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

Report Nos. 50-390/81-10 and 50-391/81-10

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: T E Conlon for — 5-14-81
T. D. Gibbons — Date Signed

Approved by: T E Conlon — 5-14-81
T. E. Conlon, Section Chief — Date Signed
Engineering Inspection Branch
Engineering and Technical Inspection Division

SUMMARY

Inspected on April 14-17, 1981

Areas Inspected

This routine, unannounced inspection involved 28 inspector-hours onsite in the areas of Licensee action on previous inspection findings, Licensee identified items, Inspector followup items, Instrumentation components and systems work and work activities, and Employee concerns.

Results

Of the areas inspected, no violations or deviations were identified.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

*J. E. Wilkins, Project Manager
*E. J. Austin, Electrical Engineer
*T. Hayes, Supervisor Instrument Engineering Unit
*J. H. Perdue, Supervisor Electrical Engineering Unit
*T. R. Trail, Management Status Engineer
*V. A. Bianco, Engineer OEDC

NRC Resident Inspectors

*T. Heatherly
J. McDonald

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on April 17, 1981 with those persons indicated in paragraph 1 above.

3. Licensee Action on Previous Inspection Findings

a. (Closed) Infraction 390/80-24-01, 391/80-18-01 - Foam generator pressure gauges out of calibration. The licensee has issued a final response to RII dated September 17, 1980 which stated the gauges would be replaced. The gauges were replaced in August 1980. This infraction is closed.

b. (Closed) Infraction 390/80-21-03 - Connections made in conduitlets. The licensee has issued a final response dated October 30, 1980 and a revised final response dated November 24, 1980. The licensee has issued Addendum 2 dated January 19, 1981 to Procedure WBNP-QCR-3.5 which defines the usage. The inspector examined the revision. This infraction is closed.

c. (Closed) Deficiency 390/79-47-01, 391/79-40-01 - Failure to follow WBNP-QCP-3.1 for cable certification. The licensee has issued a final response dated February 4, 1980. The procedure has been revised to include the required certification steps. The inspector examined the revision. This item is closed.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Licensee Identified Items (LII), 10 CFR 50.55(e) and/or Part 21

The inspector reviewed the status of the open electrical and instrumentation LIIs with the site personnel. The listing below identifies the status of each item identified.

a. (Closed) LII 390/79-08-03, 391/80-05-03 - Emergency Diesel Generator (EDG) speed switches. The licensee has issued a final report dated April 30, 1979. The new switches have been incorporated per ECN 1930. The inspector examined the documentation of ECN 1930. This item is closed.

b. (Closed) LII 390/80-12-08, 391/80-79-08 - Inadequate documentation for installation of mechanical equipment. The licensee has submitted a final report dated March 27, 1981. The corrective actions are documented in NCR-WB-G-80-5 which has been examined by the inspector. This item is closed.

c. (Closed) LII 390/80-18-03, 391/80-11-03 - Licensee investigation and findings following craft allegations. The licensee has issued a final report dated August 15, 1980. The inspector examined the investigation file on this issue. This item is closed.

d. (Closed) LII 390/80-24-03, 391/80-18-03 - Environmental qualification of electrical equipment. The licensee has submitted a final report dated January 15, 1981 stating that this item is not reportable for Watts Bar 1 and 2.

e. (Closed) LII 390/80-27-01, 391/80-21-01 - Nitrogen bottle bank supports. The licensee has issued a final report dated October 7, 1980. This item is documented on NCR 2400R and ECN 2544. The work has been completed and documented. The inspector reviewed the work packages. This item is closed.

f. (Closed) LII 390/81-10-01 - Emergency diesel generators loose electrical terminations. The licensee has issued a final report dated March 12, 1981. Procedure WBWP-QCP 3.5 was revised to correct the problem. The inspector verified the revision. Final inspection will be conducted by construction and nuclear power staffs. This item is closed.

g. (Open) LII 390/81-10-02, 391/81-10-02 - AC Auxiliary power system. The licensee reported this item to RII on September 25, 1980. The licensee is evaluating this item.

h. (Open) LII 390/81-10-03, 391/81-10-03 - Improper installation of compression type terminates on single phase status converters. The licensee has reported this item for Unit 1 on April 1, 1981 and for Unit 2 on December 12, 1980. A final report for Unit 2 only was issued on January 12, 1981. The work has not been accomplished. This item will remain open until work is accomplished on both units.

i. (Closed) LII 390/81-10-04 - Current control problem with EDG 1A-A and 1B-B. The licensee has issued a final report dated February 24, 1981 and a revised final report dated April 7, 1981. The licensee has complete wire checks of both diesels and corrected all problems identified. The EDG current unstability was found to be caused by offsite power system. This condition only occurs during testing using the offsite power system as a load. This item is closed.

6. Inspector Followup Items (IFI)

a. (Closed) IFI 390/79-47-02, 391/79-40-02 - Revision to QCPs 3.5 and 3.6 for the determination and rework. The procedures have been updated to cover the removal and reinstallation of terminated cables. The inspector verified the revisions. This item is closed.

b. (Closed) IFI 390/80-30-06, 391/80-23-05 - Handling of Class IE cable. Procedure WBNP-QCP 3.1, Revision 12 addendum 1 dated December 12, 1980 has been issued. This item is closed.

7. Instrumentation (Components and Systems) I - Observation of Work and Work Activities (Unit 2)

The inspector selected six instruments mounted on the EDG package for examination to assure that the requirements of the SAR and QAM were complied with in the areas of location, mounting, identification, testing and inspection. The instruments selected were as follows: 0-1P1-82-1040/2A1-A, 0-1P1-82-1040/2A2-A, 0-1P1-82-315/2A1-A, 0-1P1-82-315/2A2-A, 0-1P1-82-316/2A1-A and 0-1P1-82-316/2A2-A.

Within the areas examined there were no violations identified.

8. Employee Concerns

The senior resident inspector received a letter dated April 11, 1981 from an individual expressing concerns relating to the electrical installation. The senior resident inspector requested that these items be reviewed by a Regional Inspector. The concerns are grouped in the following categories: conduit overfill, missing bushing, use of metal fishtapes, multiple pulls in conduit, excessive cable bends and pull lengths, cables in cable trays not adequately protected, trash in trays, cables not dressed down and excessive

bend radius after dressing, VIMASCO fireproofing, cable bundling above tray line, possible thermal effects, excessive cable taping, and drawings not to latest revision.

The inspector itemized the list of concerns and requested the licensee to inspect the items identified. The licensee inspected all items and found only one item, in a non-safety-related area, which violated site procedures. The conduit fill was examined by design engineering to verify that the allowable fill was acceptable to design. Three conduits were found to exceed the site imposed 40% fill criteria. Design has accepted the overfill in the three conduits identified. The licensee procedures require bushings on the ends of conduit. The licensee found that two conduits identified by the employee had no bushings. It should be noted that the conduits involved were not safety-related.

The inspector, on a randum basis, examined three of the areas of concern in order to evaluate the licensee's inspection. The areas inspected were as follows: VIMASCO fireproofing, annulus area penetrations numbers 8, 9, and 27 in the Unit 2 reactor building, and cable installation in various areas. The inspector examined these installations to assure that TVA procedures were followed.

The inspector concurs with the licensee findings. One item which has not been reviewed was identified as "a conduit with excessive bends" by the employee. Consultation with the employee will be necessary in order to locate and inspect the subject conduit.

Within the areas examined, there were no violations identified.