



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

Report No. 50-390/79-36

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

Facility Name: Watts Bar Unit 1

Docket No. 50-390

License No. CPPR-91

Inspected at Watts Bar Site near Spring City, Tennessee.

Inspected by: *T. J. Donat* 10-12-79  
 T. J. Donat Date Signed

Approved by: *P. T. Burnett* 10-12-79  
 P. T. Burnett, Acting Section Chief, RONS Branch Date Signed

SUMMARY

Inspection on September 10-13, 1979

SUMMARY

Areas Inspected

This routine, unannounced inspection involved 29 inspector-hours onsite in the areas of preoperational test procedure review, witnessing of receipt and storage of new fuel, review of previously identified inspector items, and a review of plant construction status.

Results

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

## DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*J. Groves, Plant Superintendent
- \*C. Mason, Assistant Plant Superintendent
- \*B. Willis, Site Quality Assurance Supervisor
- \*K. Jones, Preoperational Test Supervisor
- J. Erpenback, Special Nuclear Material Engineer
- H. Bennett, Preoperational Test Engineer
- G. Curtiss, Preoperational Test Engineer
- W. Delk, Quality Assurance Engineer

Other licensee employees contacted included construction craftsmen, operators, and office personnel.

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on September 13, 1979 with those persons indicated in Paragraph 1 above. The inspector reviewed with the licensee the areas of the inspection and stated that the findings were clear in these areas, but did identify two items to be followed upon subsequent inspections.

### 3. Licensee Action on Previous Inspection Findings

Not inspected.

### 4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Preoperational Test Procedure Review

The following preoperational tests were reviewed for conformance with the requirements of FSAR Chapters 3.9.1, 5.5.7, 6.3, 7.2.1, 7.7.1, 14.1, FSAR Table 14.1, and Regulatory Guides 1.68, and 1.108:

W-1.4 Pressurizer Relief Tank, Rev 0;  
W-5.1 Rod Drive Mechanism Timing Test, Rev 0;  
W-5.2 Rod Control System;  
W-5.3 Rod Drop Measurement Test, Rev 0;  
W-5.4 Rod Position Indication System Test, Rev 0;  
W-3.1E SIS-RHR Pump and Related Injection System Piping Test, Rev 0;  
TVA-40 Main Steam System Test, Rev 0 and  
TVA-52 Siesmic Instrumentation, Rev 0.

The inspector had no comments on preoperational tests W-5.1, TVA-40 and TVA-52 and had the following comments on the remaining procedures:

a. W-1.4, Pressurizer Relief Tank Test, measures the flow rate into the Pressurizer Relief Tank. According to step 5.2.11, measurements are to be taken at 5 psig increments in tank pressure from 40 psig to 60 psig. However table 5.2 of the test has the time column as well as the tank-pressure column filled in with 5 minute and 5 psig entries. In order to properly compute the flow rate (change in tank level/elapsed time) the time enteries should be deleted from the table and the actual time when the tank pressure reaches the desired valve recorded as well as the corresponding tank level.

b. W-5.2, Rod Control System Test, Rev 0, 4-25-78

The test does not verify that the control rods can be withdrawn and inserted at the maximum and minimum speeds specified in FSAR section 7.7.1.2.1. Also the acceptance criteria should require evaluation of whether the bank overlap sequencing (data sheet 5.2) occurs within  $\pm 1$  step of the values entered into the counters in step 5.10 as required by FSAR section 7.7.1.2.1.

c. W-5.4, Rod Position Indication System Test, Rev 0

The test does not evaluate the individual rod position in units of "steps" with respect to the group position step counter value in "steps". This is necessary to assure compliance with technical specification 3/4.1.3.

d. W-5.3, Rod Drop Measurement Test, Rev 0

Prerequisite 2.1.5.2 needs to have a signature and date space identified, and figure 1 of Appendix D should be modified to demonstrate how the "Rod Release Time" is to be measured.

The licensee acknowledged these comments and agreed to have them corrected. The inspector will verify on a subsequent inspection that these actions have been taken and considers this Open Item 79-36-01.

The inspector noted during his review of the rod control system pre-operational test procedures that testing of the rod deviation alarm and the control bank rod insertion monitor low level and low-low level alarms was not contained in any of the procedures received. The licensee did not know which preoperational test covered these alarms. The inspector will pursue this during a subsequent inspection and considers it as Open Item 79-36-02.

6. Review of Previously Identified Inspector Followup Items

- a. Closed - Followup Item 79-03-01 concerned fuel handling instruction FHI-1 not including all of the requirements of ANSI-N 45.2.2-1972 sections 5.2 and 6.2.

The inspector reviewed the following documents concerning the receipt and storage of new fuel:

FHI-1, "Receiving, Inspection, and Storing New Fuel", Rev 3

PHYSI-1B, "Access Control and Security of Fuel Handling and Storage Area - Temporary", Rev 0

TI-1, "Special Nuclear Material Control and Accountability System", Rev 5 and

TI-2, "Initial Fuel Receipt and Storage", Rev 1, and all applicable aspects of the ANSI standard are being complied with and the item is closed.

- b. Closed - Followup Item 79-06-03 concerned the testing in preoperational test W-6.1E of the interlocks identified in FSAR question Q040.28.

The inspector reviewed revision 0, dated August 23, 1979 of preoperational test W-6.1E and all interlocks between RHR valves and different RHR valves, CVCS valves, safety injection valves or high pressure charging pump suction valves are being properly verified. This closes the item.

7. Receipt of New Fuel

The inspector reviewed the following documents concerning the the receipt of new fuel assemblies for Watts Bar Unit #1 in addition to those listed in paragraph I.6.A of this report:

Summary of Planned Fuel-Handling Operations, Watts Bar Nuclear Plant Unit 1, Rev 0 and

U. S. Nuclear Regulatory Commission Materials License SNM-1861 dated September 5, 1979.

The summary contained four attachments, a narrative summary of the fuel receipt, inspection and storage sequence in attachment #1, a listing of plant equipment to be used in attachment #2, a copy of the SNM license application in attachment 3 and a discription of post-fuel-receipt surveillance procedures in attachment #4. The SNM materials license was telecopied to the site from Washington D.C. and contained no restrictions on the licensee other than those identified in the licensee's application.

The inspector observed the arrival of the first shipment of fuel on 9/11/79. Six containers carrying two fuel assemblies each arrived at about 2345. The unloading of the containers into a temporary storage area, comparison of the shipping manifest and other documentation to insure that the correct containers had to be delivered and performance of radiation and contamination checks by health physics personnel were observed. After the shipping truck was released and had left the area, the first container was transferred to the upending area, the lid removed and the two fuel assemblies upended after verification of correct assembly serial number and assembly ANSI number. The inspector also monitored the latching of new fuel assembly C-26, its inspection by TVA personnel and Westinghouse personnel, and its insertion into New Fuel Storage location E-9. The inspector's findings in the area of new fuel receipt, inspection and storage are clear.

9. Plant Tour

The inspector toured various portions of the Unit #1 reactor containment, auxiliary building, control building, turbine building and diesel generator building. General cleanliness and housekeeping activities were inspected and no items of noncompliance or deviations were identified.