



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

*Central file*

*50-390  
391*

SEP 23 1977

In Reply Refer To:

RII:VLB

50-390/77-11

50-391/77-11

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. V. L. Brownlee of this office on August 22-26, 1977, of activities authorized by NRC Construction Permit Nos. CPPR-91 and CPPR-92 for the Watts Bar Nuclear Plant, Unit 1 and 2 facilities, and to the discussion of our findings held with Mr. F. E. Denny 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.

Within the scope of this inspection, no items of noncompliance were disclosed.

We have examined actions you have taken with regard to previously identified inspection findings. These are discussed in the enclosed inspection report.

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 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

SEP 23 1977

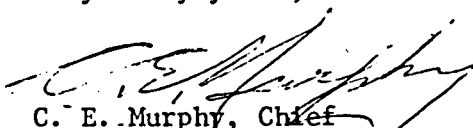
Tennessee Valley Authority

-2-

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.

Very truly yours,

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

Enclosure:  
RII Inspection Report Nos.  
50-390/77-11 and 50-391/77-11

cc: J. E. Gilleland  
Assistant Manager of Power  
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Chattanooga, Tennessee 37401

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

Report Nos.: 50-390/77-11 and 50-391/77-11

Docket Nos.: 50-390 and 50-391

License Nos.: CPPR-91 and CPPR-92

Categories: A2, A2

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

Facility Name: Watts Bar Nuclear Plant, Units 1 and 2

Inspection at: Knoxville, Tennessee  
Bristol, Virginia

Inspection conducted: August 22-26, 1977

Inspectors: V. L. Brownlee  
L. E. Foster

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

9/22  
Date

Inspection Summary

Inspection on August 22-26, 1977 (Report Nos. 50-390/77-11 and 50-391/77-11)

Areas Inspected: The licensee's audit of its contractor's (Bristol Steel and Iron Works, Incorporated) QA/QC program; previously reported unresolved items; material receipt, storage, inspection, fabrication, QA/QC documentation; training and audit documentation. The inspection involved 31 inspector-hours at the licensee's office and contractor's plant by two NRC inspectors.

Results: No items of noncompliance were identified.

DETAILS I

Prepared by:

L. E. Foster  
for V. L. Brownlee, Principal Inspector  
Projects Section  
Reactor Construction and Engineering  
Support Branch

9/22/77  
Date

L. E. Foster  
L. E. Foster, Principal Inspector  
Projects Section  
Reactor Construction and Engineering  
Support Branch

9/22/77  
Date

Dates of Inspection: August 22-26, 1977

Reviewed by:

J. C. Bryant  
J. C. Bryant, Chief  
Projects Section  
Reactor Construction and Engineering  
Support Branch

9/22/77  
Date

1. Persons Contacted

a. Tennessee Valley Authority (TVA)

- \*J. W. Mabee, Supervisor QA Audit
- J. S. Colley, QA Engineer
- \*R. H. Anderson, Civil Engineer
- \*N. Lange, QA Evaluator
- \*C. Goklaney, QA Engineer
- \*F. E. Denny, QA Evaluator
- \*C. A. Fabbri, QC Resident Inspector

b. Contractor's Organization

Bristol Steel and Iron Works, Incorporated (BSIW)

- J. G. Tilley, Vice Chairman of the Board
- \*R. J. Corrin, Vice President, Technical Services
- \*J. Barnes, Vice President, Production
- \*J. E. Corrin, Chief Engineer
- \*K. Liskey, Manager, Nuclear Products Division
- \*J. K. Ward, Manager, Quality Assurance
- \*L. E. Collins, Manager, NDE
- \*R. H. Smith, QA Representative
- \*J. E. Evatt, Chief Inspector
- \*T. Mills, Welding Engineer

The inspectors talked with and interviewed 10 other licensee and contractor employees including members of the engineering units, QA personnel, QC inspectors, and shop personnel.

\*Denotes those attending the exit interview.

2. Licensee Actions on Previous Inspection Findings

(Closed) Unresolved Item (76-9/2): Breakdown in Vendor QA Program  
(Bristol Steel and Iron Works - Documentation (10 CFR 50.55(e))  
(Units 1 and 2)

TVA submitted the final report on August 5, 1977. The report was reviewed by RII and was found to be acceptable.

The problem was identified as a condition where piece marks and material ID numbers were changed or relocated without documentation, also, discrepancies between welder ID on pieces and fabrication travelers were found.

During this inspection particular attention was directed toward the work process and associated paperwork to determine adequacy of the program to maintain material, welder and software traceability.

The inspector held discussions with responsible TVA and contractor personnel, observed work in process and examined the associated paperwork, and reviewed internal correspondence, training records, and audits. The inspector's findings are that the specific problems have been corrected and the QA program has been upgraded to minimize recurrence of this type problem. Based on the above findings, RII has no further questions regarding this matter.

3. Unresolved Items

No new unresolved items were identified.

4. Independent Inspection Effort

The inspectors held discussions with contractor personnel, performed observations of work in selected areas and examined documentation. The areas inspected are as follows:

- a. TVA/BSIW contracts and specifications.
- b. BSIW QA manuals and procedures.

- c. The control of material during receipt, storage, inspection, cutting and assembly.
- d. Route slips, fabrication sheets and inspection data sheets.
- e. Work in progress and associated documentation package.
- f. Observation of the TVA Resident Inspector.

The BSIW Plant No. 3 is a relatively new fabrication facility and is presently being utilized for TVA contract work. The inspectors observed the flow of material and work being performed on containment liner plates, penetrations and polar crane support structures. The documentation associated with the above was also reviewed. Work is being controlled and performed in accordance with BSIW's procedures.

No items of noncompliance were identified.

5. Audit of Applicant's Surveillance of Contractors QA/QC Activities

- a. The inspectors met with the licensee's representatives at the TVA offices in Knoxville, Tennessee, on August 22, 1977 to review and discuss their plans and preparations for the audit of the contractor.

The inspectors were apprised of the audit plans and team responsibilities and were provided the auditor check lists and the TVA procedure for auditing contractors. Additionally, the inspectors reviewed the TVA/BSIW contracts, specifications, QA manuals and previously identified findings. Based on the above, the inspectors determined that the audit had been planned and developed as required in TVA Procedure ENDES-QAP 3.2, Revision 2, "Vendor QA Audit Program."

- b. Observation of Licensee's Audit of Contractor

The inspectors accompanied the auditors to the contractor's office in Bristol, Virginia, and observed the pre-surveillance conference. The inspectors participated in a tour of the contractors facilities prior to the start of the audit.

The inspectors observed the performance of the licensee's audits of the following areas:

- (1) Design Control.
- (2) Procurement Document Control.
- (3) Document Control.
- (4) Control and Identification of Materials.
- (5) Special Processes and Weld Electrode Control.
- (6) Inspection, Test, Control and Calibration of Equipment.
- (7) Handling, Storage and Shipping.
- (8) Nonconformance and Corrective Actions.
- (9) QA Records, Training and Audits.
- (10) Qualification of Personnel

During the audit, TVA personnel identified material which had been returned from the Bellefonte Site for rework. The rework had been completed; however, no "Fabrication Control Record" (FCR) had been prepared to document and control the rework as required by Section 7 of BSIW's QA Manual. Based on this finding, the licensee issued a deficiency to the contractor. The contractor acknowledged the finding and stated that immediate corrective action would be initiated to control rework received from the sites. Based on the inspector's observation, the audit was performed as required by TVA procedure EN DES-QAP 3.2, Revision 2.

No items of noncompliance or deviation were identified.

#### 6. Exit Interview

At the conclusion of the audit, the inspectors attended the exit interview, held by TVA, as observers. The results of the audit were presented to Mr. J. K. Ward, QA Manager, Bristol Steel and Iron Works, Incorporated, and other members of Bristol's staff by the licensee.

At the conclusion of the licensee's exit interview, the inspectors held a management interview with Mr. F. E. Denny, Audit Team Leader, and members of the audit team. The licensee was apprised that the inspectors observed the performance of the audit team and that no items of noncompliance or unresolved items were identified.