



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
230 PEACHTREE STREET, N.W. SUITE 1217
ATLANTA, GEORGIA 30303

In Reply Refer To:
RII:RMC
50-390/78-12
50-391/78-12

JUN 30 1978

Tennessee Valley Authority
Attn: Mr. N. B. Hughes
Manager of Power
830 Power Building
Chattanooga, Tennessee 37401

Gentlemen:

This refers to the inspection conducted by Mr. R. M. Compton of this office on June 7-9, 1978, of activities authorized by NRC Construction Permit Nos. CPPR-91 and CPPR-92 for the Watts Bar 1 and 2 facilities, and to the discussion of our findings held with Mr. T. B. Northern, Jr., at the conclusion of the inspection.

Areas examined during the inspection and our findings are discussed in the enclosed inspection report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector.

During the inspection, it was found that certain activities under your license appear to be in noncompliance with NRC requirements. This item and references to pertinent requirements are listed in the Notice of Violation enclosed herewith as Appendix A. This notice is sent to you pursuant to the provisions of Section 2.201 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations. Section 2.201 requires you to submit to this office, within 20 days of your receipt of this notice, a written statement or explanation in reply including: (1) corrective steps which have been taken by you, and the results achieved; (2) corrective steps which will be taken to avoid further noncompliance; and (3) the date when full compliance will be achieved.

In accordance with Section 2.790 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you (or your contractor) believe to be proprietary, it is necessary that you make a written application within 20 days to this office to withhold such information from public disclosure. Any such application must

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include a full statement of the reasons on the basis of which it is claimed that the information is proprietary, and should be prepared so that proprietary information identified in the application is contained in a separate part of the document. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

Should you have any questions concerning this letter, we will be glad to discuss them with you.

Sincerely,



C. E. Murphy, Chief
Reactor Construction and Engineering
Support Branch

Enclosure:

1. Appendix A, Notice of Violation
2. Inspection Report Nos. 50-390/78-12
and 50-391/78-12

cc w/encl:

Mr. J. E. Gilleland
Assistant Manager of Power
830 Power Building
Chattanooga, Tennessee 37401

Mr. T. B. Northern, Jr.
Project Manager
Watts Bar Nuclear Plant
P. O. Box 2000
Spring City, Tennessee 37381

Mr. J. F. Cox
400 Commerce Street
W9D214
Knoxville, Tennessee 37902

APPENDIX A

NOTICE OF VIOLATION

Tennessee Valley Authority

License No.: CPPR-91

Based on the results of the NRC inspection conducted on June 7-9, 1978, it appears that certain of your activities were not conducted in full compliance with NRC requirements as indicated below. These items have been categorized as described in our correspondence to you dated December 31, 1974.

10 CFR Part 50, Appendix B, Criterion V, as implemented by Watts Bar FSAR Section 17.1A.5, states in part that "Activities affecting quality shall be prescribed by documented instructions, procedures or drawings ... and shall be accomplished in accordance with these instructions, procedures or drawings." Paragraph 6.2.7 of WBNP-QCP 4.7 states that the signature of the responsible engineer on the Manufacturing and Installation Quality Plan (MIQP) Operation Sheet "indicates that the inspection satisfactorily meets the requirements of the inspection instruction or acceptance criteria." Paragraph 6.3 of WBNP-QCP 4.7 states that the engineer shall mark as "N/A" inspection steps which do not apply to the specific equipment involved.

Contrary to the above requirements, on the MIQP Operations Sheets for the installation of RHR pumps 1AA and 1BB, the responsible engineer had signed inspection steps for work not yet performed, for standard inspection instructions that had not yet been written and for inspections that did not apply to that equipment.

This is an infraction.



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Report Nos.: 50-390/78-12 and 50-391/78-12

Docket Nos.: 50-390 and 50-391

License Nos.: CPPR-91 and CPPR-92

Category: A2/A2

Licensee: Tennessee Valley Authority
830 Power Building
Chattanooga, Tennessee 37401

Facility Name: Watts Bar 1 and 2

Inspection at: Watts Bar Dam, Tennessee

Inspection Conducted: June 7-9, 1978

Inspector: R. M. Compton

Reviewed by: J. C. Bryant for 6-29-78
J. C. Bryant, Chief Date
Engineering Support Section No. 1
Reactor Construction and Engineering Support Branch

Inspection Summary

Inspection on June 7-9, 1978 (Report Nos. 50-390/78-12 and 50-391/78-12)
Areas Inspected: Safety related components; safety related pipe support and restraint systems; reactor coolant pump support modifications. The inspection involved 27 inspector-hours on site by one NRC inspector.
Results: Of the three areas inspected, no apparent items of noncompliance or deviations were identified in two areas; one item of non-compliance (infraction-failure to follow procedures for inspection of equipment installation-paragraph 5) was identified in one area.

DETAILS I

Prepared by:

R. M. Compton
R. M. Compton, Civil Engineer
Engineering Support Section No. 1
Reactor Construction and Engineering
Support Branch

6/30/78
Date

Dates of Inspection: June 7-9, 1978

Reviewed by:

J. C. Bryant
J. C. Bryant, Chief
Engineering Support Section No. 1
Reactor Construction and Engineering
Support Branch

6/30/78
Date

1. Persons Contacted

Tennessee Valley Authority

*T. B. Northern, Project Manager
*H. C. Richardson, Construction Engineer
*A. W. Rogers, QA Supervisor
*J. M. Lamb, Mechanical Engineering Unit Supervisor
*J. A. Nicholls, Civil Engineering Unit Supervisor
J. A. Morgan, Mechanical Engineering Unit Assistant Supervisor
T. A. Kerr, Acting Mechanical Engineering Unit Group Leader

*Denotes those present at the exit interview.

2. Licensee Actions on Previous Inspection Findings

This area was not inspected.

3. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. An unresolved item disclosed during the inspection is discussed in paragraph 7.

4. Independent Inspection Effort

The inspector examined the modification work being performed on the reactor coolant pump support legs to avoid an interference with the crossover leg restraints. Work on Unit 1 loops 2 and 4 was in

progress. This modification is authorized by Westinghouse (W) Field Change Notices (FCN's) 10539 (Unit 2) and 10549 (Unit 1). WBNP Field Instruction M-24 is the detailed work procedure. The inspector reviewed affected drawings W 583F856, TVA 48N421 and TVA 48N412.

Although a Field Instruction is not considered a QA document, the inspector questioned the adequacy and accuracy of the issued instructions. The licensee stated that the W FCN's would be clarified and Field Instruction M-24 would be revised to better reflect the work being accomplished. This item is identified as an Inspector Followup Item 390-78-12-03. No items of noncompliance or deviations were identified.

5. Safety-Related Components I - Observation of Work and Work Activities (Units 1 and 2)

The inspector examined the installation of residual heat removal (RHR) pumps 1AA, 1BB, 2AA and 2BB and spent fuel pool cooling pumps AA, BB and CC. The requirements and acceptance criteria for this equipment are contained in FSAR sections 3, 5, 6, 9 and 17 and WBNP QCP's 4.5 and 4.7. More specific requirements are provided in the following documents:

RHR Pumsp

TVA Drawings 48N1231-1 and 47W432

Ingersoll-R and Technical Manual

Spent Fuel Pit Cooling Pumps

TVA Drawings 48W454, 41N378, 41N353, 48N1223

Gould Pump Manual-Model 3405

The above documents were used to verify locations, orientation, protection, maintenance and other installation details.

In reviewing the Manufacturing and Installation Quality Plan (MIQP) operations sheets for RHR pumps 1AA and 1BB the inspector noted several discrepancies. The responsible engineer had signed as completed a step indicating that all piping had been fit up for welding without cold spring but the discharge piping had not yet been fit up on either of these pumps. A step for post installation assembly was signed, but the coupled pumps and motors were not installed into the casings. In

addition, several steps were signed as complete that referenced standard inspection procedures that had not yet been prepared and other steps that did not apply to this equipment were also signed off. WBNP QCP 4.7 specifies that the engineer's signature on the operations sheet indicates that the inspection has met the requirements of the inspection instruction or acceptance criteria and that nonapplicable inspection steps are to be so marked. The failure to follow QCP 4.7 is in noncompliance with 10 CFR 50, Criterion V. This noncompliance has been identified as an infraction, 390-78-12-02. Prior to the conclusion of this inspection the improper signatures had been deleted from the RHR pump operations sheets and Mechanical Engineering Unit personnel were being reinstructed in the intents and requirements of QCP 4.7 and the importance of following procedures; however, licensee action will be required to determine the extent of improper documentation.

6. Safety-Related Components I - Review of Quality Records
(Units 1 and 2)

A followup inspection was performed on quality records for the Control Rod Drive Mechanisms. Material and fabrication certifications and test reports were examined for conformance to the requirements of FSAR section 17, the Office of Engineering Design and Construction QA Manual and WBNP QCP's 1.6 and 1.8. The records reviewed included TVA QA Shipping Releases, W QA Releases and ASME Code Data Reports (where required).

No items of noncompliance or deviations were identified.

7. Safety-Related Pipe Support and Restraint Systems (Units 1 and 2)

The inspector examined the following procedures to determine whether they provide means for assuring the technical adequacy of safety-related pipe supports and whether they comply with NRC and licensee requirements and licensee commitments:

WBNP QCP 4.8, Revision 5, "Inspection and Documentation Requirements for Mechanical Supports"

WBNP QCP 1.28, Revision 1, "Preparation and Documentation of Seismic Support Variance"

WBNP QCP 2.4, Revision 2, "Erection and Inspection of Structural and Miscellaneous Steel"

TVA General Construction Specification G-43, "Support and Installation of Category I and I(L) Piping Systems (Requirements to Validate Analysis)"

Detail support sketches of supports listed below.

These documents were used to verify proper installations during the inspection described below.

The Pacific Scientific mechanical snubbers listed below by serial number and size were examined in storage for general condition and smooth operation.

<u>PSA-1/4</u>	<u>PSA-1/2</u>	<u>PSA-3</u>	<u>PSA-10</u>	<u>PSA-35</u>
#4332	#2732	#4856	#1062	#439
4482	2740	4868	1122	
4573	2811	4902		

Two installed snubbers in support 74-1RHR-R46 were examined for proper size, general condition and smooth operation.

The spring can and hanger rod size, location and condition of the following installed spring hangers were examined:

62-1CVC-V177	74-1RHR-V49
62-1CVC-V174	74-1RHR-V45
72-1CS-V1	

Fixed restraints 62-1CVC-R183 and 63-1515-217 were inspected for adequate installation. The inspector noted that one support plate on hanger 74-1RHR-V49 had been modified from drawing requirements to avoid an interference. A preliminary search did not identify any applicable Field Change Request (FCR) or later drawing revision. Due to the short time available for the licensee to research this condition, it is identified as Unresolved Item 390-78-12-01 and will be examined on a subsequent inspection. No items of noncompliance or deviations were identified.

8. Exit Interview

The inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on June 9, 1978. The inspector summarized the scope and findings of the inspection of safety-related components, safety-related pipe support and restraint systems and

reactor coolant pump support modifications. The licensee acknowledged the noncompliance described in paragraph 5.