



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

Report Nos. 50-390/80-15 and 50-391/80-12

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

Facility Name: Watts Bar Nuclear Plant

Docket Nos. 50-390 and 50-391

License Nos. CPPR-91 and CPPR-92

Inspection at Watts Bar site near Spring City, Tennessee

Inspector: M. Thomas 6-23-80
M. Thomas Date Signed

Approved by: F. S. Cantrell for 6-23-80
F. S. Cantrell, Section Chief, RCES Branch Date Signed

SUMMARY

Inspection on May 28-30, 1980

Areas Inspected

This routine, unannounced inspection involved 23 inspector-hours on site in the areas of construction status, 10 CFR 50.55(e) items, licensee action on previous inspection findings, IE Bulletins, and 10 CFR Part 21 followup.

Results

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

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DETAILS

1. Persons Contacted

Licensee Employees

- *J. E. Wilkins, Project Manager
- *S. Johnson, Assistant Construction Engineer (Mechanical)
- *C. O. Christopher, Assistant Construction Engineer (Civil)
- *J. G. Shields, Assistant Construction Engineer (Electrical)
- *L. C. Northard, Assistant Construction Engineer
- *J. M. Lamb, Supervisor, Mechanical Engineering Unit (MEU) B
- *A. W. Rogers, Supervisor, Site QA Staff
- *R. L. Heatherly, Supervisor, Quality Control & Records Unit (QC&RU)
- *R. D. Eidson, Supervisor, Startup and Coordination Unit
- *J. P. Ballard, Engineer, MEU
- J. H. Perdue, Supervisor, Electrical Engineering Unit
- W. M. Copeland, Engineer, MEU
- A. D. Leff, Engineer, MEU
- J. D. Dawkins, Engineer, MEU
- L. Harris, Engineer, MEU
- D. L. Henley, MEU

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

NRC Resident Inspector

- J. A. McDonald, Senior Resident Inspector
- *T. L. Heatherly, Resident Inspector

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on May 30, 1980 with those persons indicated in Paragraph 1 above.

3. Licensee Action on Previous Inspection Findings

- a. (Closed) Infraction 390/79-45-01 and 391/79-39-01, Failure to Follow Procedure - Not Documenting Repetitive NCR's using the CAQR System. The licensee's response dated January 24, 1980 was reviewed. WBNP-QCP-1.2 and 1.4 have been combined to bring Watts Bar into full agreement with the division's policy on nonconformances. NCR's are now being written for all situations involving Criteria XV and XVI in order to eliminate the confusion which existed among employees as to when to apply the NCR procedure and when to apply the Conditions Adverse to Quality Report (CAQR) procedure. This infraction is closed.

- b. (Closed) Deficiency 390/79-45-02 and 391/79-39-01, Failure to Properly Evaluate and Report a QA Breakdown Under 10 CFR 50.55(e) The inspector reviewed the licensee's response dated January 24, 1980. Nonconforming condition report (NCR) No. 1803R has been upgraded to significant and reported to NRC as a 50.55(e). Training has been given to Mechanical Engineering Unit employees on how to prepare an NCR, with emphasis on what description is needed and when the actual nonconformance occurred. In addition, NCR status reporting has been transferred to an information processor. A monthly printout of NCR's for code or other activity work is distributed to the unit supervisor and the construction engineer. This allows for additional review of NCR's to detect generic or repetitive conditions. This deficiency is closed.
- c. (Closed) Infraction 390/79-45-03 and 391/79-39-03, Failure to take Effective Corrective Action for Repeated Nonconformances Violating the same Requirement. The licensee's response dated January 24, 1980 was reviewed. TVA has reviewed the training given to crafts employees on the Watts Bar Quality Assurance Program. TVA has used general craft training and specific disciplinary action as past methods to ensure compliance by crafts with QA program requirements. In the latest sessions conducted November 20 and 21, 1979, greater emphasis was placed on the problem of bypassing of hold points. The inspector reviewed NCR's written on work activities since the latest training session, and one case of crafts bypassing holdpoints. Following further review of this case, the inspector found that the crafts accidentally bypassed the holdpoint. After realizing their mistake, the crafts notified an inspector and a NCR was written. This appeared to be an isolated incident which was not indicative of the cases prior to the November training where crafts willfully bypassed holdpoints. This small number of NCR's written indicates that the corrective action taken has been effective. This infraction is closed.
- d. (Closed) Unresolved Item 390/79-45-04 and 391/79-39-04, Unprocessed CAQR dated April 9, 1979. The licensee has investigated the circumstances surrounding the unprocessed CAQR. The responsible engineer initiated the CAQR when he discovered that the subassembly had been cut, bypassing MEU holdpoints on the cutting operation sheet (COS). However, the craft contacted another inspector who signed off the MEU holdpoints without knowledge of the CAQR having been initiated. During the review it was determined that the CAQR was mistakenly written in place of a NCR. The Assistant Construction Engineer (Mech.) returned the incomplete CAQR to MEU on April 13, 1979 with instructions that it be transferred to a NCR. The material was verified by the responsible engineer and the inspector who signed off the MEU holdpoints. A NCR (2089R) has since been written and dispositioned. This unresolved item is closed.
- e. (Closed) Unresolved Item 390/80-06-06 and 391/80-05-06, Timely and effective Corrective Action for QA Audit Deficiencies. During followup on infraction 390/79-45-01 and 391/79-39-01, the inspector reviewed NCR's for examples of crafts bypassing holdpoints. Only 1 case was

found, (Reference Paragraph 3.c) which indicates that corrective action taken has been effective. The inspector also reviewed the status of open QA audit deficiencies. The licensee has placed more emphasis on corrective action for audit deficiencies. In addition, quality assurance staff procedure (QASP) 7.1, Revision 4, and quality assurance procedure (QAP) 18.1, Revision 1, have been revised, giving clearer guidance (including time periods) for handling audit deficiencies. The responsible engineering units have become more timely in responding to and dispositioning audit deficiencies. This item is closed.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Independent Inspection Effort (Units 1 and 2)

The inspector conducted a general walk-through inspection of Units 1 and 2 reactor buildings, the auxiliary building, and the diesel general building. Areas inspected included construction activities and in-place storage of safety-related pumps and motors. Inspection and preventative maintenance records were reviewed for the following motors:

SIS Pump Motor	1-MTR-63-10A
SIS Pump Motor	2-MTR-63-10A
SIS Pump Motor	1-MTR-63-15B
SIS Pump Motor	2-MTR-63-15B
Centrifugal Charging Pump Motor	1-MTR-62-104B

Records show that inspections are being performed regularly and in accordance with the requirements of Procedure WBNP-QCP-3.1R12--Handling, Storage and Maintenance of Permanent Electrical and Instrumentation Equipment.

No items of noncompliance or deviations were identified.

6. Licensee Identified Items (50.55(e))

The inspector reviewed the items listed below and the supporting documentation, and discussed the items with responsible licensee staff during the inspection.

- a. (Closed) Item 390/79-26-03 and 391/79-22-03, "Reactor Vessel Lower Head Insulation" (CEB 79-21). TVA has designed a restraint system to prevent excessive movement of the insulation during a seismic event. The design consists of a bumper restraint arrangement which is attached to four of the lower head support spokes. Drawing No. 590027-029C, Revision C has been issued showing the design changes. The restraints have been constructed at the site and will be installed during the normal construction schedule.

- b. (Closed) Item 390/79-30-02 and 391/79-25-02, "Motor Driven Auxiliary Feedwater Pump Lube Oil Cooling" (MEB 79-34). Ingersoll-Rand, the manufacturer of the motor driven auxiliary feedwater pumps, has provided TVA with the appropriate drawings and instructions to modify the cooling system for the motor bearings to obtain the lube oil cooling water from the pump first stage discharge. TVA has completed the modifications.
- c. (Open) Item 391/80-02-03, "Engineering Holdpoints Bypassed on Field Welds (1803R)". The inspector reviewed the licensee's final report dated February 13, 1980, and discussed this item with responsible licensee personnel. During further review into this problem since their final report, TVA has discovered more cases of craft bypassing engineering holdpoints. These violations occurred prior to RII's inspection (Reference IE inspection report RII:RWW 390/79-45 and 391/79-39). All cases have been documented on NCR's, and the licensee will submit a supplemental response stating the results of the review. This item remains open.
- d. (Open) Item 390/80-12-01 and 391/80-09-01, "Ruskin Fire Dampers" (MEB 80-04 and 8008). TVA reported that the corrective action proposed by Ruskin and described in TVA's final report dated March 28, 1980 did not prove acceptable. Additionally, Ruskin has informed TVA that on vertical units less than 9" high the blades may jam when released. Ruskin has proposed corrective action for this problem. This item remains open.
- e. (Open) Item 390/80-15-01 and 391/80-12-01, "Environmental Effect on Main Steam Safety Valve Set Points (WBN MEB 8005) Licensee reported that current main steam valve room ambient temperature has been increased to 140 degrees F. Safety valve set points have been set for 50-120 degrees F ambient. Increasing ambient temperature to 140 degrees F can affect set points and cause the pressure to exceed the ASME allowable for safety valve blown requirements.
- f. (Open) Item 390/80-15-02 "Safety Injection Train B Flow Deficiency (WBN NEB 8004). TVA reported that improper flow rates were noted during testing of train B safety injection and residual heat removal systems.

7. 10 CFR Part 21

(Closed) Item 390/78-27-04 and 391/78-23-04, "Jamesbury Valves Fail to Meet Seismic Load Requirements (1330R). The inspector reviewed the licensee's report dated July 30, 1979, and the closed NCR on the subject valves. Jamesbury Corporation proposed and TVA accepted the use of an external support member to increase the rigidity of the valve to an acceptable level. The contract drawing and seismic documentation were resubmitted by Jamesbury and approved by TVA. The new external supports were supplied to TVA, and an acceptable installation procedure was agreed upon by TVA and Jamesbury. TVA has completed installation of the new supports.

8. IE Bulletins

- a. (Closed) IE Bulletin 79-28, "Possible Malfunction of NAMCO Model EA180 Limit Switches at Elevated Temperatures". The licensee's response letter dated March 28, 1980 states that no NAMCO EA180 limit switches with the reference date code (between February and August 1979) have been identified in safety-related components at Watts Bar.

- b. (Closed) IE Bulletin 80-03, "Loss of Charcoal From Standard Type II, Two Inch Tray Adsorber Cells". The inspector reviewed the licensee's response dated March 21, 1980, and discussed this item with site personnel. Watts Bar utilizes charcoal adsorber trays manufactured by Flanders Filters, Inc. and Mine Safety Appliance Company. The licensee inspected 46 of the 221 adsorber trays supplied by Flanders and 5 of the 24 adsorbers trays supplied by Mine Safety. The inspection determined that the perforated screen was spot welded to the tray casing at a maximum of one inch intervals. There was no indication of separation between the screens and casings. Adsorber screens and casings did not appear distorted or warped, and fabrication of the assemblies appeared satisfactory. The results of this inspection revealed no deficiencies in the adsorbers.