TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

USNRC REGION II
ATLANTA, GEORGIA

January 14, 1981

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Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 3100
101 Marietta Street
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - NRC-OIE LETTER RII:JAM 50-390/80-30, 50-391/80-23 - RESPONSE TO INFRACTION

The subject inspection report dated November 21, 1980, cited TVA with an infraction concerning reporting of items of nonconformance in accordance with 10 CFR 50.55(e). The response to this infraction was originally due to the NRC on December 18, 1980. However, an adequate response could not be formulated, and an extension was granted by J. A. McDonald, the NRC Senior Resident Inspector at Watts Bar Nuclear Plant. Enclosed is our response.

If you have any questions, please get in touch with D. L. Lambert at FTS 857-2581.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure
cc: Mr. Victor Stello, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

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ENCLOSURE
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
NRC-OIE LETTER RII:JAM 50-390/80-30, 50-391/80-23
RESPONSE TO INFRACTION

INFRACTION 50-390/80-30-01; 50-391/80-23-01

As required by 10CFR50.55(e), the holder of construction permit shall notify the Commission within 24 hours of each deficiency found in design and construction, which, were it to remain uncorrected, could have affected adversely the safety of operations of the nuclear power plant at any time throughout the expected lifetime of the plant, and which represents a significant breakdown in any portion of the quality assurance program in accordance with the requirements of Appendix B or a significant deficiency in construction of a component which will require extensive evaluation or repair to establish the adequacy of the system to perform its intended function.

Contrary to the above, as of October 17, 1980, the licensee had not notified the Commission of the following significant deficiencies.

1. Approximately one-third of 1312 spent fuel rack cells did not meet acceptance criteria for cell verticality, levelness, and drag resistance and will or has required extensive evaluation and repair to establish their adequacy.

2. Hundreds of safety-related valves installed in systems, including safety injection system, had nameplate and other supplied certifications which did not meet procurement specifications.

This is an infraction.

Response

The Tennessee Valley Authority (TVA) identifies and records all conditions which are not in conformance with prescribed requirements by issuing nonconformance reports (NCR's). These NCR's are evaluated to determine if a significant condition adverse to quality exists as required by 10CFR50, Appendix B. TVA implements the requirements in 10CFR50.55(e) by reviewing all NCR's deemed significant conditions adverse to quality to determine reportability, under Part 50.55(e) using TVA Engineering Design (EN DES) Procedure 2.02. Those NCR's not meeting the 10CFR50, Appendix B, criteria as significant conditions adverse to quality are not reviewed to the 10CFR50.55(e) reporting criteria in EN DES Procedure 2.02.

1. Corrective Action Taken and Results Achieved

   During the period before October 17, 1980, TVA identified and recorded 25 NCR's related to the spent fuel racks in the areas of verticality, levelness, and dummy drag test. Each NCR was evaluated on an individual basis to determine if a significant

condition adverse to quality as required by 10CFR50, Appendix B, existed. The evaluation was conducted in accordance with the required TVA procedures for the reporting and handling of nonconformances. With the exception of one NCR, W-11-P, all were determined not to represent a significant condition and, therefore, were not required to be reported to the Commission nor evaluated against the requirements of 10CFR50.55(e).

NCR W-11-P was reported as required within 24 hours of receipt to NRC-OIE Region II, Inspector McKenzie Thomas, on October 17, 1980, as a significant condition that had potential reportability under 10CFR50.55(e). This condition identified three cells within one rack which did not meet the verticality requirements of Westinghouse Specification F-8 which was not the controlling specification but an advisory document. TVA evaluated this condition and determined that the condition was not a significant deficiency in the construction of the spent fuel racks which would require extensive evaluation or repair to establish the adequacy of the component to perform its intended function as defined by 10CFR50.55(e). On this basis, TVA informed NRC-OIE Region II, Inspector McKenzie Thomas, on October 17, 1980, that NRC W-11-P was not reportable.

It is TVA's opinion that all reporting requirements of 10CFR50.55(e) related to the NCR identified as a significant condition adverse to quality were accomplished. Further, it is TVA's opinion that the evaluation of the remaining NCR's identified as nonsignificant was accomplished in accordance with written TVA procedures as evaluated on an individual basis; in addition, TVA has investigated the situation and considers the evaluation of the nonsignificant conditions adequate on a specific and generic basis. TVA's investigation of the discrepanceis involving the fuel racks has, however, indicated that additional measures are needed to ensure an adequate level of quality. This decision is based on the number and diversity of problems identified. Quality assurance, design, operations, and construction employees are working to ensure that an effective testing program is being conducted and that deficiencies are evaluated and resolved promptly.

As a result of TVA's investigation related to this inspection report and the concern discussed above, TVA has identified a nonconforming condition (reference NCR WBNCEB8012).

The condition identified involves deficiencies on the spent fuel racks in the areas of verticality, levelness, and dummy drag test which have been identified, evaluated, and dispositioned using procedures which potentially did not have acceptable tolerance limits, were not properly followed, or did not contain sufficient evaluation information. The NCR has been identified as a significant condition adverse to quality as defined by 10CFR50, Appendix B, and reported within 24 hours of receipt to NRC-OIE Region II, Inspector Bob Wright, on December 17, 1980, as a significant condition that has potential reportability under

10CFR50.55(e). TVA evaluated this condition and determined that it is reportable under the requirements of 10CFR50.55(e). On this basis, TVA informed NRC-OIE Region II, Inspector Peter VanDoorn, on December 23, 1980, that NCR WBNCEB8012 was reportable.

Action Taken to Prevent Recurrence

Those individuals responsible for the determination of significance on this matter, as identified in 10CFR50, Appendix B, and the required TVA procedures, have been instructed that recurring nonconformances could be identified as significant conditions even though on an individual basis the nonconformances may not constitute a significant condition.

Date When Full Compliance Will Be Achieved

We are now in full compliance.

2. On June 27, 1980, TVA informed NRC-OIE Region II, Inspector Floyd Cantrell, of a significant condition that was potentially reportable under 10CFR50.55(e). This condition was identified as NCR 2394R, which dealt with discrepancies between valve nameplate data and procurement specifications. TVA's Division of Engineering Design evaluated this condition and concluded that the valves were suitable for their intended service and, therefore, could not have adversely affected plant safety throughout the expected lifetime of the plant. On this basis, TVA deemed this NCR not reportable under 10CFR50.55(e). On July 2, 1980, TVA informed NRC-OIE, Inspector McKenzie Thomas, of the determination.

This NCR documented a generic problem in documentation for valves in safety-related systems. The NCR was written to address this concern from a generic standpoint for all valves which were potentially affected. The NCR listed 12 specific examples in the first group of valves for which deficient documentation was identified. These valves were used in the Containment Spray (CS) and Chemical and Volume Control (CVCS) Systems. TVA addressed the problem by initiating a program to systematically review the documentation of all valves in safety-related systems for compatibility with system design pressures and temperatures. TVA's review was completed in approximately four months because of the large number of documentation discrepancies which were revealed. On December 3, 1980, TVA revised NCR 2394R to document the full scope of the valves considered to be in a nonconforming condition. TVA reported to Inspector McKenzie Thomas that this item had been reopened and was once again considered to be potentially reportable. Each valve was evaluated on a case-by-case basis. Over 700 valves were identified and evaluated and none were found to require replacement or physical modification. All discrepancies have been referred to Westinghouse for concurrence in the disposition and resolution of the discrepancies for valves in their scope of supply. All documentation

associated with this deficiency will be revised to reflect the correct data. Because this does not represent a condition which could adversely affect plant safety, as evidenced by the results of TVA's evaluation, this item was again deemed not reportable. TVA notified R. W. Wright of this determination on December 16, 1980.

TVA has investigated the cause of the deficiency and is taking appropriate steps (in conjunction with Westinghouse) to preclude recurrence. Since Westinghouse transmitted valve nameplate data forms (some of which erroneously referenced operating conditions rather that design conditions) to the construction site and piping and instrumentation diagrams (P&ID) which defined the system design parameters to the Division of Engineering Design in Knoxville, no one had easy access to both documents for comparison. This was a major contributing factor which led to this condition. Also, TVA purchased piping to higher pressure specifications than the system design pressure. This piping data appeared on TVA flow diagrams and was misinterpreted as the system design pressure. Finally, Westinghouse documentation indicated ambient temperatures with the generic notation "AMB" whereas TVA documentation indicated ambient temperatures with specific data as reflected in the FSAR. These factors all contributed to this condition with regard to the documentation of valve requirements. There is no indication that this deficiency has any implications to other matters not identified in the NCR.

It is TVA's opinion that we have met all the reporting requirements of 10CFR50.55(e) and are in full compliance.