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

April 14, 1982

BLRD-50-438/81-75
BLRD-50-439/81-74

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 NUCLEAR PLANT UNITS 1 AND 2 - OVERPRESSURE PROTECTION IN THE DECAY HEAT REMOVAL SYSTEM - BLRD-50-438/81-75, BLRD-50-439/81-74 - SECOND INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector C. Julian on November 27, 1981 in accordance with 10 CFR 50.55(e) as NCR BLN BLP 8127. This was followed by our first interim report dated December 21, 1981. Enclosed is our second interim report. We expect to submit our next report by August 19, 1982.

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 Regulation and Safety

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

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
OVERPRESSURE PROTECTION IN THE DECAY HEAT REMOVAL SYSTEM
NCR BLN BLP 8127
BLRD-50-438/81-75, BLRD-50-439/81-74
10 CFR 50.55(e)
SECOND INTERIM REPORT

Description of Deficiency

The Decay Heat Removal (DHR) cooler inlet relief valve discharge and the cooler outlet relief valve discharge have been combined into a single discharge header. The line size of the common header is the same as the relief valve discharge lines. This is in violation of ASME Section III, NC3677.3(d) which states that, "in no case shall the area of such common lines be less than the combined area of all lines discharging into it." This condition exists on both trains A and B for both units. This situation arose as a result of changes made to comply with item 2.1.6.a of NUREG-0578. The 2-inch relief valve discharges were combined into a single line and connected to a 2-inch embedded drain line. This problem was discovered during a checking of the system drawings for other changes.

Interim Progress

TVA is reviewing the possibility of qualifying the present piping design instead of rerouting the relief valve discharge. Using ASME Section III, NB3677.2, as a basis, calculations are being made to determine whether, with the two relief valve discharges combined, a sufficient discharge area exists and undue back pressure is prevented. Investigations are also continuing into the design of relief valve discharges from other systems.