TENNESSEE VALLEY AUTHORITY

CHATTANOOGA. TENNESSEE 37401 400 Chestnut Street Tower II

October 19, 1981 2 415 Red 2 8

BLRD-50-438/81-17 BLRD-50-439/81-17

Mr. James P. O'Reilly, Director Office of Inspection and Enforcement U.S. Nuclear Regulatory Commission Region II - Suite 3100 101 Marietta Street Atlanta, Georgia 30303

Dear Mr. O'Reilly:

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - MAKEUP PUMP LUBE OIL COOLERS -BLRD-50-438/81-17, BLRD-50-439/81-17 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. W. Wright on January 29, 1981, in accordance with 10 CFR 50.55(e) as NCR BLN NEB 8101. This was followed by our interim reports dated March 2 and June 17, 1981. Enclosed is our final report. We consider 10 CFR Part 21 to be applicable to this deficiency.

If you have any questions concerning this matter, please get in touch with R. H. Shell at FTS 857-2581.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

MUM

L. M. Mills, Manager Nuclear Regulation and Safety

Enclosure

cc: Mr. Victor Stello, Jr., Director (Enclosure) Office of Inspection and Enforcement U.S. Nuclear Regulatory Commission Washington, DC 20555

> Mr. James McFarland (Enclosure) Senior Project Manager Babcock & Wilcox Company P.O. Box 1260 Lynchburg, Virginia 24505

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ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 MAKEUP PUMP LUBE OIL COOLERS BLRD-50-438/81-17, BLRD-50-439/81-17 10 CFR 50.55(e) FINAL REPORT

Description of Deficiency

TVA was notified by B&W of a 10 CFR Part 21 report filed by B&W which addressed concerns on the lube oil coolers for the makeup/high pressure injection pump.

The cause of this concern is that the head opposite the inlet and outlet piping connections of these makeup/high pressure injection pump lube oil coolers can be misoriented so that the coolers can have a 2-pass configuration instead of the intended 4-pass orientation. The pump vendor is Bingham-Willamette, Portland, Oregon, and the heat exchanger (lube oil cooler) is supplied by Ametek, Schutte, and Koerting Divison of Whitlock, West Hartfield, Connecticut.

Safety Implications

The change from the 4- to 2-pass configuration will reduce the heat exchange area of the coolers by 50 percent. This loss of 50 percent heat exchange surface when taken with maximum design cooling water temperature of 105°F could cause the lube oil temperature to exceed the maximum allowable temperature of 200°F resulting in possible loss of the high pressure injection function.

Corrective Action

B&W has completed their investigation, discussed the problem with the manufacturer to prevent recurrence, and has concluded that an alignment pin should be added to the cooler. This alignment pin will physically limit the position of the cooler head to ensure proper orientation for 4-pass configuration. B&W field change packages 150 and 151 have been issued and distributed to TVA construction to implement this change. The work described by these packages will be completed by January 22, 1982.