



UNITED STATES  
 NUCLEAR REGULATORY COMMISSION  
 REGION II  
 101 MARIETTA ST., N.W., SUITE 3100  
 ATLANTA, GEORGIA 30303

Report No. 50-390/80-01

Licensee: Tennessee Valley Authority  
 500A Chestnut Street  
 Chattanooga, Tennessee 37401

Facility Name: Watts Bar

Docket No. 50-390

License No. CPPR-91

Inspection at Watts Bar site near Spring City, Tennessee

Inspectors: <u>M. C. Ashenden</u>	<u>1/30/80</u>
M. C. Ashenden	Date Signed
<u>E. J. Ford</u>	<u>1/28/80</u>
E. J. Ford	Date Signed
<u>R. C. Sauer</u>	<u>1/28/80</u>
R. C. Sauer	Date Signed
Approved by: <u>C. M. Upright</u>	<u>1/30/80</u>
C. M. Upright, Acting Section Chief, RONS Branch	Date Signed

SUMMARY

Inspection on January 2-4, 1980.

Areas Inspected

This routine, unannounced inspection involved 50 inspector-hours on site in the areas of preoperational test procedure review and tour of plant areas.

Results

Of the four areas inspected, no items of noncompliance or deviations were identified.

## DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*C. C. Mason, Assistant Plant Superintendent
- \*R. L. Lewis, Operations Supervisor
- \*B. S. Willis, QA Supervisor
- \*G. T. Denton, Assistant Operations Supervisor
- \*S. J. Caruthers, Preoperational Test Engineer
- K. W. Peek, Preoperational Test Engineer

NRC Resident Inspector (In training)

\*T. L. Heatherly

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on January 4, 1980 with those persons indicated in paragraph 1 above. The inspectors summarized the purpose and scope of the inspection and findings.

### 3. Licensee Action on Previous Inspection Findings

Not inspected.

### 4. Unresolved Items

Unresolved items were not identified during this inspection.

### 5. Preoperational Test Procedures Review

Preoperational test procedures were reviewed for conformance with Regulatory Guide 1.68, FSAR Table 14.2-1, Operational Quality Assurance Manual Part II Section 4.1, FSAR Sections 6.2, 6.7 and 8.0.

a. No deficiencies were noted during review of the following procedures:

TVA-13A, Rev. 0, "Onsite AC Distribution System (Shutdown Boards)"

TVA-45B(2), Rev. 0, "Station Drainage System (Control Building Sumps)"

b. During review of the following procedures, the inspector identified items which must be resolved prior to implementation of these procedures:

(1) W-10.7A, Rev 1, Draft "Containment Spray System"

(a) The procedure does not provide adequate step-by-step instructions for installation and removal of test equipment and

restoration of the system air test connection.

- (b) The test procedure was approved for use on May 23, 1978, without the review of the Nuclear Steam Supply System Vendor and Division of Engineering Design (DED) as required by the Operational Quality Assurance Manual (OQAM) Part II, section 4.1, paragraphs 2.5 and 2.2 respectively. This was discussed with licensee management. It was later found that the required approval memoranda were in the master file. It is our understanding that their approvals will be noted on the test instruction cover sheet.

The licensee agreed that the test was deficient in these areas and stated that the items would be resolved. The inspector will review this during a subsequent inspection (390/80-01-01).

- (2) W-10.9, Rev. 0, "Ice Condenser Reactor Containment System"

The inspector experienced a concern over the licensee's method of simulating over-temperature conditions of an area monitoring temperature switch by use of a jumper wire across the output of the switch. This technique is adequate in testing the control logic, but inadequate in that defective, damaged or improperly set temperature switches would not be identified after calibration and installation.

The inspector further noted that Regulatory Guide 1.68, Appendix C paragraph A.4, implies that tests should include testing the equipment under environmental conditions as close as practical to those it will experience in both normal and accident conditions. For example, the test presently tests differential pressure switches via a test gas source with a pressure gage and regulator to fit.

The licensee representative acknowledged the inspectors concern.

- (3) TVA-15, Rev. 3, "Vital 120-VAC Power System" dated 12/6/79. Approval of results for Unit 1 only.

The inspector reviewed the partially completed test data and had concerns regarding methods of documenting test results.

- (a) Paragraph 2.1.5 certifies by signature that alarms and annunciators worked properly but does not distinguish between Units 1 and 2. This signature block is completed implying testing has occurred for both units, when in fact, it hasn't.
- (b) Paragraph 2.2.6 certifies by signature that drawings used for testing had the necessary review prior to usage as indicated by sign-offs on those drawings. The certification

signature was present indicating that all required signatures were on the drawings. However, the DED representative's signature was not present on the drawings. It was later discovered that a DED signature card accompanied the test log reflecting DED review and concurrence with the correctness of the drawings.

For both of the above cases, administrative discipline would have precluded misrepresentative documentation. The inspector will review this during a subsequent inspection (390/80-01-02).

#### 6. Preoperational Test Procedure Verification

The following procedures were reviewed to verify that they were written, their test titles and objectives were consistent, and that management review and approval was in accordance with the "Watts Bar Operational Quality Assurance Manual", Part II, section 4.1.

TVA-3, "Primary Containment Leak Rate Test", Rev. 0, dtd 11-13-79

\*TVA-4, "Upper Containment Cooling System", Rev. 0, dtd 05-23-78

TVA-5, "Lower Containment Cooling System", Rev. 0, dtd 08-14-79

TVA-6, "Air Return Fans", Rev. 0, dtd 01-24-79

\*TVA-7, "Control Rod Drive Mechanism Cooling System", Rev. 0, dtd 02-13-77

\*TVA-8, "Post-Loca Hydrogen Recombiner", Rev. 0, dtd 05-23-78

TVA-9A, "Auxiliary Building Gas Treatment System and Door Status Indication and Interlock", Rev. 0, dtd 07-25-78

TVA-9B, "Reactor Building Purge System", Rev. 0, dtd 09-12-78

TVA-11A, "Plant Communications System", Rev. 0, dtd 07-14-77

TVA-11B, "Plant Communications System", Rev. 0, dtd 08-22-78

TVA-12A, "Offsite Power System (161-KV Switchyard)", Rev. 0, dtd 02-03-77

TVA-12B, "Offsite Power System (Start Boards)", Rev. 0, dtd 05-10-77

TVA-12C, "Offsite Power System (6.9KV UN BDS)", Rev. 0, dtd 10-20-78

TVA-12D, "Offsite Power System (RCP BDS)", Rev. 1, dtd 09-26-78

TVA-13A, "Onsite AC Distribution System", Rev. 0, dtd 04-11-78

- TVA-14A, "Diesel Generator Fuel Oil System", Rev. 0, dtd 06-26-79
- \*TVA-14B, "Diesel Generator Starting Air System", Rev. 0, dtd 01-9-79
- TVA-14C, "Diesel Generator Building Heating and Ventilation System", Rev. 1, dtd 04-11-79
- \*TVA-14D, "125-VDC Diesel Generator Battery System", Rev. 0, dtd 05-18-79
- \*TVA-15, "Vital 120-VAC Power System "Rev. 3, dtd 12-6-79
- TVA-16A, "125 Volt Vital DC Power System", Rev. 0, dtd 03-14-78
- TVA-24, "Fire Protection - Ventilation System Compartmentation: Fire Dampers", Rev. 0, dtd 04-11-79
- TVA-26A, "Compressed Air System", Rev. 1, dtd 11-3-77
- TVA-26B, "Auxiliary Air Compressors", Rev. 0, dtd 07-11-78
- TVA-27A, "Control Air System", Rev. 0, dtd 11-22-77
- TVA-27B, "Auxiliary Control Air System", Rev. 0, dtd 09-12-78
- \*TVA-35, "CO2 Fire Protection System (Diesel Generator Building)" Rev. 0, dtd 11-14-78

Of the above procedures, approximately 25%, as indicated by the asterick had an irregularity on the cover sheet which reflects a lack of sufficient administrative control of the review and approval process. Generally, review blanks not requiring review were left blank in a manner inconsistent with the majority of procedures examined. On TVA-15, Rev. 3, a required DED approval signature was missing; on TVA-4, Rev. 0, the required PORC review was blank. Discussions with licensee personnel indicate the errors are administrative rather than improper review. This item will be reviewed on a subsequent inspection (390/80-01-03 ).

#### 7. Plant Tour

The inspector toured portions of the Unit 1 auxiliary building, reactor building and control bays. Construction activities and general house-keeping were observed. Plant familiarization and identification of various systems and system components were also pursued during the tour.

The inspection identified a concern in that the licensee has not fully implemented its program to indicate the operating status of safety-related structures, systems and components by installing Initial Operation Release (IOR) tags on valves and switches to prevent inadvertent operation. The inspector noted that the licensee had also identified this deficiency as documented in a Quality Assurance Survey and that corrective action was being taken or verified by the installation of IOR tags on some equipment

in the auxiliary building. The inspector discussed with the licensee the importance of ensuring IOR tags are installed on motor center cubicles and switchgear cubicles associated with the (IOR) mechanical equipment. This item is considered open for review in future inspections (390/80-01-04).