

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

84 JAN 16

January 12, 1984

BLRD-50-438/83-43

BLRD-50-439/83-36

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 - REACTOR BUILDING SUMP PH VALUES BY
BABCOCK AND WILCOX - BLRD-50-438/83-43, BLRD-50-439/83-36 - SECOND INTERIM
REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
Linda Watson on June 23, 1983 in accordance with 10 CFR 50.55(e) as
NCR BLN NEB 8307. This was followed by our interim report dated July 21,
1983. Enclosed is our second interim report. We expect to submit our next
report by July 18, 1984.

If you have any questions, please get in touch with R. H. Shell at
FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

D S Kammer

for 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

8401240482 840112
PDR ADOCK 05000438
S PDR

1983-TVA 50TH ANNIVERSARY

An Equal Opportunity Employer

OFFICIAL COPY

Id 27

1/1

ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
REACTOR BUILDING SUMP PH VALUES BY BABCOCK AND WILCOX
BLRD-50-438/83-43, BLRD-50-439/83-36
NCR BLN NEB 8307
10 CFR 50.55(e)
SECOND INTERIM REPORT

Description of Deficiency

Babcock and Wilcox (B&W) is performing a recalculation of the Reactor Building (RB) sump pH values to include consideration of "dead" volumes not available for recirculation. The major contributor to the "dead" volume is the reactor vessel cavity (55 percent of total volume). While performing this recalculation in response to NRC's FSAR Question 281.2, B&W has found some problem areas. Depending on where the break is assumed, the RB pH may exceed the limits set by the NRC ($8.5 < \text{pH} < 11.0$) for prevention of stress corrosion and for materials compatibility. Reference TVA letter K-7348 (NEB 821221 109) and B&W letter D-4535 (NEB 830328 633).

Interim Progress

TVA has evaluated several options to resolve the concern. Based on this evaluation, TVA has chosen to perform an analysis in an attempt to show that the sump pH being outside the recommended limits set by the NRC is not detrimental to plant safety in either the short term or long term.