



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

Report Nos.: 50-390/87-14 and 50-391/87-14

Licensee: Tennessee Valley Authority
6N38 A Lookout 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 1 and 2

Inspection Conducted: August 3-7, 1987

Inspector:

R. W. Wright
R. W. Wright

9/3/87
Date Signed

Approved by:

G. A. Belisle
G. A. Belisle, Chief
Quality Assurance Program Section
Division of Reactor Safety

9/3/87
Date Signed

SUMMARY

Scope: This routine, unannounced inspection was in the areas of licensee action on previous enforcement matters; procurement, receiving and storage; and licensee action on previously identified inspection findings.

Results: One violation was identified for failure to perform an engineering review and approval of a Contractor Deviation Notice.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *K. Ashley, Licensing, Division of Nuclear Engineering (DNE)
- J. Barnes, Group Head, Construction Maintenance & Modification Audit Group, Division of Nuclear Quality Assurance (DNQA)
- *J. Beavers, Materials and Procurement Section Supervisor, Office of Nuclear Power (ONP)
- *H. Bounds, Project Engineer, DNE
- *J. Cofield, Assistant Construction Engineer (ACE)
- *J. Cromer, Project Managers Office (PMO)
- *G. Davis, Watts Bar Plant Manager
- *H. Desouza, Watts Bar Maintenance Supervisor
 - L. Duggar, Materials Office, Materials Procurement Section
 - K. Galloway, Construction Training Unit Supervisor
- *E. Gibbs, Assistant Project Engineer, DNE
- *D. Hill, Principal Nuclear Engineer, Nuclear Steam Supply System (NSSS) Contract Section, DNE
 - G. Hill, Quality Control (QC) Receipt Inspector
- *B. Hixson, Materials Storage, Warehouse Services Unit (WSU)
- *B. Huffacker, ACE
- *K. Hyde, QC Receipt Inspection Supervisor
- *D. Jividen, Warehouse Storage, Unit 2, Division of Nuclear Construction (DNC)
 - H. Johnson, Site Quality Manager (SQM), DNQA
- *A. Lewis, Compliance Licensing
- *J. McDonald, Site Licensing Manager
 - R. Mills, Associate Engineer, Engineering Surveillance Group (ESG) Supervisor
 - R. Pigeon, Compliance Licensing
- *C. Schermerhorn, Nuclear Engineer, NSSS Contracts Section, DNE
 - A. Smith, Office Manager, WSU
- *J. Smith, Chief Storekeeper, WSU
- *S. Spenser, Nuclear Engineer, Compliance Licensing
- *S. Stout, Licensing, DNE
- *G. Toto, Site Director

Other licensee employees contacted included engineers, technicians, and office personnel.

NRC Resident Inspectors

- *G. Humphrey, Resident Inspector
- *S. Elrod, Section Chief, Division of Reactor Projects

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on August 7, 1987, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee. The following new item was identified during this inspection.

Violation, Failure to perform an engineering review and approval of Contractor Deviation Notice No. 33671, paragraph 5.d.

The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection.

3. Licensee Action on Previous Enforcement Matters (92702)

(Closed) Severity Level IV Violation 390, 391/86-19-01: Failure to Follow Mixing Proportions as Specified by Procedures QCP 2.12 for Carbo Zinc 11.

The licensee's response dated December 10, 1986, was considered acceptable by Region II. The inspector examined memorandums (C 24 870122000 and T 19 870113808) issued to all supervisors and employees reemphasizing that the use of ad hoc or unauthorized instructions was prohibited. The inspector examined the Unit 2 paint mixing shed and found all such unauthorized postings had been removed. The inspector conducted discussion with the Coatings QC Supervisor concerning the adhesion testing of this unauthorized paint mix and concluded that appropriate action had been taken to justify the use-as-is disposition.

The inspector concluded that the licensee had determined the full extent of the violation, taken action to correct current conditions, and developed corrective actions needed to preclude recurrence of similar problems. Corrective actions stated in the licensee response have been implemented.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Procurement, Receiving, and Storage (35065)

a. Inspection Objectives

This inspection was conducted to determine whether material and equipment procurement specifications include applicable QA and technical requirements identified in the safety analysis report (SAR) and whether receipt inspection and storage activities are in compliance with the QA program.

b. References

- (1) TVA QA Topical Report TVA-TR75-1A, Rev. 9
- (2) TVA Nuclear QA Manual
- (3) TVA's Acceptable Supplier List (ASL)
- (4) Watts Bar Nuclear Plant (WBN) Quality Control Instructions (QCI)

WBN-QCI - 1.06, R2	Receiving and Storage
WBN-QCI - 1.20, R10	Site Control of Procurement
WBN-QCI - 1.20-2, R1	Material Transfer From Construction to Other TVA Divisions
WBN-QCI - 1.20-3, R0	Supplier Evaluation & Selection
WBN-QCI - 1.11-2, R8	Qualification/Certification of Watts Bar Inspectors
- (5) WBN Quality Control Procedures (QCP)

WBN-QCP - 1.06, R21	Receipt Inspection of Safety- Related Items
WBN-QCP - 1.36, R10	Storage and Housekeeping
WBN-QCP - 1.52, R6	Preventive Maintenance
- (6) WBN Construction Engineering Procedures (CEP)

WBN-CEP - 1.02, R1	Corrective Action
WBN-CEP - 1.06, R0	Receiving & Storage
WBN-CEP - 1.36, R0	House Keeping

c. Program Review

The inspector reviewed the licensee's QA program for procurement, receiving and storage of material and equipment as described in references (2) through (6) to verify that it met the requirements of reference (1), the accepted QA program, NRC Regulatory Guides, and ANSI standards endorsed by the program.

The inspector reviewed the Stone & Webster Engineering Corporation (SWEC) draft assessment of WBN Spare & Replacement Parts Program for construction and operations. Discussions were conducted with responsible management personnel concerning TVA's probable course of action for ascertaining that spare and replacement parts that are in inventory, to be ordered in the future, or currently installed in CSSC equipment will satisfactorily perform their function and not jeopardize safety-related functions. The licensee was informed that Region II would be examining the proposed program implementation at a later date.

The safety-related equipment and materials received at the site are either NSSS supplied or procured from specifications prepared by the licensee. The WSU is responsible for the operation, control, and maintenance of storage facilities. The ESG identifies items and

equipment requiring preventive maintenance, specifies storage levels, maintenance requirements, and frequency of maintenance required. The Receiving Inspection Unit (RIU) from the Site Quality Managers organization performs and documents their inspection in accordance with procedure WBN-QCP-1.06.

Within this area, no violations or deviations were identified.

d. Site Procurement Activities and Records

<u>Purchase Order (Contract)</u>	<u>Item</u>	<u>Vendor</u>
361072	Metal Plate, Stainless Steel, Type 304, ASME SA-240, 0.5 x 48 x 96 inches	Hub, Inc.
368564	½" ball valves, 160 psi	Contramatics Div.
376017	E7018 Welding Electrodes	Proweld, Inc.
8339155	Differential Pressure Transmitter	Tobar, Inc.
837253	Cable & Instrument Valves	Dragon Valves Inc.
838572	Cable, 6 AWG, 1 cond, stranded, tin plated copper, 600V, type SRO AJ	Rockbestos Co.
838891	Stainless Steel Flexible Conduct & Fittings	Service Air Co.
541-V-7105 (54114-1)	Compensator Housings	Limitorque Corp.
72751 (54114-1)	Electronic Pressure Transmitter	ITT Barton

These 1985-87 procurement contracts, applicable procurement specifications, related receiving inspection records, and supplier-forwarded documentation (inspection, test, material, etc.) required via procurement documents were selected for examination to verify they contained the following requirements:

- Applicable regulatory, technical, and quality assurance requirements
- Documentation to confirm acceptability of the item required to be furnished
- Purchase notification points, hold points, and access rights incorporated in or provided for in the documentation where necessary
- QA requirements applicable to subcontractors

- 10 CFR 21 reporting requirements
- Suppliers were on approved vendor lists
- Procurement documentation received adequate review

One item of noncompliance identified as Violation 50-391/87-14-01, Failure to Perform an Engineering Review and Approval of Contractor Deviation Notice No. 33671, concerning out of specification equipment accepted by the licensee was identified in this area of inspection. Review of receiving inspection records and supplier forwarded documentation from Westinghouse (W) Purchase Order No. 72751 (TVA Contract 54114-1) revealed that a Deviation Notice (DN) No. 33671 was written against the Barton Pressure Transmitter procurement because the material was out of specification with regard to stability. This DN was dispositioned accepted under the condition "use-as-is" by (W) on October 2, 1986. TVA Specification Number 9996 (Section 4, pages 11, 12) for the subject contract states that contractor nonconforming material records be forwarded by the Contractor (W) after their review or approval to TVA, Chief Materials Engineer, for review and approval. Additionally, page 17.1-24 of TVA-TR-1A, Revision 8, requires that nonconformance reports for purchased material and equipment be reviewed and approved by the Technical Engineer and the Chief, Procurement Assurance Quality Branch. The Barton Transmitter was TVA source inspected, accepted, shipped, and QC receipt inspected and accepted at the site on November 14, 1986. The licensee was unable to furnish objective evidence that the subject DN was ever reviewed and approved by responsible engineers.

e. Receiving Inspection

The inspector examined the system established for conducting receiving inspections to verify the following:

- Facilities were adequate
- Certified Mill Test Reports were reviewed and approved by trained personnel
- Inspection staff was adequate
- Inspectors were properly trained and certified
- Inspections were properly documented
- Records were reviewed and approved
- Identified discrepancies were appropriately resolved
- Certificate of Conformance documentation was adequate

Receiving inspection reports documenting the item's acceptance discussed in paragraph d were reviewed to confirm implementation of requirements. Receipt inspection verification adequacy was also provided by witnessing the receipt inspection process for a

Manual/Automatic Sub-Panel procured by (W) Purchase Order Number 72943. The receipt inspector was very thorough in his examination of the Sub-Panel and rejected it for the following reasons:

- Inadequate information of the Certificate of Compliance
- Serial Number of Sub-Panel was not on the Calibration Data Sheet
- Required Serial Number missing on Sub-Panel
- No (W) QA Release
- No TVA Shipping Release

Certification records and training of three receiving inspectors were found to be in compliance with commitments.

Within this area, no violations or deviations were identified.

f. Storage

The inspector reviewed the controlling QA/QC storage procedures referenced in section 5.b to ascertain that these procedures were in compliance with applicable ANSI standard commitments.

The inspector examined two Class A warehouse facilities (Buildings 13, 15 - Attic only), three Class B warehouses (Buildings 25, 26, Paint House), three Class C warehouses (Buildings 1, 6, 15 - Ground Level), and portions of Class D warehouse laydown yards 1 and 2. The inspector examined these storage facilities to determine the following:

- Storage facilities for Class A equipment had a properly controlled environmental atmosphere
- Facilities for Class B, C, and D material/equipment storage were adequate
- Protection from damage during storage was adequate
- Periodic inspection of storage facilities was made
- Stored items were identified and stored at proper level
- Nonconforming items were segregated and/or controlled
- Items in storage received the required preventive maintenance

After examining of the above storage facilities, it was apparent to the inspector that the WSU and RIU have placed increased emphasis on good housekeeping practices and have become actively involved in maintaining proper storage conditions. Numerous items and materials were found to be recently placed in a hold status awaiting an

engineering reevaluation to determine if their storage level should be upgraded. Electrical pipe conduit stored in warehouse laydown yard 2 was inspected and some of it found to have rusted threads due to its plastic thread caps deteriorating because of weathering. However, existing WSU deficiency report No. 36P0587-01-01 already described this field condition and engineering had dispositioned the problem by stating that they would sort out the acceptable pipe for future use and instigate surplus proceedings on the remainder. The inspector also observed that corrective actions had been initiated to resolve CAQR Number 420 concerning electrical cable storage violations. The inspector questioned the storage level (Class C) of various O-rings and gaskets found in Warehouse 1, but subsequent review of their applicable procurement contracts resulted in no problems being identified because they were purchased for non-safety applications as non-QA materials.

The inspector examined the in-place storage of equipment and material in Unit 2's auxiliary building. During this inspection two specific pieces of equipment (RHR Pump Motor 27-A and RHR Flow Control Valve 40) were preselected to examine for evidence of proper preventive maintenance. The flow control valve was being properly maintained but the pump motor's heater plug was found disconnected from its wall receptacle. Although no craftsmen were in the pump room at that time, it was obvious that work was being performed on this motor because of its condition and the tools found lying on the floor of the pump room. The inspector examined several other pump motors nearby to verify that their heaters were energized and found them acceptable. Due to the above circumstances (isolated case, safety implications - hazards of craft working on energized motor) and the fact that further investigation into this matter revealed a TVA inspector had reported this condition (Deficiency Number 52-Q-0887-04) one day prior to the NRC finding no citation was issued.

Within this area, no violations or deviations were identified.

g. Audits

The inspector reviewed the following audits:

WB-A-86-10	Material Identification and Control
WB-A-87-0021	Procurement/Storage Activities (Operations and Construction)

These audits were reviewed to verify that the licensee was implementing a program to evaluate the adequacy of the Watts Bar's procurement, receiving and storage program against site procedures and ANSI N45.2.2 and N45.2.13 requirements. Audit identified deficiencies and resulting corrective actions were reviewed.

Within this area, no violations or deviations were identified.

6. Licensee Action on Previously Identified Inspection Findings (92701)

(Closed) Inspector Follow-up Item (IFI) 391/81-26-02: Complete Development of Maintenance Activities Procedures to Support Plant Operations

The subject IFI was closed for Unit 1 in NRC Inspection Report Number 50-390/85-13. The inspector reviewed Administrative Instruction 3.7, 9.2, and 6.5 and concluded that these instructions currently developed for Unit 1 will also be adequate for establishing preventive maintenance activities for system transfers from Construction to Operations for Unit 2. Additionally, there appears to be adequate instructions for identifying which systems or portions of systems are under Construction's control or Operation's control for performance of work prior to, during, and after the transfer of a system.

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