

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

July 16, 1984

BLRD-50-438/83-09

BLRD-50-439/83-06

U.S. Nuclear Regulatory Commission
Region II

Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Dear Mr. O'Reilly:

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - BACKFLOW NOT CONSIDERED FOR ERCW
BOOSTER PUMP SHUTOFF - BLRD-50-438/83-09, BLRD-50-439/83-06 - THIRD INTERIM
REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
L. Watson on December 30, 1982 in accordance with 10 CFR 50.55(e) as
NCR BLN BLP 8233. This was followed by our interim reports dated
January 28 and May 6, 1983. Enclosed is our third interim report. We
expect to submit our next report by February 15, 1985.

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
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

ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
BACKFLOW NOT CONSIDERED FOR ERCW BOOSTER PUMP SHUTOFF
BLRD-50-438/83-09, BLRD-50-439/83-06
10 CFR 50.55(e)
NCR BLN BLP 8233
THIRD INTERIM REPORT

Description of Deficiency

During design of the Essential Raw Cooling Water (ERCW) System, consideration was not given to booster pump shutdown and the prevention of backflow. Designers had considered that these pumps would operate continuously and would not require backflow prevention. During loss of offsite power or during routine maintenance the pumps would shut down thereby resulting in backflow. This deficiency was discovered during the design review process. A check valve should have been placed in the discharge line of the booster pumps to prevent backflow when the pump shuts down.

Interim Progress

TVA has issued engineering change notice 1718. The ERCW design criteria diagram has been modified to include check valves in the discharge of the booster pumps. Check valve procurement documents have been issued. Piping drawings have been revised to include the check valves. Seismic analysis drawings will be revised to include the check valves. Seismic support will be changed as necessary.

To prevent recurrence of this deficiency, TVA will reinstruct designers to consider pump shutdown as an operating mode in preparation of design criteria diagrams.