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

Report No.: 50-391/79-04

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

Facility Name: Watts Bar Unit 2

Docket No.: 50-391

Licensee No.: CPPR-92

Inspection at Watts Bar, Tennessee

Inspector: W. P. Ang — 3-7-79
W. P. Ang — Date Signed

Approved by: R. M. Compton for — 3/8/79
J. C. Bryant, Section Chief, RCESB — Date Signed

SUMMARY

Inspection on January 30 through February 2, 1979

Areas Inspected

This routine, unannounced inspection involved 24 inspector-hours on-site in the areas of safety-related component work activities, safety-related structures quality records, reactor vessel internals work activities, and safety-related pipe welding activities.

Results

Of the four areas inspected, no apparent items of noncompliance or deviations were identified in three areas; one apparent item of noncompliance was found in one area (failure to follow reactor vessel internals procedures-Paragraph 5).

DETAILS

1. Persons Contacted

Licensee Employees

T. B. Northern, Project Manager
*S. Johnson, Assistant Construction Engineer
*J. M. Lamb, Mechanical Engineering Unit Supervisor
*J. Nichols, Civil Engineering Unit Supervisor
L. Northard, Welding Engineering Unit Supervisor

Other Organizations

A. L. Hogarth, Site Manager, Westinghouse Electric Corporation

NRC Resident Inspector

*B. J. Cochran

*Attended exit interview.

2. Exit Interview

The inspection scope and findings were summarized on February 2, 1979 with those persons indicated in Paragraph 1 above. The infraction (50-391/79-04-01) identified in Paragraph 5 and the unresolved item (50-391/79-04-02) identified in Paragraph 6 were discussed with the licensee.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve noncompliance or deviations. A new unresolved item identified during this inspection is discussed in Paragraph 6.

5. Independent Inspection Effort

An inspection of the Unit 2 containment building and auxiliary building was performed. Housekeeping and general work activities on safety-related equipment was observed.

Welding of a layer of UHI piping system weld number 2-087B-D018-03 was observed. The weld operation sheet and the weld procedure used (GT-SM-88-0-1A R4) were reviewed. The qualifications of the welder and QC personnel involved were checked.

Installation of the lower internals into the reactor vessel for a trial fit was observed. The inspector could not see if a load measuring device was being used during the lowering of the lower internals into the reactor vessel. A Westinghouse mechanical engineer, a Westinghouse QA reprsentative and a TVA mechanical engineer all stated that a working load measuring device was not being used. They further stated that they did not think that a load measuring device was required by the procedure. A subsequent check by the inspector revealed that Westinghouse procedure 2463A68G01 (Reactor Internals Assembly), Paragraph 2.2, states in part, "Attach a calibrated sensor between the crane hook and the internals...". Paragraph 2.13.1 of the same procedure further states, "Monitor load sensor so that descent can be stopped for any significant unloading occurrences". The Westinghouse site manager stated that the Westinghouse supplied load cell was not working and had to be sent off-site. The verbal agreement between him and TVA was to use the load cell of the polar crane for any such lifts. He was not aware that the polar crane load cell was not operating properly when the lower internals was installed in the reactor vessel for the trial fit operations.

The licensee stated that the Westinghouse procedure noted above may not have been an approved TVA procedure and therefore was not applicable. However, the licensee was unable to show the inspector any TVA procedure for installing the lower internals into the reactor vessel and performing the trial fit operations. The licensee did have a general procedure for lifting safety-related components, but it did not detail the operation of installing the lower internals into the reactor vessel. No TVA procedures were provided for the trial fit operations. The Westinghouse procedure appears to be the only available procedure for performing the work described.

The failure to use a load sensing device and consequent inability to monitor a load sensor for significant unloading occurrences is an apparent noncompliance with 10 CFR 50, Appendix "B", Criterion V and shall be identified as an infraction, 50-391/79-04-1.

6. Safety-Related Components II-Observation of Work and Work Activities

This is a follow-on inspection to Report No. 50-391/77-17. The Unit 2 reactor coolant pump casings, RHR heat exchangers and containment spray heat exchangers and their records were inspected to

determine if component protection was being provided in accordance with applicable procedures and if inspection activities on this matter were in accordance with applicable requirements. WBNP 4.5, Revision 8, Handling, Storage and Maintenance of Permanent Mechanical Equipment, provides the procedure for preventative maintenance for safety-related components. WBNP QCP-4.5, Preventative Maintenance Forms for the Reactor Coolant Pump Casings, the RHR heat exchangers and one of two containment spray heat exchangers were reviewed. The Attachment A form for containment spray heat exchanger 2B could not be found by the licensee. However, the licensee was able to identify and locate the engineer who performed the preventative maintenance and inspection on the two Unit 1 heat exchangers and the Unit 2A heat exchanger. The engineer informed the Mechanical Engineering Unit Supervisor that he remembers performing the preventative maintenance and inspection for containment spray heat exchanger 2B. He indicated that he had performed the required inspection and maintenance at the same time he inspected and performed the required maintenance on the two Unit 1 heat exchangers and the other Unit 2 heat exchanger. The licensee stated that based on the engineer's recollection, the record for containment spray heat exchanger 2B will be reconstructed by having the engineer fill in the forms again. Pending reconstruction of the record and NRC inspection, this item will be identified as an unresolved item, 50-391/79-04-2.

7. Safety-Related Structures (Structural Steel and Supports)-Review of Quality Records

Pertinent quality records associated with installation and inspection of the RHR heat exchangers 2A and 2B supports were reviewed to determine whether these records, and the work reflected by the records, comply with NRC requirements and SAR commitments. The RHR heat exchangers 2A and 2B supports were also visually inspected to correlate the records with drawing requirements.

No items of noncompliance or deviation were identified.