

TENNESSEE VALLEY AUTHORITY
NRC REGION II
CHATTANOOGA, TENNESSEE 37444
ATLANTA, GEORGIA

400 Chestnut Street Tower II

APR 28 1982
MAY 2 4 5:02

WBRD-50-390/82-11
WBRD-50-391/82-11

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 - DESIGN OF HVAC PENETRATIONS IN
CONTAINMENT - WBRD-50-390/82-11, WBRD-50-391/82-11 - SECOND INTERIM
REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
R. V. Crlenjak on December 24, 1981 in accordance with 10 CFR 50.55(e)
as NCR WBN CEB 8120. This was followed by our first interim report dated
January 28, 1982. Enclosed is our second interim report. We expect to
submit our next report by August 6, 1982.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

James A. Damer
for 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, DC 20555

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
DESIGN OF HVAC PENETRATIONS IN CONTAINMENT
NCR WBN CEB 8120
WBRD-50-390/82-11, WBRD-50-391/82-11
10 CFR 50.55(e)
SECOND INTERIM REPORT

Description of Deficiency

The containment vessel contractor (Chicago Bridge and Iron) designed the HVAC and electrical nonprocess penetrations in an unconservative manner as a result of inadequate load definitions in TVA's containment design specification WBNP-DS-1705-1440-3. Thus, lacking complete load definitions, the contractor applied the total mass of the piping assemblies at the end of the nozzles in lieu of at the mass center which produces higher bending moments. These bending moments can cause bending overstresses in the containment shell around these penetrations.

Interim Progress

The nonprocess penetrations are being reevaluated using the correct load definitions. Any penetrations which are overstressed as a result of these loads will be supported by hangers or stiffened as required to qualify them according to the ASME Code Section III maximum allowable criteria. Based on TVA's analyses, approximately eight HVAC penetrations will require supports, stiffening, or a combination of both.