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

January 19, 1983

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

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 - SECOND INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. V. Crlenjak on August 19, 1982 in accordance with 10 CFR 50.55(e) as NCR GEN CEB 8209. This was followed by our first interim report dated September 20, 1982. Enclosed is our second interim report. We expect to submit our next report on or about March 16, 1983.

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 AND BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
USE OF FILLET WELDS ON PIPING LUGS
NCR GEN CEB 8209
10 CFR 50.55(e)
BLRD-50-438/82-59, BLRD-50-439/82-53
WBRD-50-390/82-87, WBRD-50-391/82-83
SECOND 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, lugs were designed by TVA; for Bellefonte they were designed both by ITT Grinnell and by TVA. 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

Instructions for determining fillet welded pipe stresses on future TVA designs have been issued and pipe stresses have been determined for all lugs designed by ITT Grinnell. Initial comparisons indicate all fillet welded lugs are adequate except for TVA-designed lugs on rigorously analyzed piping less than 2-1/2 inches in diameter at Bellefonte, and these are being reviewed individually. The overall review of Watts Bar and Bellefonte fillet welded lugs is continuing.