UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

Report Nos.: 50-390/85-59 and 50-391/85-48

Licensee: Tennessee Valley Authority
6N11 B Missionary Place
1101 Market Street
Chattanooga, TN 37402-2801

Docket Nos.: 50-390 and 50-391 License Nos.: CPPR-91 and CPPR-92

Facility Name: Watts Bar Units 1 and 2

Inspection Conducted: September 21, 1985 - October 20, 1985

Inspectors: A. J. Ignatonis for M. B. Shymlock — 11/14/85 Date Signed

A. J. Ignatonis for W. E. Holland — 11/14/85 Date Signed

A. J. Ignatonis for C. W. Caldwell — 11/14/85 Date Signed

Accompanying Inspector: J. W. York

Approved by: Stephen P. Weise — 11/14/85 Date Signed
S. P. Weise, Section Chief
Division of Reactor Projects

SUMMARY

Scope: This routine inspection entailed 321 resident inspector - hours on site in the areas of licensee action on previous enforcement items, followup on inspector identified items, fire prevention and protection, preoperational test program implementation verification, testing of pipe support and restraint systems, TMI action item followup, licensee event followup, and QA program.

Results: No violations or deviations were identified.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

R. M. Pierce, OEDC Project Manager for Watts Bar
*E. R. Ennis, Plant Manager
*R. H. Ector, Assistant Site Director
G. Wadewitz, Construction Project Manager
*B. S. Willis, Operations and Engineering Superintendent
*H. B. Bounds, Maintenance Superintendent
D. W. Wilson, Design Services Manager
J. E. Gibbs, Site Services Manager
*R. Norman Jr., Operations Supervisor
*T. L. Howard, Quality Engineering Supervisor
R. C. Miles, Modifications Manager
R. D. Greer, Electrical Maintenance Supervisor
C. D. Nelson, Special Projects Manager
*M. K. Jones, Engineering Group Supervisor
R. A. Beck, Health Physics Supervisor
R. T. McCollom, Acting Instrument Maintenance Supervisor
J. L. Collins, Mechanical Maintenance Supervisor
J. A. McDonald, Plant Compliance Supervisor
R. R. Garu, Preoperational Test Supervisor
R. D. Tolley, Project Manager, Design Services
H. J. Fisher, Construction Engineer, WBNP
S. Johnson Jr., Quality Manager - Construction
T. W. Hayes, Nuclear Licensing Unit Supervisor
C. E. Wood Jr. Assistant Electrical Maintenance Supervisor
L. C. Miller, Head, Plant Quality Engineering and Control Group
H. L. Pope, Supervisor, Plant Quality Control Section
L. J. Smith, Supervisor, Quality Surveillance Section
D. W. Bryson, Electrical Engineer, OE
E. H. Cole, Project Engineer, OE
*L. E. Ottinger, Plant Compliance Staff, Nuclear Engineer
C. A. Borelli, Plant Compliance Staff, Nuclear Engineer
R. E. Yarbrough Jr., Assistant Operations Supervisor
R. E. Bradley, Assistant Operations Supervisor
M. J. Burzynski, Regulatory Engineering Supervisor
G. R. Owens, Nuclear Engineer, Nuclear Licensing Section
T. R. Brown, Asst. Construction Engineer - Construction
R. L. McKnight, Engineer, Design Services - WBNP
D. G. Fickey, NEB Supervisor - OE (Onsite)

Other licensee employees contacted included engineers, technicians, nuclear power supervisors, and construction supervisors.

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on October 22, 1985, with those persons indicated by an asterisk in paragraph one above. One inspector followup item was identified (paragraph 3) to track Final Safety Analysis Report (FSAR) changes with regard to the volume control tank level control system, 20 inspector followup items (paragraph 8) were identified to track licensee completion of TMI action items for Unit 2, and one inspector followup item was identified (paragraph 11) with regard to the disposition of NCR W-269-P (Q List Discrepancies) and procedural requirements associated with the discrepancies listed in the NCR. Also, additional items were identified (paragraph 4.c.) with regard to the licensee's program for identifying and correcting non-conforming conditions. The licensee acknowledged the inspection findings with no dissenting comments. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection. At no time during the inspection period did the inspectors provide written material to the licensee.

3. Licensee Action on Previous Enforcement Matters (92702)

a. (Closed) Violation 390/85-40-03, Failure to Complete Work Required by a Work Release. The violation occurred because work release No. 3976 for removal of abandoned hanger 1-68-295 was voided without the work either being performed or placed on an outstanding item work list. Also, the subsequent walkdown of the system for transfer failed to identify that two structures were installed with the same hanger identification. Corrective action taken by the licensee included issuance of Nonconformance Report (NCR) 6130 and removal of the abandoned support steel which was accomplished by Work Plan (WP) 5317. Also, the evaluation of the deficiency for corrective action to prevent recurrence concluded that the condition was an isolated case since system walkdowns, prior to transfer, normally identify outstanding work items. Furthermore, the procedures controlling documentation of outstanding work items and requirements for completion and signoff of the work release have been revised to strengthen these programs. The inspector reviewed the NCR and the WP. The inspector then field verified that the abandoned support had been removed in accordance with the WP. The inspector also reviewed the revised procedures which control work releases and system transfers. The inspector determined that all corrective actions necessary to close this violation have been completed.

b. (Closed) Violation 390/85-40-04, Failure to Process a Field Change Request. The violation occurred because NUC PR personnel failed to follow procedure for attachment of a component to a engineered support. Also, further investigation indicated a need to define more clearly procedural requirements. Corrective action taken by the licensee included preparation of field change requests (FCRs) and variances to show the attachment points of the instrument cable to the engineered support. Work Plan (WP) 5317 was written to correctly reinstall the

instrument cable and remove the abandoned support. Also, the procedures involved were revised to more clearly define the requirements for preparing FCR's and variance sheets; and NUC PR modifications personnel were retrained in implementing the revised procedures. The inspector reviewed the revised procedures (MAI-13 and MAI-16) and the WP. The inspector then field verified that the instrument line had been removed from the abandoned support and rerouted in accordance with the WP. The inspector determined that all actions necessary to close this violation have been completed.

c. (Closed) Violation 391/81-15-02, Failure to Follow Scaffolding Procedure. This violation identified a procedure violation with regard to instructions that were used for rigging scaffolding for both Units 1 and 2. The corresponding Unit 1 violation was identified as 390/81-15-02. In a subsequent inspection, a regional inspector reviewed the documentation applicable to procedural changes, additional training, and TVA field audits conducted to prevent further recurrence of the violation. The inspector found that all administrative controls were adequate and that a subsequent field verification found no procedural violations. This action was documented in inspection report 390/82-09, 391/82-07 where the Unit 1 item was closed. The inspector determined that the corrective actions to close out the Unit 1 item are also applicable to Unit 2 since the same procedures, training, and audits were used. Therefore, this item is closed.

d. (Closed) Violation 391/82-28-01, Air Return System Deficiency. The inspector reviewed inspection report 391/82-28 and found that this item is not a violation, but a licensee identified item (LII). This LII reported to Region II on March 4, 1981, was identified as CDR 391/81-23. This discrepancy involved the upper/lower containment backdraft dampers for both Units 1 and 2. Since this CDR is still open, this item is closed.

e. (Closed) Violation 391/85-02-01, Use of Vimasco Number 2B for Fire Protection. The inspector reviewed inspection report 390, 391/85-02 and found that the subject violation was identified for Unit 1 only in the report. Since this violation was not imposed against Unit 2, this item is closed.

f. (Open) URI 391/82-20-05, Inadequate Valve Supervision for Fire Protection Containment Isolation Valves. During an inspection by a regional based inspector, it was noted that it is not possible to lock the containment isolation valves in their normal position since this would defeat the containment isolation function. This URI was identified for both units in inspection report 390, 391/82-20 and remained open for both units in inspection report numbers 390/84-23 and 391/84-18. This item was later closed, for Unit 1, in inspection report 390/84-46. This item is open pending review for Unit 2.

g. (Closed) URI 391/81-15-03, Pipe Spool Serial Numbers. This item, identified in inspection report 390, 391/81-15, involved a discrepancy between the current serial number on several pipe spools and the associated documentation and code data plates. Per this inspection report, this item was identified for Unit 2 only. Inspection report numbers 390/82-41 and 391/82-38 also addressed this item and it was determined that the documentation for the pipe spools had been assigned different numbers due to an administrative error and that the documentation had been corrected to accurately reflect the spool piece serial numbers. However, the latter report incorrectly identified the subject item as a Unit 1 item and closed it out under the number of 390/81-15-03. Due to the previous inspection effort and this typographical error, this item is closed.

h. (Closed) Deviation 390/85-40-02, Design of Volume Control System is Not Accurately Reflected by the Description in the FSAR. This issue related to specific problems Westinghouse had identified with regard to a potential control and protection system interaction concern involving the volume control tank (VCT) level control system. The concern was such that if one VCT level transmitter failed high, letdown flow would be diverted to the holdup tank. This condition could prevent the automatic transfer of the centrifugal charging pump (CCP) suction to the refueling water storage tank (RWST), because when the low level in the VCT is reached, only one transfer signal would be present. Westinghouse recommended that plant procedures be reviewed to assure that operators would be alerted to this specific situation. The licensee issued NCR WBN NEB 8114 to evaluate this VCT problem for applicability to Watts Bar and concluded that this condition did not apply to Watts Bar and was not reportable. The NCR was then closed since no further action was required.

To address this deviation, the licensee has taken corrective action to resolve the FSAR inaccuracies and issued NCR WBN NEB 8504 to document and investigate the improper closure of NCR WBN NEB 8114 as well as the FSAR errors. The licensee has submitted revised FSAR sections 9.3.4.2.1 and 9.3.4.2.5 to correctly reflect the VCT level control logic and which should be incorporated in the next amendment to the Watts Bar FSAR. In addition, the licensee has requested Westinghouse to evaluate the reasons for the subject FSAR discrepancy and to certify those portions of the FSAR prepared by Westinghouse as being correct. The corrective actions taken by the licensee are adequate to close this deviation. However, the inspector will review later FSAR revisions to verify that the corrective action is properly incorporated. This is identified as inspector followup item (390/85-59-01).

4. Followup on Inspector Identified Items (92701)

a. (Closed) IFI 391/82-29-04, Pipe Supports Jeopardizing Insulation During Thermal Movement. This IFI was a followup item on a CDR that was issued due to pipe expansion resulting in damage to insulation. This item was subsequently reviewed by a regional inspector and documented

in inspection report 391/82-29. In this report the inspector reviewed supporting documentation, procedures, drawings and training manuals to verify that the corrective actions had been completed by the licensee. This item is closed. In addition, the inspector noted this item was further addressed and closed in inspection report 391/82-34.

b. (Open) IFI 391/84-43-08, New or Revised Operating Instructions Resulting From Evaluations Of Fire Induced Spurious Operations. This item was identified for both units in inspection report numbers 390/84-55 and 391/84-43. The corresponding Unit 1 item number is 390/84-55-09. This discrepancy involved the interface between the high and low pressure systems, HVAC shutdown procedures, shutdown logic diagrams, and associated actions in an emergency. A regional inspector reviewed the applicable abnormal operating instructions and determined that the interface between these instructions, diagrams, and actions required was adequate. This item was subsequently closed for Unit 1 in inspection report numbers 390/85-47 and 391/85-38. However, the corresponding item for Unit 2 was not addressed in this report. Therefore, this item will remain open for Unit 2 pending further inspection.

c. (Open) IFI 390/85-46-01, Review of Licensee's Program for Identifying and Correcting of Nonconforming Conditions. The inspectors are continuing with the review of the subject programs. Inspection report 390/85-46 identified concerns in the area of promptness for evaluation of nonconformance reports (NCR's) and one-party reviews of construction NCR's for significance. The inspectors reviewed the Office of Engineering (OE) procedure for handling of conditions adverse to quality (CAQ), OEP-17 "Corrective Action", and determined that the procedure provided for a controlled system of documenting, evaluating, and resolving CAQ's identified by OE. The inspector also noted that timeframes are addressed in a manner appropriate with the importance of the CAQ.

However, the inspectors did not find evidence of a TVA program which would identify how the OE, Office of Construction, and NUC PR programs interact. Also, the inspectors found that not all of the NCR's identified by OC or NUC PR are being properly trended. The inspectors did determine that a trending program, for NCR's which require OE disposition and for CAQ's identified by OE, is in existence; however, this program is not being used to trend all NCR's identified by the different TVA offices. This item will remain open pending further NRC and licensee review.

5. Fire Prevention and Fire Protection - Unit 2 (42051)

During plant tours, the inspectors conducted observations of fire prevention and protection activities in areas containing combustible materials where ignition of these materials could damage safety - related structures, systems or components. The observations included verification that applicable requirements of Administrative Instruction (AI) 9.9 (Torch

Cutting, Welding, and Open Flame Work Permit), Standard Practice WB 12.6 (Fire Brigade Instructor's Guide and Fire Brigade Handbook), AI 1.8 (Plant Housekeeping) and WBNP Quality Control Instruction (QCI) 1.36 (Storage and Housekeeping) were being implemented with regard to fire prevention and protection.

Within this area inspected, no violations or deviations were identified.

6. Preoperational Test Program Implementation Verification - Unit 1 (71302)

The inspectors conducted routine tours of the facility to make an independent assessment of equipment conditions, plant conditions, security, and adherence to regulatory requirements. The tours included a general observation of plant areas to determine if fire hazards existed, observation of other activities in progress (e.g., maintenance, preoperational testing, etc.) to determine if they were being conducted in accordance with approved procedures. Also, observation of other activities which could damage installed equipment or instrumentation. The tours also included evaluation of system cleanliness controls and a review of logs maintained by test groups to identify problems that may be appropriate for additional followup.

Within this area inspected, no violations or deviations were identified.

7. Testing of Pipe Support and Restraint Systems - Unit 1 (70370C)

The inspector toured areas of the Unit 1 auxiliary building and reactor building. Numerous snubbers and restraints were observed. Visual examinations were conducted to check for deterioration and physical damage of mechanical snubbers. Visual examinations were also conducted to check for proper installation of base support plates, fasteners, locknuts, brackets, and clamps of fixed pipe supports.

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

8. TMI Action Item Listing - Unit 2 (25401)

The following is a listing of all TMI (NUREG-0737, Enclosure 2) items for Watts Bar Unit 2. The inspectors will evaluate each item identified as an inspector followup item for closure and document their findings in future inspection reports.

a. Item I.A.1.1, Shift Technical Advisor. This item was closed in inspection report 390/84-35 for Unit 1. This closeout action was also applicable to Unit 2. This item is closed.

b. Item I.A.1.2, Shift Supervisor Responsibilities. This item was closed in inspection report 390/83-15 for Unit 1. This closeout action was also applicable to Unit 2. This item is closed.

c. Item I.A.1.3, Shift Manning. This item was closed in inspection report 390/84-20 for Unit 1. This closeout action was also applicable to Unit 2. This item is closed.

d. Item I.A.2.1, Immediate Upgrade of RO and SRO Training and Qualifications. This item was resolved in the SER, section 13.2.1 and is considered closed.

e. Item I.A.2.3, Administration of Training Programs. This item was resolved in the SER, section 13.2.1 and is considered closed.

f. Item I.A.3.1, Revise Scope and Criteria for Licensing Exams. This item was resolved in the SER, section 13.2.1 and is considered closed.

g. Item I.B.1.2, Evaluation of Organization and Management. This item was closed in inspection report 390/85-40 for Unit 1. This closeout action was also applicable to Unit 2. This item is closed.

h. Item I.C.1, Short-Term Accident and Procedure Review. This item is identified as inspector followup item 391/85-48-01.

i. Item I.C.2, Shift Relief and Turnover Procedures. This item was closed in inspection report 390/84-35 for Unit 1. This closeout action was also applicable to Unit 2. This item is closed.

j. Item I.C.3, Shift Supervisor Responsibility. This item was closed in inspection report 390/84-35 for Unit 1. This closeout action was also applicable to Unit 2. This item is closed.

k. Item I.C.4, Control Room Access. This item was closed in inspection report 390/83-27 for Unit 1. This closeout action was also applicable to Unit 2. This item is closed.

l. Item I.C.5, Feedback of Operating Experience. This item was closed in inspection report 390/84-35 for Unit 1. This closeout action was also applicable to Unit 2. This item is closed.

m. Item I.C.6, Verify Correct Performance of Operating Activities. This item is identified as inspector followup item 391/85-48-02.

n. Item I.C.7, NSSS Vendor Review of Procedures. This item is identified as inspector followup item 391/85-48-03.

o. Item I.C.8, Pilot Monitoring of Selected Emergency Procedures for NTOLs. This item is identified as inspector followup item 391/85-48-04.

p. Item I.D.1, Control Room Design Reviews. This item is identified as inspector followup item 391/85-48-05.

q. Item I.D.2, Plant Safety Parameter Display Console. This item is identified as inspector followup item 391/85-48-06.

r. Item I.G.1, Training During Low Power Testing. This item is identified as inspector followup item 391/85-48-07.

s. Item II.B.1, Reactor Coolant System Vents. This item is identified as inspector followup item 391/85-48-08.

t. Item II.B.2, Plant Shielding. This item was closed in inspection report 390/84-90 for Unit 1. This closeout action was also applicable to Unit 2. This item is closed.

u. Item II.B.3, Postaccident Sampling. This item is identified as inspector followup item 391/85-48-09.

v. Item II.B.4, Training for Mitigating Core Damage. This item was closed in inspection report 390/85-08 for Unit 1. This closeout action was also applicable to Unit 2. This item is closed.

w. Item II.D.1, Relief and Safety Valve Test Requirements. This item was closed in inspection report 390/85-08 for Unit 1. This closeout action was also applicable to Unit 2. This item is closed.

x. Item II.D.3, Valve Position Identification. This item was closed in inspection report 390/84-35 for Unit 1. This closeout action was also applicable to Unit 2. This item is closed.

y. Item II.E.1.1, Auxiliary Feedwater System Evaluation. This item is identified as inspector followup item 391/85-48-10.

z. Item II.E.1.2, Auxiliary System Feedwater Initiation and Flow. This item is identified as inspector followup item 391/85-48-11.

aa. Item II.E.3.1, Emergency Power for Pressurizer Heaters. This item is identified as inspector followup item 391/85-48-12.

bb. Item II.E.4.1, Dedicated Hydrogen Penetrations. This item is identified as inspector followup item 391/85-48-13.

cc. Item II.E.4.2, Containment Isolation Dependability. This item is identified as inspector followup item 391/85-48-14.

dd. Item II.F.1, Accident Monitoring Instrumentation. This item is identified as inspector followup item 391/85-48-15.

ee. Item II.F.2, Instrumentation for Detection of Inadequate Core Cooling. This item is identified as inspector followup item 391/85-48-16.

ff. Item II.G.1, Power Supplies for Pressurizer Relief Valves, Block Valves, and Level Indicators. This item is identified as inspector followup item 391/85-48-17.

gg. Item II.K.1, IE Bulletins. This item is identified as inspector followup item 391/85-48-18.

hh. Item II.K.2, Orders on B&W Plants. This item was closed in inspection report 390/85-08 for Unit 1. This closeout action was also applicable to Unit 2. This item is closed.

ii. Item II.K.3, Final Recommendations, B & O Task Force. This item was closed in inspection report 390/85-08 for Unit 1. This closeout action was also applicable to Unit 2. This item is closed.

jj. Item III.A.1.1, Emergency Preparedness, Short Term. This item was resolved in the SER, Section 13.3 and is considered closed.

kk. Item III.A.1.2, Upgrade Emergency Support Facilities. This item was closed in inspection report 390/84-71 for Unit 1. This closeout action was also applicable to Unit 2. This item is closed.

ll. Item III.A.2, Emergency Preparedness. This item is identified as inspector followup item 391/85-48-19.

mm. Item III.D.1.1, Primary Coolant Outside Containment. This item is identified as inspector followup item 391/85-48-20.

nn. Item III.D.3.3, Inplant Iodine Radiation Monitoring. This item was closed in inspection report 390/84-74 for Unit 1. This closeout action was also applicable to Unit 2. This item is closed.

oo. Item III.D.3.4, Control Room Habitability. This item was closed in inspection report 390/84-37 for Unit 1. This closeout action was also applicable to Unit 2. This item is closed.

9. TMI Action Item Closeout - Unit 1 (25401)

a. (Open) TMI 390/80-RD-24, NUREG 0737 Item II.F.2, "Instrumentation for Detection of Inadequate Core Cooling". This item was addressed in Inspection Report 390/85-08. The outstanding issues related to the acceptance of the licensee's response in their February, 1985, submittal by the NRC staff. The licensee has submitted a new response to the subject item dated September 19, 1985, which supersedes all previous responses. This new response provides a current status of installation of instruments and a schedule for testing of each instrument prior to declaring the instruments operable.

The inspectors reviewed the September, 1985, response and verified that the reactor vessel level instrumentation system (RVLIS) was installed, the core exit thermocouples (CET) with operator display and backup

analog readout was installed, and two saturation temperature meters were installed as outlined in the response. The inspector met with the licensee to discuss additional instrumentation to be added. The additional instrumentation included the postaccident monitoring (PAM) I and II displays. These displays will provide the operators with two independent trains of readout on the control panel for selected CET readout and will also provide a backup means of obtaining reactor coolant subcooling margin independent of the plant process computer. Installation of the PAM I and II displays and associated components requires completion of the design of the systems (estimated by December, 1985) and procurement of components (estimated by March, 1986). The inspector stated that the licensee should consider installing the systems prior to fuel load instead of the commitment in the September, 1985, response. This item will remain open pending NRC staff acceptance of the response and appropriate consideration by the licensee to install the PAM I and II systems prior to the proposed dates.

b. (Open) TMI 390/80-RD-38, NUREG 0737 Item I.C.6, "Verify Correct Performance of Operating Activities". The inspectors reviewed the licensee's program for independent verification. The licensee has developed and implemented procedures in response to the subject item. The inspectors review included audits of the following procedures/instructions:

- Administrative Instruction (AI) - 2.19, "Independent Verification".
- AI - 2.15, "Temporary Alteration".
- AI - 2.1, "Authorities and Responsibilities for Safe Operation and Shutdown".
- AI - 2.12, "Clearance Procedure".
- Operation Section Letter (OSL) - A2, "Maintaining Cognizance of Operational Status".

Additionally, several system operating instructions (SOIs) and their corresponding data sheets, system lineups, and valve and breaker check sheets were reviewed.

The instruction which sets the general guidelines and defines independent verification, AI-2.19, states that its purpose is to provide an effective "system" for establishing system operability. The instruction covers all systems, subsystems, trains, components, and devices which affect the ability of a safety system to perform its function. The inspector assumed that this statement was intended to include all safety-related and important to safety systems. However, the instruction does clearly exclude those portions of safety-related

systems from independent verification which do not fulfill a safety-related or important to safety function.

AI-2.19 includes the definition of independent verification. Additionally, the procedures/instructions reviewed also included clarifications with regard to independent verification when appropriate. In general, the procedures/instructions require independence in that two individuals must independently verify, (i.e. one person then the next), the appropriate task. However, the instruction does not require the individuals to work separately or apart from one another. While allowing workers to perform this function together is not the preferred method, the fact that two separate checks are conducted meets regulatory requirements.

In summary, the inspectors determined that all appropriate areas were covered by the licensee's program for independent verification. The areas covered include system tagouts and return to service, performance of surveillance instructions, maintenance activities, testing, temporary alterations, and normal system lineups/operations which are required by approved procedure. AI-2.1 requires that configuration control be maintained for critical safety-related equipment. To meet this requirement, a method has been implemented which can be used at any time to determine exact system/component status for safety-related systems. The method is composed of the individual SOI check sheets, which are entered into a status file and a deviation notebook. As required by OSL-A2, whenever a change is made to a safety system lineup after configuration control is established, an entry will be made in the deviation notebook, except for conditions where positive control is maintained in accordance with other approved procedures. Together, the SOI check sheets, deviation notebook, and operator logs are required to be maintained so that they can be depended on for system status. This item will remain open pending final review of implementation of the program prior to fuel load.

Within this area inspected, no violations or deviations were identified.

10. Licensee Event Followup (92700)

a. (Closed) CDR 390/85-28; 391/85-27, Diesel Generator Exhaust Silencers Are Improperly Anchored. The subject CDR was identified at Watts Bar during reinspection of the diesel generator exhaust foundations as a result of NRC Information Notice 85-25. This reinspection revealed that the nuts on the expansion end of the exhaust silencer foundation support were tightened, thus restricting the sliding movement of the support which is required to accommodate thermal expansion.

Corrective action for the deficiency included loosening of the nuts on the expansion end of the exhaust silencer support and installation of jam nuts as specified by the vendor. The work was accomplished in accordance with Engineering Change Notice (ECN) 5860 and Work Plan (WP) E5860-1. Also, the affected engineering personnel in the Office of

Engineering were issued a memorandum reinforcing the requirement to reference all appropriate design input documents on design drawings.

The inspector reviewed the ECN and the craft completed WP. The inspector then field verified that all work required by the ECN had been accomplished on each of the eight exhaust silencer foundation supports. The inspector determined that all work necessary to close this CDR has been accomplished.

b. (Closed) CDR 391/80-01, Main Control Room Habitability. This condition concerns leakage identified in the control room HVAC system. During a review of Unit 2 open items, it was determined that this CDR is the same as CDR 391/81-95. The resident inspectors reviewed the corrective action for CDR 391/81-95 and verified the correction of a gasket and a chlorine detector problem. In addition, Abnormal Operating Instruction (AOI)-30, Chlorine Release, was reviewed to verify that the chlorine concentration indicated by the isolated chlorine monitor would not be utilized as a reference for when to manually unisolate the system in an emergency. As a result of this review, the CDR was closed in inspection report 391/84-33. The inspector determined that the actions performed to close CDR 391/81-95 also close CDR 391/80-01.

c. (Open) CDR 391/82-07, Containment Penetration Protection. This CDR was reviewed for its current status. During the review it was determined that the correct title for this item is "Shock Arrestor Strut Assembly Interference." This condition concerns an interference between the mechanical shock arrestor and rear bracket in Pacific Scientific Strut assemblies. Discussions with the licensee indicated that corrective actions are still required to be completed on this item for Unit 2.

d. (Closed) CDR 391/82-46, Failure to Evaluate Operator Actions to Realign ERCW Train A. This item was also identified for Unit 1 as CDR 390/82-49. The licensee reported the subject deficiency per requirements of 10 CFR 50.55(e) on March 10, 1982. The concern was that before the Component Cooling Water System (CCS) valves are repositioned, excess flow to the CCS heat exchangers might divert water from other system users. In a final report dated September 22, 1983, the licensee stated that the system is able to deliver design flow to all loads during the period in question. Therefore, the licensee determined that this condition is not adverse to the safe operation of the plant and is no longer reportable under 10 CFR 50.55(e). The resident inspectors found the licensee's conclusions acceptable and closed this item for Unit 1 in inspection report numbers 390/83-46 and 391/83-35. However, this item was not addressed for Unit 2 in that inspection report. Based upon the determination that this item is not reportable for Unit 2 and previous evaluation by the resident inspectors for Unit 1, this item is closed.

e. (Closed) CDR 391/82-70, Containment Penetration Protection. This item involved inadequate protection of certain electrical penetrations against overloads and short circuits. This CDR was reviewed for its current status. During the review, it was determined that a regional inspector verified that the corrections had been made to the 480V shutdown boards in accordance with the 10 CFR 50.55(e) required final report dated November 17, 1982. The regional inspector documented these actions and closed this item in inspection report 391/83-17. The inspector determined that this closeout action was adequate.

f. (Closed) CDR 391/83-11, Drawing Issued Showing Rigid Attachments in Lieu of Flexible Hoses as Designed. This CDR identified a problem with the drawings issued under Engineering Change Notice (ECN) 2104 in which flexible hoses were not added per the design requirement. This item was reported initially on March 14, 1983 in accordance with 10 CFR 50.55(e) requirements for Unit 1 and Unit 2. In a second interim report dated June 16, 1983, the licensee identified that the original submittal inadvertently indicated that this deficiency was applicable to both Units 1 and 2. This condition, in fact, was only applicable to Unit 1 as CDR 390/83-12. A regional inspector verified that the corrective actions for Unit 1 were completed and documented this closeout in inspection report 390/84-03. Based on the fact that this item was applicable to Unit 1 only, this item is closed.

g. (Closed) LII 391/79-15-02, Pressurizer Power Operated Relief Valves (PORVs). This condition concerns the operability requirements of the PORVs to meet the 33 Hz minimum natural frequency during a seismic event. During a review of Unit 2 open items, it was determined that this item is the same as CDR 391/79-17. A Regional inspector reviewed documentation for rework and procurement and verified that the PORVs in question had been replaced by models that could meet the 33 Hz criteria. This review was documented in inspection report 391/83-35 and this CDR was closed. The inspector determined that the actions performed to close CDR 391/79-17 satisfy those required for LII 391/79-15-02. This item is closed.

h. (Closed) LII 391/80-02-01, Component Cooling Water Pump Discharge Nozzle Overloading. This item concerns a condition that could exist in which five Component Cooling Water System (CCS) pump nozzles were overloaded. During a review of Unit 2 open items, it was determined that this item is the same as CDR 391/79-37. A Regional inspector field verified that modifications had been completed in accordance with the ECN that had been issued and that these modifications appeared to be adequate. This verification was documented in inspection report 391/83-07 and the CDR was closed. The inspector determined that the actions performed to close CDR 391/79-37 satisfy those required for LII 391/80-02-01. This item is closed.

i. (Closed) LII 391/80-04-05, Full Penetration Welds for Pipe Supports. This item concerns a potential problem involving welding of attachments

to pressure boundary piping. During a review of Unit 2 open items, it was determined that this item is the same as CDR 391/80-02. A regional inspector inspected associated drawings, which eliminated the need for welding supports to pipe, and verified that weld attachments to pressure boundary piping were not involved. This verification was documented in inspection report 391/83-35 and the CDR was closed. The inspector determined that the actions performed to close CDR 391/80-02 satisfy those required for LII 391/80-04-05. This item is closed.

j. (Closed) LII 391/80-21-02, Hydrogen Detection System Integrity. This condition concerned a failure of the hydrogen detection system sampling pumps. During a review of Unit 2 open items, it was determined that this item is the same as LII 391/82-29-07. A regional inspector reviewed supporting documentation to verify that the corrective actions identified in the CDR had been completed. The corrective action required a design change to provide a mini-flow recirculation line for the sampling pumps. This review was documented in inspection report 391/82-29 and this CDR was closed. The inspector determined that the actions performed to close CDR 391/82-19-07 satisfy those required for LII 391/80-21-02. This item is closed.

k. (Closed) LII 391/81-17-04, Weld Deficiencies in Box Anchors. This condition involved hanger lugs and piping that could corrode in their location of application. During a review of Unit 2 open items, it was determined that this item is the same as CDR 391/81-38. Several ECNs were issued to delete the associated piping and shear lugs that were constructed from carbon steel and instead used stainless steel. Since the features involved in the deficiency are no longer included in the design of the plant, this item was closed in inspection report 391/82-04. The inspector determined that the disposition of this CDR is also applicable to LII 391/81-17-04. This item is closed.

l. (Closed) LII 391/81-17-07, Safety Related Hydro Test Audit WB-M-80-16. This condition concerned a construction audit, WB-M-80-16, in which deficiencies were identified in the hydrostatic test program. Examples of deficiencies were inappropriate identification of test boundaries, inappropriate test pressures specified or utilized, exclusion of components from testing, and modifications performed after testing. During a review of Unit 2 open items, it was determined that this item is the same as CDR 391/81-10. A regional inspector reviewed hydrostatic documentation for three systems to ensure that proper parameters were specified and calibrated instrumentation utilized. The regional inspector compared hydrostatic test reports against segmented piping drawings to ensure that all three systems were totally tested. In addition, the licensee responded to apparent discrepancies identified as a result of the inspector's review in an adequate manner and this CDR was closed in inspection report 391/83-11. The inspector determined that the actions performed to close CDR 391/81-10 satisfy those required for LII 391/81-17-07. This item is closed.

m. (Open) CDR 391/81-22, Discrepancy in As-Built versus As-Analyzed Piping Systems. This discrepancy was initially reported in per the requirements of 10 CFR 50.55(e) on February 26, 1981. This condition concerns inconsistencies which have developed between the support location as specified on the support drawings and the analysis isometrics. The construction specification allows an acceptable relocation tolerance from the analyzed point; however, some support drawings specify locations outside this tolerance. This item was closed for Unit 2 in inspection report 391/84-33 based upon a target date for completion of work. However, the licensee has reopened this item since they were not able to complete the corrective actions on the date stated in the final report of December 1, 1983. This item will remain open pending further inspection of the corrective action.

n. (Closed) LII 391/82-29-03, Incorrect Valve Weight in Auxiliary Feedwater Piping. This item concerns a discrepancy in which the valve weights used for the seismic analysis of the Auxiliary Feedwater level control valves is incorrect. During a review of Unit 2 open items, it was determined that this is the same as LII 391/80-21-06 which is an open item pending further inspection. This discrepancy will be tracked by that number. Therefore, LII 391/82-29-03 is closed.

o. (Open) CDR 390/84-29, Increased Environmental Temperature in the Main Steam Valve Rooms. The subject deficiency was initially reported in accordance with the requirements of 10 CFR 50.55(e) on May 22, 1984. This item concerns the current Westinghouse main steam line break (MSLB) mass and energy release analysis which does not consider the effects of steam superheating following a steam generator tube uncovery. A sixth interim report was submitted to Region II on August 13, 1985, which stated that the licensee has completed preliminary evaluations of the Watts Bar plant-specific MSLB mass and energy blowdown data. This analysis resulted in higher than expected temperatures but these elevated temperatures were of a much shorter duration.

Because of the potential for damage to equipment from these elevated temperatures, the licensee committed to wrap all post accident monitoring (PAM) equipment in the main steam valve vaults with thermal blankets and provide a final analysis of the temperature profiles to the NRC staff for review and approval. The inspector verified that all PAM equipment in the main steam valve vaults have been provided with a thermal wrap to protect them from elevated temperatures in the event of a MSLB accident. However, the final analysis of the temperature profiles in these rooms has not been submitted to the NRC staff for review and approval. This analysis will be included as a license condition upon in the low power operating license for Watts Bar. Therefore, pending receipt of the licensee's final analysis report and NRC/NRR review for acceptance, this CDR will remain an open item.

11. QA Program (35740)

During a routine review of nonconforming condition reports (NCRs) the inspector noticed that a NUC PR NCR (W-269-P, Rev. 0) had been written in late August, 1985, which identified discrepancies between the WBNP Q List and the CSSC list in use by NUC PR. Some of the discrepancies included:

- The nuclear quality assurance manual (NQAM) requirements have not been incorporated into the WBNP Q List with regard to differentiation between safety-related and special features equipment.

- Safety system components were omitted from the CSSC Q List. This list is the document used by NUC PR to determine the safety-related status of plant equipment.

The inspector found that the NCR had been evaluated as not being significant by NUC PR management. The inspector held discussions with the plant staff and determined that the NCR was a result of a plant quality assurance (PQA) evaluation and this evaluation resulted in the issuance of the subject NCR and a corrective action report (CAR). After discussions between the inspectors and NUC PR, NCR W-269-P, Rev. 1, was written in late September, 1985, which identified further discrepancies in the WBNP Q List. The NCR was reevaluated for significance and determined to be significant.

The inspectors were in the process of reviewing the requirements of the administrative procedures at the end of the inspection period. Completion of the review of the applicable procedures and followup on disposition of NCR W-269-P shall be identified as an inspector followup item (390/85-59-02).

Within the area inspected, no violations or deviations were identified.