



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

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

June 30, 006

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  
05000390/200608

Dear Mr. Singer:

On June 9, 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 June 9, 2006, with Mr. J. Laughlin 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,  
*/RA/*

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

Docket Nos. 50-390  
License No. NPF-90  
Enclosure: NRC Inspection Report 05000390/200608  
w/Attachment: Supplemental Information

cc w/encl:

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

Larry S. Bryant, Vice President  
Nuclear Engineering&Technical Services  
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  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402

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

Distribution w/encl:  
D. Pickett, NRR  
RIDSNNRRDIRS  
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w/Attachment: Supplemental Information

PUBLICLY AVAILABLE       NON-PUBLICLY AVAILABLE       SENSITIVE       NON-SENSITIVE

ADAMS:  Yes      ACCESSION NUMBER: \_\_\_\_\_

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SIGNATURE	RA	RA	RA	RA	RA		
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DATE	6/30/2006	6/29/2006	6/29/2006	6/29/2006	6/30/2006	7/ /2006	7/ /2006
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

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: June 5 - 9, 2006

Inspectors: Lee Miller Senior Emergency Preparedness Inspector  
Section 1EP1,1EP4  
James Kreh Emergency Preparedness Inspector  
Section 1EP1, 4OA1  
Nathan Sanfilippo Emergency Preparedness Specialist  
Section 1EP1, 4OA1

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

Enclosure

## SUMMARY OF FINDINGS

IR 05000390/2006008; 06/5-9/2006; Watts Bar Nuclear Power Plant, Units 1; Baseline Inspection

The report covered an announced inspection by a team of three emergency preparedness inspectors. The NRC's 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

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## 1. REACTOR SAFETY

Cornerstone: Emergency Preparedness

### 1EP1 Exercise Evaluation

#### a. Inspection Scope

Prior to the inspection activity, an in-office review was conducted 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 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 are 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), Operational Support Center (OSC), and Emergency Operations Facility (EOF).
- 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 FEMA 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 to evaluate the licensee's self-assessment of its ERO performance during the exercise and to ensure compliance with 10 CFR 50 Appendix E.IV.F.2.g

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

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b. Findings

No findings of significance were identified.

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

a. Inspection Scope

The inspectors review of revisions to the emergency plan, implementing procedures and EAL changes was performed for determining that changes had not decreased the effectiveness of the plan. The inspectors also evaluated the associated 10 CFR 50.54(q) reviews associated with non-administrative emergency plan, implementing procedures and EAL changes. The Radiological Emergency Plan revision 80 was reviewed.

The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 04, "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, Regulatory Guide 1.101 were also used as references. This inspection activity represents one sample 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.

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 10/01/2005 to 03/31/2006. 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 drill and exercise performance 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

Enclosure



verified the accuracy of the PI for alert and notification system 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, Revision 3, "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 June 9, 2006, the team lead for the Emergency Preparedness Inspection presented the inspection results to Mr. J. Laughlin, Watts Bar Nuclear Plant Manager, and other members of his staff. The inspectors confirmed that proprietary information was not provided or taken during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

J. Laughlin, Plant Manager  
B. Marks, Manager, Emergency Services  
P. Pace, Manger, Licensing  
D. Voeller, Manager, Maintenance/Modifications  
J. Young, Emergency Preparedness Manager  
J. Parshall, Exercise Coordinator  
D. White, Operations Manager  
M. DaRoche, Site Nuclear Assurance Manager

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

None

LIST OF DOCUMENTS REVIEWED

**Section 1EP1: Exercise Evaluation**

Plans and Procedures

Tennessee Valley Authority Nuclear Radiological Emergency Plan, Rev. 81

Problem Evaluation Reports

104697, Handling Sensitive Information

104681, Dose Assessment

104686, Search and Rescue

104685, Paperwork accuracy

104684, On-site Pager Repeater failed to activate on-site pagers

104683, Classification made using wrong EAL

104625, Fire Truck Improperly parked

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

Plans and Procedures

Tennessee Valley Authority Nuclear Radiological Emergency Plan, Rev. 80

CECC EPIP-1, Central Emergency Control Center (CECC) Operations, Rev. 43

CECC EPIP-3, Operations Duty Specialist Procedure for Alert, Rev. 34  
CECC EPIP-7, CECC Radiological Assessment, Staff Procedure for Alert, Site Area  
Emergency, and General Emergency, Rev. 30  
CECC EPIP-8, Dose Assessment Staff Activities during Nuclear Plant Radiological  
Emergencies, Rev. 28  
EPIP-3, Alert, Rev. 27  
EPIP-4, Site Area Emergency, Rev. 28  
EPIP-5, General Emergency, Rev. 33

Change Packages

10 CFR 50.54(q) change package Radiological Emergency Plan, Rev. 80

**Section 40A1: Performance Indicator (PI) Verification**

Records and Data

Q4 2005 DEP evaluation sheets and ERO participation logs  
Q1 2006 DEP evaluation sheets and ERO participation logs  
Drill package and scenario - 3/14/06  
Documentation of ANS tests, 10/01/2005 - 03/31/2006

**LIST OF ACRONYMS**

ANS	Alert and Notification System
CFR	Code of Federal Regulations
DEP	Drill and Exercise Performance
EAL	Emergency Action Level
EOF	Emergency Operations Facility
EP	Emergency Plan
ERO	Emergency Response Organization
NRC	Nuclear Regulatory Commission
OSC	Operational Support Center
PI	Performance Indicator
RSPS	Risk Significant Planning Standard
TSC	Technical Support Center
FEMA	Federal Emergency Management Agency