

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

April 25, 1984

10:30 P12:53

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:

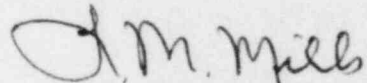
BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - DESIGN PROBLEMS WITH STEAM
GENERATORS - BLRD-50-438/82-64, BLRD-50-439/82-57 - FIFTH INTERIM REPORT

The subject deficiency was initially reported to NRC-CIE 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 and October 19, 1983. Enclosed is our fifth interim report. We expect to submit our next report by November 14, 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
FIFTH 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 and TVA has approved the following field change packages (FCPs):

<u>FCP No.</u>		<u>Subject</u>
<u>Unit 1</u>	<u>Unit 2</u>	
217 R1	221 RO	SG shell and shroud drilling
226 RO	245 RO	Fitup installation of header and risers
234 R1	249 RO	Capping AFW inlet nozzles for original internal headers

In addition, TVA is now reviewing FCP 226, revision 1, which provides permanent installation instructions for the headers, risers, and header restraints for unit 1. B&W's schedule for submittal of the corresponding unit 2 FCP revision is six weeks after TVA approval of the unit 1 FCP.

SG shell and shroud drilling and fitup installation of the headers and risers has been completed for units 1 and 2. The gaskets, thermal sleeves, and bolts needed for permanent installation have been delivered to the site. Final installation will be done after receipt and installation of the header restraints. TVA is presently awaiting B&W's shipment of the header restraints and the caps for the original AFW inlet nozzles.

B&W has analyzed the new AFW piping configuration and submitted reports of the results for units 1 and 2 to TVA. TVA is presently reviewing these reports and will submit a final report upon completion of all design reviews and approval of design revisions.