



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

JAN 10 1978

In Reply Refer To:

RII:EJV
50-390/77-18
50-391/77-17

Tennessee Valley Authority
Attn: Mr. Godwin Williams, Jr.
Manager of Power
830 Power Building
Chattanooga, Tennessee 37401

Gentlemen:

This refers to the inspection conducted by Mr. E. J. Vallish of this office on December 13-16, 1977, of activities authorized by NRC Construction Permit Nos. CPPR-91 and CPPR-92 for the Watts Bar Nuclear Plant Unit Nos. 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

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Tennessee Valley Authority

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such information from public disclosure. Any such application must 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

Enclosures:

1. Appendix A, Notice
of Violation
2. RII Inspection Report Nos.
50-390/77-18
50-391/77-17

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. Stan Duhan
400 Commerce Street
E4D112
Knoxville, Tennessee 37902

APPENDIX A

NOTICE OF VIOLATION

Tennessee Valley Authority

License No.: CPPR-92

Based on the results of the NRC inspection conducted on December 13-16, 1977, it appears that certain of your activities were not conducted in full compliance with NRC regulations and License conditions as indicated below. These items have been categorized as described in our correspondence to you dated December 31, 1974.

Criterion V of 10 CFR 50, Appendix B, as implemented by WBNP-QCP-4.1, "Procurement, Storage, Issue and Control of Welding Materials," which states in part that "Quantities shall be limited to the amount..... E7018 Mild Steel (Low Hydrogen) - 4 Hour Supply... all unused coated electrodes.... shall be deposited in locked collection boxes or returned to the control center within the return due time..... Under no circumstances shall the welding material be used after the indicated return due time." (Underlining in QCP)

Contrary to the above:

Failure to follow WBNP-QCP-4.1 was apparent December 14, 1977, and December 15, 1977, when the inspector found about 3 1/2 pounds of E7018 weld rod in the auxiliary building and observed it being there for over 16 hours. This condition could result in the use of unqualified welding material in safety-related structures of components.

This is an infraction.



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Report Nos.: 50-390/77-18 and 50-391/77-17

Docket Nos.: 50-390 and 50-391

License Nos.: CPPR-91 and CPPR-92

Categories: A2 and A2

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

Facility Name: Watts Bar Nuclear Plant

Inspection at: Spring City, Tennessee

Inspection conducted: December 13-16, 1977

Inspector: E. J. Vallish

Reviewed by:

J. G. Bryant
J. G. Bryant, Chief

Engineering Support Section No. 1

Reactor Construction and Engineering Support Branch

1/6/78
Date

Inspection Summary

Inspection on December 13-16, 1977 (Report Nos. 50-390/77-18 and 50-391/77-17)

Areas Inspected: Work activities concerning Units 1 and 2 reactor vessel installation, reactor coolant pump casing mounting, residual heat exchangers, containment heat exchangers, weld rod control, and the unit 1 upper head injection system. The inspection involved 24 inspector-hours on site by one NRC inspector.

Results: Of the ten areas inspected, no apparent items of noncompliance or deviations were identified in nine areas; one apparent item of noncompliance was identified in one area (Infraction: Not following weld control procedures (77-17-01)).

DETAILS I

Prepared by:

J. C. Bryant for
E. J. Vallish, Mechanical Engineer
Engineering Support Section No. 1
Reactor Construction and Engineering
Support Branch

1/6/78
Date

Dates of Inspection: December 13-16, 1977

Reviewed by:

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

1/6/78
Date

1. Persons Contacted

a. Tennessee Valley Authority (TVA)

*T. B. Northern, Jr., Project Manager
*H. C. Richardson, Construction Engineer
*L. C. Northard, Welding Engineering Supervisor
*J. M. Lamb, Mechanical Engineering Supervisor
S. J. Boney, Welding Engineering Unit
J. D. White, Mechanical Engineer
*A. W. Rogers, QA Unit Supervisor
J. R. Inger, QA Unit Auditor
L. J. Johnson, Mechanical Engineering Group Leader

b. Contractor Organization

Westinghouse Electric Corporation (W)

A. Hogarth, Site Manager
W. Sudak, Mechanical Engineer

*Denotes those present at exit interview.

2. Licensee Actions on Previous Inspection Findings

Licensee actions on previous inspection findings were not reviewed during this inspection.

3. Unresolved Items

No unresolved items were identified during this inspection.

4. Independent Inspection Effort

This inspection effort concerned the Unit 1 upper head injection system including the installation of the gas accumulator, water accumulator, accumulator surge tank, rupture disk flange and strainer assembly, recent mechanical and welding audits and welding rod control.

The following documents were reviewed and used as sources of information for this inspection effort:

- a. TVA Drawings:
 - 47 W 435 - 19 R8, "Additional Equipment"
Building - S1S - "Upper Head Injection System"
 - 47 W 435 - 17 R9, "S1S Upper Head Injection System Piping"
 - 47 W 435 - 21 R7, "SIS Upper Head Injection System Piping"
- b. TVA General Construction Specification G-29, Specification 1.M.3.1(e).
- c. WBNP-QCP-4.1 R5, "Procurement, Storage, Issue and Control of Welding Materials."
- d. WBNP-QCP-4.5 and -4.7, (referenced earlier)
- e. CONST-QAP-13.01 R1, "Storage and Preservation of Materials, Components and Systems."
- f. Audit No.-WB-W-77-02, "Procurement, Storage, Issue and Control of Welding Materials."
- g. Audit No.-WB-M-77-02, "Storage Maintenance and Inspection."

No items of noncompliance or deviations were identified.

While inspecting the Unit 2 auxiliary building, at elevation 692, near column lines A10 and T, approximately three and one-half pounds of 7018 welding rod were observed in a cardboard box with some temporary type pipe clamps. After the 4:00 p.m. shift change the rods were still there. At 9:00 a.m. the next day the rods were still there. This appears to be in noncompliance with Criterion V of Appendix B to 10 CFR 50, "Instructions, Procedures, and Drawings," as the control of these rods was not being accomplished in accordance with approved procedures as required by the PSAR, Page A.2-33, paragraph A.2.9, titled "Control of Special Processes" and as implemented by General Construction Specification G-29, 1.M.3.1(e), paragraph 4.0 and 5.0, and WBNP-QCP-4.1 R5, titled, "Procurement, Storage, Issue and Control of Welding Materials." (77-17-01)

5. Reactor Vessel Installation - Work Observation

Licensee commitments in this area were reviewed in the PSAR, Section 1.7, 4 and Appendix A. The following items concerning the reactor vessel installation were chosen at random and inspected:

- Nozzle shoe and shims
- Ventilation ducts
- Embedments (as visible)
- Retainer plates and retaining screws
- Shim locking arrangement
- General arrangement and overall installation

The following drawings were reviewed and used to verify locations, orientation details and installation requirements:

- TVA 48N 410 R6 "Reactor Supports"
- TVA 48N 427 R9 "Reactor Support Embedments"
- W 113E 335 "Reactor Vessel Support Hardware Details"

The installed vessels were observed to be adequately protected with covers and shields.

No items of noncompliance were identified.

6. Safety Related Components II - Work Observation

PSAR Sections 1.7, 4, 6, 9 and Appendix A were reviewed to determine licensee commitments in this area. The reactor coolant pump casing and mountings were selected as a representative component within the reactor coolant pressure boundary. The residual head exchangers and the containment spray heat exchangers were selected as representative components outside the reactor coolant pressure boundary.

The following TVA drawings and QCPs were reviewed and used to verify locations, orientation details and installation requirements:

- 48N411R2, "Equipment Supports - S.G. & R.C. Pump Vertical Column Location"
- 48N412R7, "Equipment Supports - S.G. & R.C. Pump Vertical Columns"
- 48N413R0, "Lower Steam Generator & Pump Tie Rod Supports & Arrangements"
- 47W437-1 R7 and -2 R7, "Containment Spray System Piping"

47W 432-1 R9 and -2 R10, "Residual Heat Removal System Piping"

WBNP-QCP-4.5, "Handling Storage and Maintenance of Permanent
Mechanical Equipment"

WBNP-QCP-4.7 "Mechanical Equipment Installation Inspection
and Documentation"

No items of noncompliance were identified.

7. Exit Interview

At the end of the inspection on December 16, 1977, a meeting was held with licensee representatives (denoted in paragraph 1) to discuss the inspection findings. Items discussed included Units 1 and 2 reactor vessel installation, reactor coolant pump casings and mountings, residual heat and containment spray heat exchangers, the upper head injection system of Unit 1 and the apparent noncompliance with Criterion V of Appendix B to 10 CFR 50, concerning failure to follow the weld rod control procedures. The licensee's representatives acknowledged these findings.