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

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October 19, 1983

BLRD-50-438/82-64
BLRD-50-439/82-57

U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - DESIGN PROBLEMS WITH STEAM GENERATORS - BLRD-50-438/82-64, BLRD-50-439/82-57 - FOURTH INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector D. Quick on August 30, 1982 in accordance with 10 CFR 50.55(e) as NCR BLN NEB 8210. This was followed by our interim reports dated September 28 and November 29, 1982 and January 28, 1983. Enclosed is our fourth interim report. We expect to submit our next report by April 30, 1984. We consider 10 CFR Part 21 applicable to this deficiency.

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

Records Center (Enclosure)
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

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ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
DESIGN PROBLEMS WITH STEAM GENERATORS
BLRD-50-438/82-64, BLRD-50-439/82-57
10 CFR 50.55(e)
NCR BLN NEB 8210
FOURTH INTERIM REPORT

Description of Deficiency

At the July 7, 1982, Babcock and Wilcox (B&W) Owner's Group meeting, B&W (Lynchburg, Virginia) indicated that recent inspections of steam generators (SGs) at 177FA B&W operating plants revealed deformation of the auxiliary feedwater (AFW) header and damage to the header supports. There was also evidence of contact between the header and some adjacent SG tubes. Investigations are in progress to determine the cause of these conditions. The Bellefonte header design is similar to the 177FA plant design except that AFW is introduced to the header in the lower portion of the SG (beneath the steam outlet nozzles) whereas the 177FA plant headers are located toward the top of the SG (in the superheat region). The postulated cause of the deficiency was a sudden drop of the header internal pressure resulting from the injection of a cold slug of AFW into the header while the header was dry.

Interim Progress

B&W has submitted the field change packages (FCPs) for unit 1 discussed in our third report on this deficiency. TVA has approved the FCPs and the unit 1 work has begun. However, B&W has not yet submitted FCPs for the unit 2 AFW header modifications. TVA will submit a final report on this deficiency upon receipt, review, and approval of the unit 2 FCPs.