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

Report Nos.: 50-259/84-22, 50-260/84-22, and 50-296/84-22

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

Docket Nos.: 50-259, 50-260 and 50-296

License Nos.: DPR-33, DPR-52, and DPR-68

Facility Name: Browns Ferry 1, 2, and 3

Inspection Dates: June 26-29, 1984

Inspection at Browns Ferry site near Decatur, Alabama

Inspector: _____ 7/12/84
for E. H. Girard Date Signed

Approved by: _____ 7/12/84
J. J. Blake, Section Chief Date Signed
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope: This routine inspection involved 41 inspector-hours on site in the areas of licensee action on previous enforcement matters, welding, inservice testing, IE Bulletins, licensee event reports and inspector followup items.

Results: No violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

*G. T. Jones, Plant Manager
J. R. Pittman, Superintendent - Maintenance
*R. E. Burns, Instrument Group Supervisor
*B. C. Morris, Plant Compliance Supervisor
J. C. Pettitt, Special Projects Field Coordinator
M. Totten, Modifications Engineer
T. B. Schreeder, Level III NDE Examiner
B. L. Bartell, Compliance Engineer
B. R. McPherson, Lead Mechanical Engineer
G. Pitzell, Supervisor - Metallurgical Standards Group
R. Latimer, ISI Coordinator
H. Hodges, Modifications Engineer

NRC Resident Inspectors

*G. L. Paulk, Senior Resident Inspector
C. A. Patterson, Resident Inspector

*Attended exit interview.

2. Exit Interview

The inspection scope and findings were summarized on June 29, 1984, with those persons indicated in paragraph 1 above. The licensee was informed of the inspection findings listed below. The licensee acknowledged the inspection findings with no dissenting comments.

Inspector Followup Item 259, 260, 296/84-22-01, Corrections to Pump Test Procedures, paragraph 6.

3. Licensee Action on Previous Enforcement Matters

a. (Closed) Violation (259, 260, 296/82-33-02): Failure to maintain summary lists and increase test frequency. TVA's letters of response dated January 10 and 28, 1983, have been reviewed and determined to be acceptable by Region II. The inspector held discussions with the cognizant Lead Mechanical Engineer and examined the corrective actions as stated in the letter of response. The inspector concluded that TVA had determined the full extent of the subject noncompliance, performed the necessary survey and follow-up actions to correct the present conditions, and developed the necessary corrective actions to preclude recurrence of similar circumstances. The corrective actions identified in the letter of response have been implemented.

b. (Closed) Violation (259, 260, 296/83-22-01): Failure to follow procedures for calibration of temperature monitoring device. TVA's letter of response dated August 18, 1983, has been reviewed and determined to be acceptable by Region II. The inspector held discussions with personnel responsible for assuring that ovens used for baking electrodes have properly calibrated thermometers and examined the corrective actions as stated in the letter of response. The inspector concluded that TVA had determined the full extent of the subject noncompliance, performed the necessary survey and follow-up actions to correct the present conditions, and developed the necessary corrective actions to preclude recurrence of similar circumstances. The corrective actions identified in the letter of response have been implemented.

c. (Closed) Unresolved Item (260/82-32-01): Arc Strikes. This item was identified to express a concern that a small pipe attached to valve 69-500 displayed numerous arc strikes. The inspector was informed that the pipe had been removed, as documented in a memo from J. H. Miller to T. L. Chinn entitled Tracking Item #85 and dated January 18, 1983. The line was found to have had little safety significance. It will not be replaced.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Welding - Unit 3 (55700)

The inspector examined in-process welding related activities for torus modifications and reactor vessel jet pump instrumentation nozzle safe end repairs to verify compliance with NRC requirements and licensee commitments. The torus modification welding was governed by AWS Code D1.1 and the repairs to the nozzles were governed by ASME Code Section III and IX.

a. Torus Modification Welding

The inspector observed two welders shielded metal arc welding N, J, and L gussets to torus ring girder #1 and examined the related activities and documentation as described below:

(1) The procedure utilized was examined for compliance with AWS D1.1 requirements.

(2) The welding material control system was reviewed for proper storage, dispersal, and handling of the welding material.

(3) The in-process welding was observed for proper weld quality.

(4) The qualification of the welding procedure was verified.

(5) The qualifications of the welders were verified from cards at the issue station.

b. The inspector observed automatic gas tungsten arc repair welding in-process on Jet Pump Instrumentation Nozzles A and B and examined the related activities as described below:

(1) The procedure utilized was examined for compliance with ASME Section IX requirements.

(2) The in-process welding was observed for proper weld quality.

(3) Welder performance and procedure qualifications were reviewed for compliance with ASME Section IX.

Within the areas examined, no violations or deviations were identified.

6. Inservice Testing (92706)

The inspector examined selected aspects of the licensee's inservice testing program to verify compliance with code (ASME Section XI) and Technical Specification requirements as follows:

a. The surveillance test instructions for the RHR and HPCI pumps were examined to verify that they specified proper minimum flow acceptance criteria.

b. The current calibration was verified for core spray pump discharge pressure indicator PI-75-48.

In reviewing the RHR pump test procedure, the inspector noted that it permitted a delay in declaring a pump inoperable when its test values were found outside the allowable range, such that the test instrumentation could be recalibrated and the test rerun. The inspector noted that the NRC staff did not consider this acceptable. The licensee indicated that this was not being allowed and that the provision was being deleted from the procedures. In reviewing the HPCI pump test procedure, the inspector found that it appeared to contain two different acceptance values for minimum flow, one from the Technical Specifications and the other from ASME Section XI. The inspector noted this could result in confusion. The licensee indicated the requirement would be reviewed and corrected, if necessary. The inspector informed the licensee that their corrections to the test procedures would be examined further in subsequent inspection as inspector followup item 259, 260, 296/84-22-01, Corrections to Pump Test Procedures.

7. Status of Inspection and Enforcement Bulletins (IEBs) (92703)

(Open) IEB 83-03: Check Valve Failures in Raw Cooling Water Systems of Diesel Generators (Units 1, 2, and 3)

This IEB deals with generic aspects of multiple swing check valve failures identified in raw cooling water systems for diesel generators. The licensee submitted an acceptable proposal for complying with the IEB and data for examinations of Units 1 and 2 in a January 25, 1984 letter. During the current inspection, the inspector questioned the cognizant engineer regarding the status of examinations for Unit 3. The inspector was informed that the examinations had been completed but that they were awaiting completion of certain checks on Unit 1 before submitting results to the NRC.

This IEB will remain open pending the Region II's review of the licensee's completed actions for all three units.

8. Reportable Occurrences - Licensee Event Reports (LERs) (92700)

(Open) LER (BFRO-50-296/84006): Jet Pump Instrument Nozzle Cracking.

The licensee's report on this event was submitted to Region II in a letter dated June 8, 1984. This event involved apparent stress corrosion cracking detected by the licensee in the two safe-ends attached to Unit 3 reactor vessel nozzles utilized as penetrations for jet pump instrumentation. The licensee's temporary (for one refuel cycle) repair of the nozzles consists of overlay weld cladding. The inspector examined the welding in-process on the nozzles as described in paragraph 5 above. The work was not completed during the inspection.

The licensee completed a check of the Unit 1 nozzle safe-ends during a brief unscheduled outage that occurred the week before this NRC inspection.

The inspector questioned the licensee's Level III Examiner, who examined the safe-ends during the outage, regarding his findings. The examiner stated that no cracking indications were detected. Cognizant licensee metallurgists indicated that they believed that the cracking detected in the Unit 3 safe-ends did not occur in the Unit 1 safe-ends because of a difference in fabrication that resulted in apparent sensitization of the Unit 3 safe-ends. The licensee will check the similar Unit 2 safe-ends during its next refueling outage (about September 1984). This item will remain open pending the licensee's completion of the repairs of Unit 3 safe-ends and examination of the Unit 2 safe-ends, the licensee's actions in this regard will be reviewed by Region II in subsequent inspection.

9. Inspector Followup Items (IFIs) (92701)

(Closed) IFI (296/81-13-05): Jet Pump Holddown Assembly Replacement.

This item was opened to followup on the licensee's planned replacement of jet pump hold down assemblies in response to problems addressed in IEB 80-07. The licensee has performed such replacements for Units 1 and 2 previously. The inspector questioned the licensee as to whether replacement for Unit 3 had been performed or if such replacement was imminent. The inspector was informed that, while planning for the replacement had been performed (Work Plan 13137 for Engineering Change Notice 0450), the replacement would not be undertaken during the current outage - that, instead, the examinations requested by IEB 80-07 would continue.