions identified through the EP program to determine the significance of the issues and to determine if repeat problems were occurring. The facility's self-assessments and audits were reviewed to assess the licensee's ability to be self-critical, thus avoiding complacency and degradation of their EP program. In addition, inspectors reviewed licensee's self-assessments and audits to assess the completeness and effectiveness of all EP-related corrective actions.

The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 05, "Correction of Emergency Preparedness Weaknesses and Deficiencies." The applicable planning standard, 10 CFR 50.47(b)(14) 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 to this report.

##### b. Findings

No findings of significance were identified.

#### 4. OTHER ACTIVITIES

##### 4OA1 Performance Indicator (PI) Verification

###### a. Inspection Scope

The inspectors reviewed the licensee's procedure for developing the data for the EP PIs which are: (1) Drill and Exercise Performance (DEP); (2) ERO Drill Participation; and (3) Alert and Notification System (ANS) Reliability. The inspectors examined data reported to the NRC for the period April 2005 to June 2006. Procedural guidance for reporting PI information and records used by the licensee to identify potential PI occurrences were also reviewed. The inspectors verified the accuracy of the PI for ERO 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 inspection was conducted in accordance with NRC Inspection Procedure 71151, "Performance Indicator Verification." The applicable planning standard, Nuclear Energy Institute (NEI) 99-02, Revisions 3 and 4, "Regulatory Assessment Performance Indicator Guidelines," were used as reference criteria. This inspection activity represents three samples on an annual basis.

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

###### b. Findings

No findings of significance were identified.

##### 4OA6 Meetings, including Exit

On September 8, 2006, the team lead for the Emergency Preparedness Inspection presented the inspection results to Mr. M. Skaggs, Watts Bar Site Vice President, and other members of his staff. The inspectors confirmed that proprietary information was not provided or taken during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION



SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

M. Skaggs, Site Vice President  
B. Marks, Manager, Emergency Services  
P. Pace, Licensing and Industry Affairs  
J. Bushnell, Licensing and Industry Affairs  
J. Young, Emergency Preparedness Manager

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

None

## LIST OF DOCUMENTS REVIEWED

### Section 1EP2 Alert and Notification System Evaluation:

#### Procedures

EPFS-9, Inspection, Service, and Maintenance of the Prompt Notification System (PNS) at Browns Ferry, Sequoyah, and Watts Bar Nuclear Plants, Rev. 1

#### Records and data

Watts Bar Nuclear Plant Site-Specific Offsite Radiological Emergency Preparedness Alert and Notification System Quality Assurance Verification Final Report, November 30, 1995

Prompt Notification System Service Reports, 08/01/2004 - 09/04/2006

PNS Checklist and Trouble Reports, 08/01/2004 - 09/04/2006

WBN Silent Test Results 08/01/2004 - 08/04/2006

WBN Full Activation Test Results 08/01/2004 - 08/04/2006

### Section 1EP3 Emergency Response Organization Augmentation :

#### Procedures

TRN-30, Radiological Emergency Preparedness Training, Rev. 13

EPT301.000, Site Emergency Director, Rev. 5

EPT302.000, Technical Support Center Training, Rev. 5

EPT308.000, Radiological Dose Assessment, Rev. 2

3-OT-PCD-048C, Radiological Emergency Plan Training

#### Records and data

Watts Bar Nuclear Plant Emergency Response Organization Call List, 07/21/2006

Drill package and scenario - 04/20/06

Training Records for selected individuals

06/07/2006 REP Drill - TSC/OSC Blue

03/14/2006 REP Drill - TSC/OSC Red

05/17/2006 REP Drill - TSC/OSC Blue

04/20/2006 REP Drill - TSC/OSC Green

### Section 1EP4: Emergency Action Level (EAL) and Emergency Plan Changes

#### Plans and Procedures

Tennessee Valley Authority Nuclear Radiological Emergency Plan, Rev. 82

Change Packages for:

EPIP-12, Emergency Equipment and Supplies, Rev. 23

Section 1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies:

Procedures

EPIL- 5, EP Tracking System Activities Management Oversight System (AMOS), Rev. 5

Records and Data

Watts Bar and Browns Ferry Emergency Preparedness (EP) Program Assessment, 12/16/2005  
L17 060807 800, Nuclear Assurance - TVA Nuclear - Interim Audit Report No. SSA0603  
AMOS Records 8/2004 - 8/2006

PER Summary of Corrective Actions

67303, Untimely REP notification  
71525, Off year EP Exercise missed declaration  
71527, Assembly and Accountability expectations  
75524, EAL 6.1 Logic  
82046, PI data errors  
92937, Equipment checks per EPIP-12  
95886, EP Training  
103534, REP declaration  
107544, Plan Effectiveness Determination correction for EPIP-1 Rev. 24  
107662, SED equivalency training

Section 4OA1: Performance Indicator (PI) Verification

Procedures

EPIL-15, Emergency Preparedness Performance Indicators, Rev 10

Records and Data

Q2 2006 DEP evaluation sheets and ERO participation logs  
Documentation of ANS tests, Q2 2006

## LIST OF ACRONYMS

ANS	Alert and Notification System
CFR	Code of Federal Regulations
DEP	Drill and Exercise Performance
EAL	Emergency Action Level
EP	Emergency Plan
ERO	Emergency Response Organization
NEI	Nuclear Energy Institute
PI	Performance Indicator

