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

Report Nos. 50-390/79-19 and 50-391/79-15

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

Facility Name: Watts Bar Nuclear Plant Units 1 and 2

Docket Nos. 50-390 and 50-391

License Nos. CPPR-91 and CPPR-92

Inspection at Watts Bar Site near Spring City, Tennessee

Inspector: _____ 5/10/79
B. J. Cochran Date Signed

Approved by: _____ 5/10/79
A. R. Herdt, Section Chief, RCES Branch Date Signed

SUMMARY

Inspection on April 2 - 27, 1979

Areas Inspected

This routine, announced inspection involved 189 inspector-hours on-site in the areas of cable pulling and termination; base line inspection of Safety Injection System piping; insulation installation on Refueling Water Storage Tank; cadwelding of rebar in Unit 2 main steam valve room; testing of diesel generator building cardox system; work in and around Unit 1 reactor vessel; concrete placement in Unit 2 reactor building; storage of safety related components; safety related pipe welding; safety related pipe supports and restraints; and followup on allegations made against work practices in pulling cable to the diesel generator building.

Results

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

DETAILS

1. Persons Contacted

Licensee Employees

*T. B. Northern, Jr., Project Manager
*S. Johnson, Assistant Construction Engineer
*A. W. Rogers, Supervisor QA
C. O. Christopher, Assistant Construction Engineer (Civil)
*R. L. Heatherly, Supervisor, QC&R Unit
J. H. Perdue, Supervisor, Electrical Engineering Unit
J. M. Lamb, Supervisor, Mechanical Engineering Unit
*H. C. Richardson, Construction Engineer
J. G. Shields, Assistant Construction Engineer
J. E. Treadway, Construction Superintendent
W. C. English, Assistant Construction Superintendent

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

Other Organizations

A. L. Hozarth, Westinghouse Project Manager

*Attended exit interview.

2. Exit Interview

The inspection scope and findings were summarized on April 6, 20, and 27, 1979 with those persons indicated in Paragraph 1 above. The resident inspector met with the licensee construction project manager and engineering supervisors each week to review the resident inspector's activities and findings. No items of noncompliance or deviations were identified.

3. Licensee Action on Previous Findings

This item was not inspected during this period.

4. Unresolved Items

There were no unresolved items identified during this inspection.

5. Independent Inspection Effort (Units 1 and 2)

a. During this inspection period the following construction activities were observed while they were in progress.

(1) Termination of power cables to 1BBRHR pump motor. The terminations were made in accordance with the RayChem High Voltage termination instructions.

(2) Baseline inspection of weld 1-063A-D079-07 on check valve in a section of 12 inch Safety Injection System Piping.

(3) Pulling 52 cable bundle of control cables from shutdown boards at elevation 757 in the Auxiliary Building to the Emergency Diesel Generator Building. The inspection confirmed proper pulling tension was not exceeded, proper pulling techniques were being used, approved cable lubricating compound was being used and cable was being properly protected by being placed on plastic sheeting on the ground outside of the pull box.

(4) Installation of insulation on Unit 2 refueling water storage tank.

(5) Cadwelding rebar in north wall of Unit 2 main steam valve room.

(6) Removal of the temporary service platform on Unit 1 Reactor Head and installation of the permanent platform.

(7) Examination of the five inch check valve that failed in the emergency diesel generator cardox system test and witnessed the dismantling of another check valve in the system and inspected for damage. The second valve was found to be free of defects.

(8) Placement of concrete in the Unit 2 reactor building south wall.

(9) Inspected for damage to rebar in areas where concrete is removed for the installation of pipe sleeves.

b. The following tests were witnessed:

(1) Charging of the CO_2 manifold and checking setting of relief valves in each of the emergency diesel generator building compartments.

c. The following Watts Bar QA audits were reviewed:

(1) WB-G-79-04, Control of Nonconforming Materials and Conditions Adverse to Quality

(2) WB-G-79-05, Preparations and Documentation of Field Change Requests

(3) WB-M-79-03, Mechanical Equipment, Installations, Standard Inspections and Documentation

(4) WB-W-79-02, Training and Certification of NDE Personnel

(5) WB-W-79-03, Welder and Welder Qualifications

(6) WB-C-79-02, Protective Coating - Inspection and Documentation

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

6. Licensee Identified Items

a. (Open) Item 390/79-19-02 and 391/79-15-02, "Pressurizer Power Relief Valves" (10 CFR 50.55(e)).

On April 9, 1979, TVA notified IE:II of a possible 50.55(e) item concerning the pressurizer relief valves were not designed for a natural frequency of 33 Hz as specified.

b. (Open) Item 390/79-19-01 and 391/79-15-01, "Audit of Spent Fuel Rack Fabrication" (10 CFR 50.55(e)).

On April 5, 1979, TVA notified IE:II of a 50.55(e) item concerning a breakdown in the implementation of the spent fuel rack fabricator QA program.

7. Safety-Related Components - Observation of Work and Work Activities - (Unit 1)

The storage of the following components were selected for inspection:

RHR Pump and Motors 1AA and 1BB

Titrated Drain Collector Tank

Evaporator Feed Pumps A and B

Gas Stripper Feed Pumps A and B

Safety Injection System Pumps and Motors 1AA and 1BB

Charging Pumps and Motors 1-CB, 1BB and 1CC

Turbine Driven Auxiliary Feedwater Pump 1-AS

The RHR, Safety Injection and Charging Pumps and Motors are protected against dirt and construction debris by being covered with flame resistant plastic. All areas were found to be clean and parts and material stored in orderly fashion.

Examination of inspection records confirmed that periodic inspection and maintainence activities were performed according to procedural requirements. Storage maintainence activities consist of checking for cleanliness, rotating the pump and checking lubrication.

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

8. Electrical Components and Systems - Observation of Work and Work Activities - Unit 1

The Unit 1 480 volt shutdown boards 1A1-A, 1A2-A, 1B1-B and 1B2-B; the 6.9 Kv auxiliary panel 2A-A panel 12; the 125 volt DC vital battery board rooms 1 and 2; the auxiliary control room panels 1-L-10, 2-L-10 and O-L-4A thru 4D; the 120 volt AC vital invertors 1-I, 1-II, and 2-II; the 125 volt DC vital battery chargers 1-II, 2-II and 1-S; and the 125 volt DC vital battery rooms and 2 were selected for inspection. The panels were all set in place and properly anchored to the floor embeds. The panels were maintained in a clean condition. There was no dirt accumulation, materials or construction debris in the area ways and clear access to the front and rear of the panels. Electricians were in the process of pulling cables and terminating conditions in the shutdown boards and in the panels in the auxiliary control room. Cable harness in side the panels were neat and secured with plastic ty-wraps. Two lug crimping tools were checked to determine if controlled by the tool calibration program. The vital battery rooms were clean and the ventilation system operating. The batteries were free of dust and all plastic caps were in place.

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

9. Safety-Related Piping (Welding) - Observation of Work and Work Activities (Unit 2)

Welds in Unit 2 Containment Spray piping system were selected for examination. Field weld operation sheet #2-72-F-5-1 for weld 2-072A-D035-01 identified weld procedure as GTA-88-01R1 and welder 6AAX. All inspection hold points were inspected and initialed by the welding and mechanical engineers. Review of isometric sketch E-2879-1C35 confirmed the weld between FCV-72-45 (Westinghouse Valve S/N 12000GM82) and spool piece W-2-9020B.

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

10. Safety-Related Pipe Support and Restraint Systems (Unit 1)

The following pipe restraints and supports were selected for inspection:

a.	Fixed Supports	784A-63-7
		784A-63-9
		784A-70-26
		784A-70-16
		784A-67-21
		784A-62-14
		781A-74-7
		781A-62-9
		781A-74-2
b.	Dynamic Supports	781A-68A-430
		781A-62A-81
		781A-62A-10
		781A-68A-1
		781A-68A-14
		781A-62A-254
		781A-74-4
		781A-74-1
		781A-74-9
c.	Spring Loaded Supports	781A-62-709
		781A-74-6

Inspection of fixed supports verified that each support is identified with a fixed identification plate, no forced bending or deformation is detectable, pads or sleeves are provided to permit the pipe to slide during thermo-cycling, welds to embeds appear to be acceptable, and bolted plates are tight against the walls and no deflections were identified.

Dynamic supports, where possible, were checked for freedom of movement, snubbers are wrapped with plastic to protect them from dirt and construction debris and all bolts and nuts were found to be tight. All snubbers examined were mechanical. Spring loaded supports indicate the hot and cold settings on the spring seals, but they have not been set at this time.

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