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OCT 30 1995

U.S. Nuclear Regulatory Commission
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Gentlemen:

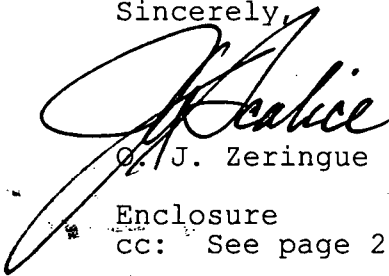
In the Matter of the Application of)
Tennessee Valley Authority) Docket Nos. 50-390
50-391

WATTS BAR NUCLEAR PLANT (WBN) - UNITS 1 AND 2 - NRC INSPECTION
REPORT NO. 50-390, 391/95-64 - REPLY TO NOTICE OF VIOLATION

The purpose of this letter is to provide a reply to Notice of
Violation 50-390/95-64-01. This notice of violation identified
five examples of failure to follow procedures. TVA's reply to this
notice of violation is provided in the enclosure to this letter.

If you should have any questions, contact P. L. Pace at
(423) 365-1824.

Sincerely,



O. J. Zeringue

Enclosure
cc: See page 2

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cc (Enclosure):

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ENCLOSURE
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
REPLY TO NOTICE OF VIOLATION (NOV)
NOV 50-390/95-64-01

NOTICE OF VIOLATION 50-390/95-64-01

"10 CFR 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings and TVA's Nuclear Quality Assurance Plan required that activities affecting quality shall be prescribed by document instructions, procedures, or drawings, and shall be accomplished in accordance with these instructions; procedures, or drawings. Instructions and drawings shall include appropriate quantitative or qualitative acceptance criteria to determine that activities have been satisfactorily accomplished.

Contrary to the above, Tennessee Valley Authority Nuclear Quality Assurance Plan TVA-NQA-PLN-89-A, Site Standard Practice (SSP)-7.53, Modifications Addition Instruction (MAI)-3.1 were not complied with in the following cases:"

EXAMPLE 1

"Modification Addition Instruction MAI-3.1, Installation of Electrical Conduit System and Conduit Boxes, Revision 12, Section 6.2.22.b specifies the 45W3000 series electrical drawings for providing separation criteria between conduit to tray, tray to tray, and cables in free air. Drawing 45W3000-1, Revision 1, Section 4, requires a minimum separation of one inch when a conduit of one division crosses a cable tray containing cables of a redundant division.

As of August 30, 1995, Division B flexible conduit MC662B was separated less than one-inch distance from Division A open cable tray at tray node 3A2454."

TVA RESPONSE - EXAMPLE 1

TVA agrees that this violation example occurred.

REASON FOR THE VIOLATION - EXAMPLE 1

This violation example occurred because actions were not taken to prevent flexible conduit migration. Flexible conduit MC662B was previously installed with no separation violation. The flexible conduit position was most likely changed from the initial installation when the cables were installed by Workplan D-19274-80. Since cables cannot be pulled through flexible conduit, flexible conduit MC662B would have been removed and reinstalled. The individuals reinstalling the flexible conduit may have not considered the separation criteria at that time.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED - EXAMPLE 1

The separation violation identified by this example has been corrected in the plant under Workplan D-19274-86. This condition was determined to be limited to Class 1E conduits installed by a contractor under Design Change Notice (DCN) M-19274-A since March 1995. As a result, Class 1E conduits installed under this DCN since that time have been inspected for separation violations with no additional violations identified.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER VIOLATIONS

This condition has been discussed with the individuals involved with the installation and inspection of conduit MC662B and its cables.

As discussed above, the example is limited to the condition identified. Therefore, no further TVA action is necessary.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

With regards to Example 1, TVA is in full compliance.

EXAMPLE 2

"Modification Addition Instruction MAI-3.1, Installation of Electrical Conduit System and Conduit Boxes, Revision 12, Section 6.2.22.b specifies the 45W3000 series electrical drawings for providing separation criteria between conduit to tray, tray to tray, and cables in free air. Drawing 45W3000-1, Revision 1, Section 3, requires a minimum separation of greater than one inch between free air cables of one division and a conduit of the opposite division.

As of August 30, 1995, Division A free air cables from Division A cable tray at node 4A2651 to conduit 1PLC3903A are separated less than one-inch distance from Division B conduit 1PLC3398B."

TVA RESPONSE - EXAMPLE 2

TVA agrees that the violation example occurred.

REASON FOR THE VIOLATION - EXAMPLE 2

This violation example occurred when a tie wrap used to restrain the free air cable slipped. The installers of conduit 1PLC3398B had not anticipated this condition. The subject free air cables were installed prior to conduit 1PLC3398B. These cables had been restrained to an A train conduit by the tie wrap, but it appears that the tie wrap had slipped allowing the cables to straighten thereby creating the separation violation. The individuals who installed conduit 1PLC3398A apparently did not recognize this potential problem when installing this conduit.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED - EXAMPLE 2

The separation violation identified by this example has also been corrected in the plant by Workplan D-19274-86. This condition was also determined to be limited to Class 1E conduits installed by a contractor under DCN M-19274-A since March 1995. As a result, Class 1E conduits installed under this DCN since that time were inspected for separation violations with no additional violations identified.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER VIOLATIONS - EXAMPLE 2

This condition has been discussed with the individuals involved with the installation and inspection of conduit 1PLC3398B.

As discussed above, the example is limited to the condition identified. Therefore, no further TVA action is necessary.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

With regards to Example 2, TVA is in full compliance.

EXAMPLE 3

"Modification Addition Instruction MAI-3.1, Installation of Electrical Conduit System and Conduit Boxes, Revision 12, Section 6.2.22.b specifies the 45W3000 series electrical drawings for providing separation criteria between conduit to tray, tray to tray, and cables in free air. Drawing 45W3000-1, Revision 1, Section 2, requires a minimum vertical separation distance of 12 inches (tray top of lower tray to tray bottom of upper tray). Acceptance criteria is not provided for configurations where the cables in the lower tray extend over the height of the tray side rails. Division A cable tray at node 3A112 crosses over Division B cable tray at 3B264.

As of August 28, 1995, the cables installed at tray node 3B264 extend above the height of the tray side rails. The vertical distance between the class 1E Division B cables and the bottom of the Division A tray is less than 12 inches."

TVA RESPONSE - EXAMPLE 3

TVA agrees that this violation example occurred.

REASON FOR THE VIOLATION - EXAMPLE 3

This violation example occurred due to design output that did not specifically address this condition. Design output separation requirements presented on drawings 1-45W3000-1 and 1-45W3000-2 did not address the condition where cables installed above the side rails due to cable fill.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED - EXAMPLE 3

Since recurrence control will address future rooms completed by the cable tray cover installation effort, this condition was determined to be limited to the rooms previously walked down for separation of tray. These rooms were further limited to only those rooms that contain redundant tray crosses, pass-bys or stacks. These rooms were reinspected based upon the clarified criteria under workplan series D-10471. Deficiencies identified have been corrected.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER VIOLATIONS - EXAMPLE 3

DCN F-38275-A was issued to clarify the separation requirements for cables outside the boundary of the cable tray siderails between redundant divisions of cable tray.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

With respect to Example 3, TVA is in full compliance.

EXAMPLE 4

"Modification Addition Instruction MAI-3.1, Installation of Electrical Conduit System and Conduit Boxes, Revision 12, Section 6.2.22.b specifies the 45W3000 series electrical drawings for providing separation criteria between conduit to tray, tray to tray, and cables

in free air. Drawing 45W3000-1, Revision 1, Section 2, requires the installation of tray covers whenever vertical separation distances between tray crossings cannot be maintained. The covers are required to be installed for a minimum distance of three feet on each of the tray crossing. Division A cable tray at node 3A111 crosses over Division B cable tray at node 3B266.

As of August 28, 1995, due to insufficient physical separation between the redundant division cable trays, a tray cover at node 3B266 was required to be installed for a distance of three feet on each side of the tray crossing. However, on one side of the tray crossing the installed tray cover length only extended 18 inches."

TVA RESPONSE - EXAMPLE 4

TVA agrees that this violation example occurred.

REASON FOR THE VIOLATION -EXAMPLE 4

This violation example occurred because the design output separation requirements are unclear when the trays are installed at other than right angles to each other. Drawing 45W3000-2 provides the criteria and did not specifically address the situation of trays crossing at angles other than right angles. Since this condition existed, a variety of interpretations could have been used by the field.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED - EXAMPLE 4

Since recurrence control will address future rooms completed by the cable tray cover installation effort, this condition was determined to be limited to the rooms previously walked down for separation of tray. These rooms were further limited to only those rooms that contain redundant tray crosses, pass-bys, or stacks. These rooms were reinspected based upon the clarified criteria under workplan series D-10471. Deficiencies identified have been corrected.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER VIOLATIONS - EXAMPLE 4

DCN F-38275-A was issued to clarify the separation requirements and provided an example detail for nonperpendicular redundant division cable trays.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

With respect to Example 4, TVA is in full compliance.

EXAMPLE 5

"Site Standard Practice (SSP)-7.53, Modification Workplans, Revision 13, Section 2.8.A.3.a, requires, when field work scope is transferred from one work implementing document to another, to verify that the receiving work implementing document has been initiated and includes the transferred work scope. Additionally, section 2.9.F requires a confirmation that any work scope transferred out of a workplan was adequately justified or was captured in accordance with section 2.8.A. Division B cable tray between nodes 4B2438 and 4B2446 (wall) was physically marked indicating the need for a tray cover. In February 1995, Workplan D-19471-110 was implemented to install a tray cover between the respective cable tray nodes. In July 1995, Workplan D-35918-09 removed the cable tray cover to facilitate cable

installations in the cable tray. The workplan was annotated to document that the cable tray cover would be reinstalled through the implementation of Workplan D-10471-110. As of August 28, 1995, workplan D-35918-09 had been closed without confirming that the transferred work scope was included in Workplan D-10471-110. Workplan D-10471-110 did not contain a requirement to reinstall the tray cover, and the cover was not installed."

TVA RESPONSE - EXAMPLE 5

TVA agrees that this violation example occurred.

REASON FOR THE VIOLATION - EXAMPLE 5

This violation example occurred because of personnel error due to lack of attention in following procedure. Site Standard Practice (SSP)-7.53 provides the direction and instructions on how to properly transfer work between work plans. This SSP specifically requires the responsible engineer to ensure that the procedure is followed in both packages when transferring work. Interviews with the involved individual and his supervisor indicated that the individual recently transferred from a group where the work transfer part of the procedure would not have been used. The involved individual revealed that he was aware that the transfer could be made but appeared to be slightly uncertain as to exactly how it should be documented.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED - EXAMPLE 5

The above supervisor reviewed the group's organizational chart and determined that the above individual was the only individual that had been transferred into his group from an organization that did not frequently use the procedural methods for work transfer. Based upon this review, this condition was determined to be limited to the above individual.

TVA has reviewed this individual's workplans during the time he was within this group and identified a similar error in the same workplan. The conditions described in this violation example and the similar error have been subsequently corrected.

In addition, 18 workplans of this group during this time frame were reviewed with no additional deficiencies of this type found. However, a different type deficiency was identified and was determined to have a cause unrelated to this example. This deficiency was addressed by the same corrective action document as this violation example.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER VIOLATIONS - EXAMPLE 5

The individual has been retrained to the requirements of the SSP-7.53 and MAI-3.9, "Installation of Cable Tray, Cable Tray Supports, Cable Covers."

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

With regards to Example 5, TVA is in full compliance.

ADDITIONAL INFORMATION

Subsequent to the NRC inspection 390/95-64, the NRC inspector observed Division B conduit MC924B to cross Division A cable tray, at node

3A53, and to be in contact with cables in the cable tray. In addition, during the reinspection effort described in Examples 3 and 4 above, examples of free air cable separation deficiencies were identified.

Apparent Causes

For conduit MC924B, the cause was determined to be that the separation measurement was taken at the cable tray siderails with no consideration given that the cables were above the siderails. A subsequent field inspection revealed that without a proper height ladder, the cables above the tray siderails are not visible. For the free air deficiencies, the cause was determined to be personnel error.

Corrective Actions

For conduit MC924B, the cables in contact with this conduit have been redistributed and a barrier installed. However, an exception was granted by engineering not to install a required tray cover at this location because of space limitations.

To establish an extent of condition, an inspection of room C301 was performed since this room contains one of the greatest concentrations of conduits and tray interactions. An inspection was performed of six additional rooms identified as having potential tray separation concerns. No unacceptable conditions were identified. Therefore, no additional inspections for this type example are considered necessary.

For the free air examples, the deficiencies have been reworked using approved methods. To address the extent of condition, a 100 percent inspection of room C301 has been performed. Deficiencies identified by this inspection have been evaluated or corrected. In addition, a sample of 58 free air cable examples outside this room has been inspected. No additional deficiencies were identified. TVA has determined that no further inspections are required.

Recurrence Controls

For each of these conditions, additional training has been provided to identify this type of separation deficiencies to the personnel performing these cable tray walkdown inspections. No further recurrence controls are considered necessary.

Full Compliance

With respect to this additional field observations, TVA is in full compliance.