



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

Report Nos. 50-390/80-25 and 50-391/80-19

Licensee: Tennessee Valley Authority
500A Chestnut Street
Chattanooga, TN 37401

Facility Name: Watts Bar Nuclear Plant

Docket Nos. 50-390 and 50-391

License Nos. CPPR-91 and CPPR-92

Inspection at Watts Bar near Spring City, Tennessee

Inspector:

L. Modenos

9/15/80

Date Signed

Approved by:

A. R. Herdt, Section Chief, RCES Branch

9/26/80

Date Signed

SUMMARY

Inspection on August 19-21, 1980

Areas Inspected

This routine, announced inspection involved 17 inspector-hours onsite in the areas of seismic analysis for as-built safety-related piping systems (IE Bulletin 79-14) and pipe support base plate designs using concrete expansion anchor bolts (IE Bulletin 79-02).

Results

Of the 2 areas inspected, 2 items of noncompliance were found, (Infraction - failure to provide adequate procedures paragraph 5; Infraction - failure to follow procedures paragraph 6).

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The inspector reviewed the following supports that had passed the licensee's inspection:

63-ISIS-R-50
63-ISIS-R-109
63-ISIS-R-114
62-ICVC-22
1-87-AB-H-512

In the CVCS system, TVA identified that the design called for the use of 5/16" diameter self drilling (SD) anchor bolts. These anchors were intended to be used for special designs for supporting pipe on prestressed concrete. Discussions with the TVA's design group (CEB) revealed that the 5/16" diameter SD anchors are not recommended in general design practice. CEB informed the inspector that the typical design drawings, found under "Mechanical Cat. I Support process pipe 2 inch diameter and less" will be revised to reflect the change from the 5/16" diameter SD anchors. This item will be identified as an Unresolved Item and will be identified as 50-390/80-25-04 and 50-391/80-19-04 "Deletion of 5/16" diameter self drilling anchors."

Procedure QCP-4.23 is used by WBNP for inspection and documentation of seismic supports. This procedure was reviewed by the inspector in February 1980 as referenced in IE Report 390/80-11 and 391/80-08. At that time, the inspector recommended changes to the procedure to assure adequacy of inspections. As a result of the sample test mentioned above, certain supports were selected from those inspected and finalized under the inspection guidelines of QCP-4.23. The results of the review and the licensee's failure to revise procedure QCP-4.23 since the February inspection indicates that WBNP has been conducting QC inspections with an inadequate procedure.

Failure to provide adequate procedures for conducting inspections on safety related supports, appears to be in noncompliance with Criterion V of Appendix B, to 10 CFR 50 and QAPP-5 Article B.1. This matter is identified as an Infraction, Item No. 390/80-25-01 and 391/80-19-01 "Failure to provide adequate procedures".

This IE Bulletin will remain open until all inspections and evaluations are evaluated by the NRC.

6. (Open) Seismic Analysis For As-Built Safety-Related Piping Systems (IE Bulletin 79-14)

WBNP has established procedure QCP-4.23 as mentioned above, to inspect seismic supports and added procedure QBNP-QCP-4.28 "Piping Location Verification" dated 5/22/80 to inspect pipe geometry. The inspector informed WBNP management that in order to satisfy the requirements of the bulletin, penetration, valve and material verification has to be accomplished with written procedures. At the present no written procedure exists for valve verification. Material verification can be accomplished through QA/QC records.

DETAILS

1. Persons Contacted

Licensee Employees

- *J. E. Wilkins, Project Manager
- *H. C. Richardson, Construction Engineer
- *R. W. Olson, Construction Engineer
- *J. M. Lamb, Mechanical Engineer Supervisor
- *C. D. Christopher, Assistant Construction Engineer
- *L. C. Northard, Assistant Construction Engineer
- *A. W. Rogers, QA Supervisor
- *B. Baines, Mechanical Engineer Unit - B
- *G. K. Bonine, Mechanical Engineer Unit - B
- *S. K. Walker, QC & R
- *T. W. Hayes, IEU
- *T. B. Bucy, Supervisor, HEU
- *M. McAlister, Civil Engineer Branch (CEB)
- *D. T. Nye, CEB
- *W. C. English, Assistant Construction Superintendent

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on August 21, 1980 with those persons indicated in Paragraph 1 above.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve noncompliance or deviations. New unresolved items identified during this inspection are discussed in paragraphs 5 & 6.

5. (Open) Pipe Support Base Plate Design Using Concrete Expansion Anchor Bolts (IE Bulletin 79-02)

A proposed sample inspection program for anchor bolt testing was discussed in IE inspections Report 390/80-11 and 391/80-08 in order to establish a basis for satisfying the requirements of the bulletin. The test results indicated that the criteria established and the minimum requirements of TVA's general procedures have not been met. TVA needs some time to evaluate their results before making a decision to expand the test program. The inspector concurred and this item will remain open until TVA completes the evaluation.

Discussions held with management revealed that some systems in Unit 1, had been turned over to Power Operations. The inspector raised the possibility that the systems involved may have to be re-inspected with established adequate procedures before accepting the systems for as-built conditions as required by the bulletin. Review of WBN-QCP-4.8 "Inspection and Documentation Requirements for Mechanical Supports" revealed that the scope was in conflict with WBNP-QCP-4.23. The inspector informed WBNP management that a clarification on the scope is needed between the two procedures. Management agreed to look into the matter. This will be identified as a Followup Item No. 390/80-25-05.

Pipe inspection verification on NSSS piping is about 92% complete and about 85% complete in identifying nonconformances for Unit 1. Review of the procedure and records of inspection revealed that Attachment A of the procedure, has not been signed or completed by the QC inspectors. This has not been done for any of the completed systems. The fact that the majority of the inspections were conducted without a written procedure or signout sheet, leaves room for error in completing the signout sheets at a later date. The inspector informed WBNP management that the procedure should be reviewed and Attachment A either revised or utilized properly. The management agreed to review the procedure. This will be identified as a Followup Item No. 390/80-25-06.

The inspector reviewed and inspected pipe verification for Component Cooling on the following drawings:

TVA Sketch No. 464-3 Rev. 1

Dravo	Fabrication	Dwg No.	E-2879-IC-156	Rev. 2
Dravo	Fabrication	Dwg No.	E-2882-IC-62	Rev. 3
Dravo	Fabrication	Dwg No.	E-2879-IC-167	Rev. 2
Dravo	Fabrication	Dwg No.	E-2882-IC-63	

The marked up field drawing No. E-2882-IC-63 had a dimension change of 1'-0" and as required by WBNP-QCP-4.28 tolerances outside of ± 2 inch must be reported to EN DES as a nonconformance for evaluation. WBNP had no written nonconformance for this item.

Re-inspection of support 1-70-873 on the Component Cooling System by the NRC inspector and subsequent checks of the QC signed out chit for this support, revealed a missing cotter pin and the use of a wrong clamp to install the snubber. The applicable procedure (WBN-QCP-4.23) requires the QC inspector to check-off all boxes on the chit and mark N/A for items not checked. The QC inspector did not check the support for snubber and the remaining boxes were not marked N/A.

The above are two examples of failure to follow procedures WBNP-QCP-4.28 and WBNP-QCP-4.23. This appears to be in noncompliance with Criterion V of Appendix B, to 10 CFR 50 and is identified as an infraction Item No. 390/80-25-02 and 391/80-19-02, "Failure to follow procedures".

During inspection of the pipe verification, the inspector noticed that anchor supports in the Spent Fuel Heat Exchanges had been used on both pedestals of the Exchanger. Review of the manufacturers drawing No. 5598 by Joseph Oat and Sons Inc., showed that one pedestal was required to be free to move axially. This will be identified as Unresolved Item 390/80-25-03 and 391/80-19-03, "Equipment supports - anchors of both pedestals."

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