TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

September 20, 1982

BLRD-50-438/82-59
BLRD-50-439/82-53
WBRD-50-390/82-87
WBRD-50-391/82-83

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

82 SEP 21 AM 11:41

USNRC REGION II
ATLANTA, GEORGIA

Dear Mr. O'Reilly:

BELLEFONTE AND WATTS BAR NUCLEAR PLANTS UNITS 1 AND 2 - USE OF FILLET WELDS ON PIPING LUGS - BLRD-50-438/82-59, BLRD-50-439/82-53, WBRD-50-390/82-87 WBRD-50-391/82-83 - FIRST INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector K. V. Crlenjak on August 19, 1982 in accordance with 10 CFR 50.55(e) as NCR GEN CEB 8209. Enclosed is our first interim report. We expect to submit our next report by January 21, 1983.

If you have any questions concerning this matter, 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

BELLEFONTE AND WATTS BAR NUCLEAR PLANTS UNITS 1 AND 2
USE OF FILLET WELDS ON PIPING LUGS
NCR GEN CEB 8209
BLRD-50-438/82-59, BLRD-50-439/82-53, WBRD-50-390/82-87, WBRD-50-391/82-83
10 CFR 50.55(e)
FIRST INTERIM REPORT

Description of Deficiency

Fillet welds have been used to attach lugs to piping at Watts Bar and Bellefonte. These lugs are permanent integral attachments on mechanical piping and are designed to provide support or to restrain movement axially or laterally. At Watts Bar, the lugs were designed by TVA. The lugs were designed by ITT Grinnell and by TVA for Bellefonte. While use of fillet welded lugs is allowed by the ASME Code, this is considered a deficiency because TVA design documents require the use of full penetration welds, and the use of fillet welds produces larger piping stresses than those for which the piping was designed.

Interim Progress

TVA civil engineering personnel have issued instructions for determining fillet welded pipe stress for future designs and have also determined pipe stresses for all lugs designed by ITT Grinnell. Initial comparisons indicate lugs designed by ITT Grinnell for rigorous analyses piping are adequate because of large piping reserve stress. TVA is still reviewing piping subject to in-house rigorous analyses or to vendor and/or TVA alternate analyses.