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JUN 29 1987

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

WATTS BAR NUCLEAR PLANT (WBN) - UNITS 1 AND 2 - SUPPLEMENTAL RESPONSE TO VIOLATION - 50-390/86-18-01 AND 50-391/86-18-01 - ASCO SOLENOID VALVE INSTALLATION

Because of an inadvertent error, my June 25, 1987 letter to you did not contain the entire enclosure. The entire supplemental response to Section A, Item 1 is enclosed. I apologize for any inconvenience this may have caused.

If there are any questions, please telephone R. D. Schulz at (615) 365-8527.

To the best of my knowledge, I declare the statements contained herein are complete and true.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. A. Domer

J. A. Domer, Assistant Director
Nuclear Safety and Licensing

Enclosure
cc: See page 2

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U.S. Nuclear Regulatory Commission

JUN 29 1987

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ENCLOSURE
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
SUPPLEMENTAL RESPONSE TO NRC REGION II LETTER
FROM G. G. ZECH TO S. A. WHITE DATED OCTOBER 28, 1986

Violation 390/86-18-01; 391/86-18-01

A. 10 CFR 50, Appendix B, Criterion III, as implemented by TVA's QA Topical Report, TVA-TR-75-1A, Revision 8, paragraphs 17.1.3 and 17.2.3, requires that measures be established and implemented to ensure that regulatory and design bases requirements are correctly translated into specifications, drawings, procedures, and instructions.

1. Contrary to the above, the Automatic Switch Company (ASCO) Solenoid Valves Manual NP-1 requirements to orient solenoid valves, model 206-381, vertical and upright, were not translated into installation instructions. This failure resulted in installed equipment not meeting vendor requirements.

2. Contrary to the above, seismic requirements of IEEE 344-1975, which requires the effects of electrical connections, conduit, and sensing lines, etc., be considered were not translated into installation instructions. This failure resulted in installed equipment, as referenced in Construction Deficiency Report (CDR) WBRD 50-390/86-59, not meeting regulatory requirements.

This a Severity Level IV Violation (Supplement II) and applies to units 1 and 2.

SUPPLEMENTAL RESPONSE

1. Admission or Denial of the Alleged Violation (Section A, Item 1)

TVA admits that a violation has occurred as stated in the original response to these violations on ASCO solenoid valve installation.

2. Reason for the Violation (Section A, Item 1)

This violation occurred for the following reasons:

a. Procedures for installation and inspection did not provide acceptance criteria for solenoid valve orientation.

b. Solenoid valve orientation is not currently specified on the vendor drawing for the control valve assembly.

If any further reasons for this violation are determined, due to the walkdown of 1E solenoid valves at WBN unit 1 and common, TVA will submit a revised response.

3. Corrective Actions Taken and Results Achieved (Section A, Item 1)

Nonconformance Report W-415-P was initiated to document this deficiency. Also, Significant Condition Reports WBNMEB8715 R0 (WBN U1) and WBNMEB8716 R0 (WBN U2) have been initiated.

A review has been performed identifying all 1E solenoid valves in WBN unit 1 and common to be inspected. Walkdown procedure WP-17 has been issued in order to provide instructions required to determine the as-installed orientation of these solenoid valves.

TVA has now qualified the ASCO 206 solenoid valves (operationally and seismically) for up to 45 degrees from vertical and upright. This was done based upon a combination of vendor certification and additional seismic qualification testing. In addition, ASCO has further clarified their definition of "solenoid upright" as "upright and vertical within an acceptance band of ±45 degrees."

Corrective Actions to be Taken To Avoid Further Violations (Section A, Item 1)

In order to resolve any further generic implications to other ASCO solenoid valves the following actions are being taken by TVA.

1. A list has been developed to identify those safety-related solenoid valves needing orientation verification. A walkdown of those valves will be performed in accordance with walkdown procedure WP-17 to determine actual (as-installed) valve orientation.

2. A review of supplier qualifications for equipment which contains ASCO valves as a subcomponent of the assembly will be performed for any installation where the ASCO installation requirements are not met. This review will determine if the assembly (including ASCO solenoid valves) meets its own qualification requirements.

3. A. TVA and vendor drawings will be revised to clearly specify the orientation requirements for the ASCO solenoid valves.

   B. Engineering Requirements Specification ER-WBN-EEB-001 was revised to specify that instruments be oriented in accordance with vendor specifications and DNE-approved vendor drawings.

4. For any unacceptable installations identified through this walkdown, TVA will perform an evaluation to determine whether there are additional root causes applicable to this violation. Unit 2 installations have not been finalized, and conformance to the orientation requirements as specified in the revised drawings should alleviate this condition for unit 2. Any discrepancies identified as a result of these actions will be documented and corrected via TVA's corrective action process.

   With respect to the generic implications to the seismic qualification of other equipment, TVA has undertaken a broad reevaluation. Its purpose is to respond not only to this violation but also to several other identified Conditions Adverse to Quality (CAQs) and NRC raised questions related to maintaining configuration control for seismic qualification. As a result of these concerns, a team has been established to perform the following review to ensure that regulatory and design bases are correctly translated in specifications, drawings, and instructions:

1. An assessment of the seismic qualification of equipment program from design input, design output (including vendor information), construction, operations, maintenance, and documentation of requirements.

2. An assessment of seismic qualification of equipment issues revealed by the program from employee concerns, CAQs, NRC concerns, walkdowns, and planned modifications.

The team has completed their evaluations and an independent review will be performed by Stone & Webster Engineering Corporation (SWEC). From this, the actions will be defined to confirm and ensure that the installed configuration of equipment is adequate for the seismic requirements and that an acceptable program is in place to ensure future modifications and maintenance activities will be adequately implemented.

Date When Full Compliance Will Be Achieved, (Section A, Item 1)

TVA will be in full compliance by unit 1 fuel load for unit 1 related items, and unit 2 fuel load for unit 2 items.