

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

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July 20, 1984

BLRD-50-438/83-42

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 UNIT 1 - MAKEUP/HIGH PRESSURE INJECTION PUMP  
VIBRATION -BLRD-50-438/83-42- FOURTH INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector Linda Watson on June 22, 1983 in accordance with 10 CFR 50.55(e) as NCR 2393. This was followed by our interim reports dated July 20, and November 30, 1983 and March 12, 1984. Enclosed is our fourth interim report. We expect to submit our next report by November 19, 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

*DS 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

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ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNIT 1  
MAKEUP/HIGH PRESSURE INJECTION PUMP VIBRATION  
BLRD-50-438/83-42  
NCR 2393  
10 CFR 50.55(e)  
FOURTH INTERIM REPORT

Description of Deficiency

Measured vibration levels on one of the three makeup/high pressure injection (MU/HPI) pumps provided by Babcock & Wilcox (B&W) for Bellefonte (BLN) unit 1 are not consistently below the established high level limit of 0.75 mils. After the high vibration problem was noted, an attempt by B&W was made to balance the rotating assembly in November 1982. The effort was not successful. It was noted at that time that the vibration level on the pump varied with the temperature of the pump.

Since the attempt to balance the rotating assembly on site was not successful, the inner casing and rotating assembly were removed and shipped to the manufacturer, Bingham-Willamette in Portland, Oregon. The shaft and rotating assembly were examined by Bingham and returned to Bellefonte in March 1983. The pump was reassembled and further vibration testing was completed. The initial vibration levels of the reassembled pump were high (2.5 to 3.0 mils displacement). B&W again attempted to balance the pump rotating assembly. Vibration levels were reduced to a level below the 0.75 mils limit for approximately 70 percent of the measurements, with the remainder of the measurements at or greater than the 0.75 mils limit.

Interim Progress

During April 16-30, 1984, representatives from B&W were at BLN to balance the pump and measure the associated vibration levels. The method and results of B&W's balancing effort are given in B&W report No. 1151454A-00, "TVA Bellefonte Plant Makeup Pump 1B Vibration Investigation."

In concluding their report, B&W indicates that the pump is now operating at acceptable vibration levels and recommends that a final alignment of the pump be performed to reduce the vibration levels further. TVA is currently reviewing the results of the balancing and B&W's subsequent recommendations. The results of our review and any further action taken to resolve this high vibration nonconformance will be included in our next report.