TENNESSEE VALLEY AUTHORITY

CHATTANOOGA TENNESSEE 37401
400 Chestnut Street Tower II

January 31, 1983

WBRD-50-390/82-68
WBRD-50-391/82-65

U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - REPACKING VALVES WITH GRAFOIL PACKING - WBRD-50-390/82-68, WBRD-50-391/82-65 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. V. Crlenjak on June 7, 1982 in accordance with 10 CFR 50.55(e) as NCR 4134R. Our first interim report was submitted on July 8, 1982. Enclosed is our final report. TVA does not now consider the subject nonconforming condition adverse to the safe operation of the plant. Therefore, we will amend our records to delete this nonconformance as a 10 CFR 50.55(e) item.

If you have any questions, please get in touch with R. H. Shell at FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Licensing

Enclosure
cc: Mr. Richard C. DeYoung, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
REPACKING VALVES WITH GRAFOIL PACKING
NCR 4134R
WBRD-50-390/82-68, WBRD-50-391/82-65
10 CFR 50.55(e)
FINAL REPORT

Description of Deficiency

Packing sequence instructions provided to the site on how to repack Westinghouse-supplied valves inadvertently referred to a grafoil preformed ring as an anti-extrusion ring. This led to reassembly of the valve packing without anti-extrusion rings. Also, to help prevent the stainless steel stems from pitting, a sacrificial anode of zinc powder was incorporated into the packing set construction.

Safety Implications

As a result of the incorrect packing instructions there are valves that may lack the required anti-extrusion rings. However, where graphite type rings (preformed only) are used and installed properly, there will be no detrimental effect on operational integrity due to the lack of anti-extrusion rings. This is based on information provided by valve vendors that do not require anti-extrusion rings. Therefore, the subject valves will be used as is until routine scheduled maintenance is performed on the packing or when opportunity exists prior to scheduled maintenance. At that time the valves should be repacked according to corrected instructions.

Although zinc powder was incorporated into the graphite packing, the amount possibly introduced into the Reactor Coolant System (RCS) through leakage would be small and considerably less than what has been experienced nationwide in the secondary systems of other PWR plants and the reactor water of BWRs due to corrosion of brass condenser tubing. Since no problems have been found in these systems due to zinc contamination, TVA considers zinc contamination from the zinc in graphite packing to not present a concern which would in any way be detrimental to the safe operation of the plant. Therefore, TVA does not believe 10CFR50.55(e) is now applicable to this nonconformance.

Corrective Actions

Correct valve packing procedures have been provided to the project, and project personnel are incorporating these into the site quality control procedures. This includes recommended packing combinations, the correct sequence of packing components, installation instructions, and a listing of the valves requiring grafoil.