TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

March 21, 1985

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WBRD-50-390/85-14
WBRD-50-391/85-15

U.S. Nuclear Regulatory Commission
Region II
Attn: Dr. J. Nelson Grace, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Dear Dr. Grace:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - SERIES-MOUNTED SMOKE DAMPERS DO NOT MEET DESIGN REQUIREMENTS - WBRD-50-390/85-14 AND WBRD-50-391/85-15 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector Al Ignatonis on March 4, 1985 in accordance with 10 CFR 50.55(e) as NCR WBN MEB 8510. Enclosed is our final report.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. A. Domer

for J. W. Hufham, Manager
Licensing and Regulations

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

Records Center
Institute of Nuclear Power Operations
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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
SERIES-MOUNTED SMOKE DAMPERS DO NOT MEET DESIGN REQUIREMENTS
WBRD-50-390/85-14 AND WBRD-50-391/85-15
NCR WBN MEB 8510
10 CFR 50.55(e)
FINAL REPORT

Description of Deficiency

Two 1-1/2-hour-rated vertical-mount smoke dampers are installed in series in two locations in a common wall between the auxiliary and control buildings. TVA assumed that this configuration would satisfy the 3-hour compartmentation requirements detailed on TVA drawings SK1004 and SK1007. The dampers included in the scope of this NCR are:

0-XFD-31-92A and 0-XFD-31-92B
0-XFD-31-78A and 0-XFD-31-78B

The vendor does not provide a 3-hour-rated vertical-mount smoke damper with an Underwriter's Laboratories (UL) label. TVA inappropriately assumed that two 1-1/2-hour-rated vertical-mount UL labeled smoke dampers installed in series could provide 3-hour rated compartmentation requirements.

Safety Implications

Failure to provide the required 3-hour fire barrier could result in an inability to contain design basis fires and/or to prevent the fire from spreading to an adjacent compartment. Consequently, the cited condition could be adverse to the safe operation of the plant.

Corrective Actions

TVA, in consultation with the damper vendor and UL, has determined that the 3-hour compartmentation requirement can be met with the present dampers if the dampers are converted from smoke dampers to fire dampers. To accomplish this conversion, TVA will remove the stainless steel jamb seals, electro thermal links (ETL) and all conduit attachments to the dampers per the vendor's instructions. The ETLs will be replaced with standard 165°F fusible links. A local UL inspector and vendor quality assurance inspector will inspect the modified dampers to ensure that no damage resulted from the modifications and if found acceptable, the modified fire dampers will be tagged with a 3-hour-rated UL label. Equivalence is based on the fact that subject dampers are constructed of the same materials and are sized within maximum section size limitations of 3-hour-rated fire dampers. TVA intends to modify the unit 1 dampers before April 1, 1985, to support unit 1 fuel load. If this schedule cannot be met, TVA will institute a fire watch on the subject dampers until such time as the modifications can be completed.