



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

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Report Nos. 50-390/80-06 and 50-391/80-05

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 3/21/80
M. Thomas Date Signed

Approved by: F. S. Cantrell 3/21/80
F. S. Cantrell, Section Chief, RCES Branch Date Signed

SUMMARY

Inspection on March 3-6, 1980

Areas Inspected

This routine, unannounced inspection involved 30.5 inspector-hours on site in the areas of 10 CFR 50.55(e) items, IE Bulletins and Circulars, storage of safety-related piping and equipment, and QA audits.

Results

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

DETAILS

1. Persons Contacted

Licensee Employees

- *J. E. Wilkins, Project Manager
- *H. C. Richardson, Construction Engineer
- *J. E. Treadway, Construction Superintendent
- *S. Johnson, Assistant Construction Engineer (Mech)
- *A. W. Rogers, QA Supervisor
- *R. L. Heatherly, Supervisor, QC&R Unit
- *R. L. Moore, QA&A Staff, Power Prod
- *J. H. Perdue, Supervisor, Electrical Engineering Unit (EEU)
- *J. M. Lamb, Supervisor, Mechanical Engineering Unit (MEU)
- *L. J. Johnson, Mechanical Engineer, MEU
- *C. O. Christopher, Assistant Construction Engineer (Civil)
 - G. K. Bonnie, Engineer, MEU
 - R. C. Washington, Engineer, MEU
 - J. P. Ballard, Engineer, MEU
 - L. Harris, Engineer, MEU
 - J. E. Hoffert, Engineer, EEU
 - J. Weinbaum, QA Engineer

Other licensee employees contacted included construction craftsmen, technicians, security force members, 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 March 6, 1980 with those persons indicated in Paragraph 1 above. Unresolved item 390/80-06-06 and 391/80-05-06, Timely and Effective Corrective Action for Audit Deficiencies (paragraph 5), was discussed in detail.

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. New unresolved items identified during this inspection are discussed in paragraph 5.

5. Independent Inspection Effort (Units 1 and 2)

The inspector conducted a general walk-through inspection of Units 1 and 2 reactor buildings and the auxiliary building. Areas inspected included storage of safety related piping and components, followup on chipping activities in the auxiliary building. The following QA audits were reviewed:

- WB-E-79-12, Reverification of Class IE Cable
- WB-E-79-13, Temporary Electrical Connections
- WB-E-80-01, Installation & Documentation of Exposed Conduit
- WB-G-80-01, Variances of B001 Supports
- WB-G-80-02, Emergency Gas Treatment System
- WB-G-80-03, Fabrication, Installation, and Documentation of Waste Disposal System
- WB-M-80-01, Tests and Inspections for ASME Section III Piping Systems

While reviewing QA audit reports, the inspector noticed several audits with outstanding deficiencies that have been open for a longer than reasonable period of time. There were no responses to the deficiencies nor any explanations from the responsible organizations as to why no type of corrective actions have been implemented.

During further review of QA audit reports, the inspector also noticed several deficiencies and noncompliance reports (NCR's) where engineering hold points were either bypassed by crafts or signed off as acceptable by QC personnel before the work was completed. These are examples of a problem identified in IE Region II inspection report item 390/79-45-01 and 391/79-39-01. These findings by site QA personnel indicated that effective corrective action has not been taken to prevent recurrence of the problem identified in the aforementioned IE inspection report. The inspector's findings were discussed with responsible licensee site personnel. This item will be identified as unresolved item 390/80-06-06 and 391/80-05-06, "Timely and Effective Corrective Action for QA Audit Deficiencies", pending Region II's final review of the licensee's response to the above IE inspection report item.

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

6. Licensee Identified Items (50.55(e))

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

- a. (Closed) item 390/79-19-01 and 391/79-15-01, "QA Program Implementation Breakdown" (QEB 79-1 and 1477R). After completion of a reaudit of Wachter's facilities, TVA has closed out all 36 of the audit findings written against Wachter's QA program manual. TVA has concluded that the combination of the written Wachter explanation, the walk through of Wachter's facilities by TVA personnel, and the establishment of additional physical inspection hold points provide objective documentary evidence to support acceptance of the racks from Wachter.
- b. (Closed) item 390/79-43-04 and 391/79-36-04, "Rebar Bending Not in Accordance With Specifications" (YC-023). Construction engineering procedures and quality control procedures for Watts Bar have been revised to require construction employees to obtain approval from the design project or branch before bending of partially embedded rebar.
- c. (Open) item 390/80-06-01 and 391/80-05-01, "Defective Seismic Pipe Supports" (2019R). The licensee reported that a number of documented seismic pipe supports were inspected and each support was found to have one or more of the following type defects: poor welds, undersize welds, lack of locking device on threaded connection, improper construction, improper tolerances, and unacceptable cleanliness level.
- d. (Open) item 390/80-06-02 and 391/80-05-02, "Shock arrestor Strut Assembly Interference" (MEB 80-3). The licensee reported that they have been notified by Bergen-Paterson of a potential problem with their part 2540 (sizes 15, 50, 120) strut assembly with Pacific Scientific mechanical shock arrestors. An interference between the shock arrestors and rear bracket may impede free movement of the strut assembly.
- e. (Open) item 390/80-06-03 and 391/80-05-03, "Deficiency in Material Verification" (2054R). The licensee reported that material verification hold points on QA documentation have been signed off by engineering personnel "as verified", when no certified mill test reports were on file.
- f. (Open) item 390/80-06-04 and 391/80-05-04, "Qualification of Cold Forming Procedures" (2053R). The licensee reported that during a documentation review of cold forming records it was discovered that there was a failure to properly qualify cold forming procedures with magnetic particle or liquid penetrant tests.
- g. (Open) item 390/80-06-05 and 391/80-05-05, "Bergen-Paterson Clamps Do Not Meet Specifications (MEB 80-2). The licensee reported that a type

of pipe clamp manufactured by Bergen-Paterson which is normally used to connect a pipe to a pipe support was made from 1½" thick stock material instead of 1-3/4" material as specified on the Bergen-Paterson drawings.

7. IE Bulletins and Circulars

- a. The file of IE Circulars maintained by the Quality Control and Records Unit was examined. The inspector reviewed IE Circulars 79-01 through 79-20 and verified that they had been received and reviewed by responsible project management. The above Circulars are closed.
- b. The licensee has received and reviewed the following IE Bulletins (IEB's) at the site. All IEB's are reviewed by appropriate project management for site applicability and coordinate a response if needed with corporate design and licensing personnel. The following IEB's are not applicable to the site or require no action (issued for information only) and are therefore closed.

IEB 79-01 IEB 79-12 IEB 79-19
IEB 79-05 IEB 79-16 IEB 79-20
IEB 79-06 IEB 79-17 IEB 79-21
IEB 79-08 IEB 79-18 IEB 79-22
IEB 79-10

- c. (Closed) IE Bulletin 79-23 "Potential Failure of Emergency Diesel Generator Field Exciter Transformer". The licensee' response letter dated October 29, 1979 states that no connections that would allow circulating currents exit between low-KVA-rated transformers and high-KVA-rated diesel generators at Watts Bar. Sustained full load testing of the diesel generators is required during preoperational testing of the facility. Preoperational testing of diesel generators at the site will comply with applicable requirements and regulations.