TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

September 9, 1982

WBRD-50-390/82-29
WBRD-50-391/82-26

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 - INADEQUATE DUCT SUPPORTS IN THE EMERGENCY GAS TREATMENT SYSTEM - WBRD-50-390/82-29, WBRD-50-391/82-26 - SUPPLEMENTAL INFORMATION

The subject deficiency was initially reported to NRC-OIE Inspector R. V. Crlenjak on March 25, 1982 in accordance with 10 CFR 50.55(e) as NCR WBN SWP 8210. Our final report was submitted on April 28, 1982.

Enclosed is supplemental information which addresses concerns raised by Inspector T. Heatherly. The "description of condition" has been expanded to more accurately discuss the underlying cause of this deficiency. The "corrective actions" has also been expanded to discuss recent TVA actions which will present recurrence of similar deficiencies. This supplemental response was fully discussed with Mr. Heatherly on September 7, 1982.

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

ENCLOSURE
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
INADEQUATE DUCT SUPPORTS IN THE EMERGENCY GAS TREATMENT SYSTEM
10 CFR 50.55(e)
NCR WBN SWP 8210
WBRD-50-390/82-29, WBRD-50-391/82-26
SUPPLEMENTAL INFORMATION

Description of Deficiency

Seismic duct supports, 47A055-157-412, -413, -2153, and -2154 used in the Emergency Gas Treatment System (EGTS) have been found to be inadequate as, under seismic loading, the anchor plates for these four supports could pull away from their respective mounting surfaces. This condition was caused by the replacement of a number of EGTS dampers located near the supports with heavier air-operated valves without the designer reevaluating the hangers as required by design criteria WB-DC-40-31.8 and Engineering Design procedures due to his inexperience and by the failure of the design reviewer to detect this error.

Safety Implications

Failure of the supports could damage the attached ductwork and cause a loss of the EGTS pressure boundary. This loss could, in turn, cause a subsequent failure of the Annulus Vacuum Control Subsystem to maintain the required negative pressure in either annulus. This could adversely affect the safe operation of the plant.

Corrective Action

The subject supports have been redesigned through ECN 3384 to prevent failure under seismic loading, and all field modifications will be completed before fuel loading. System design engineers have been instructed to evaluate the supports associated with additions or changes to safety-related systems to be sure they do not become overloaded.

In addition, the following actions (although not initiated as a result of this NCR) should prevent recurrence of similar nonconformances:

1. A training program for instruction in the use of engineering procedures has been initiated and is now in progress.

2. A hanger design manual was issued on May 18, 1982, for use by all project personnel involved in the design and review of seismic supports for piping and ductwork; and all of these people have received training in the use of these manuals.

Generic concerns on design review are being investigated and separately reported under audit M81-13, deficiency 5.