TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

November 10, 1982

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USNRC REGION II
ATLANTA, GEORGIA

BLRD-50-438/81-61

U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

BELLEFONTE NUCLEAR PLANT UNIT 1 - REACTOR COOLANT PUMP IMPELLER TO SHAFT MISMATCH - BLRD-50-438/81-61 - FIFTH INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. V. Crlenjak on September 17, 1981 in accordance with 10 CFR 50.55(e) as NCR's 1589 and 1596. This was followed by our interim reports dated October 20 and December 29, 1981 and March 16 and July 2, 1982. Enclosed is our fifth interim report. We expect to submit our next report by February 11, 1983. We consider 10 CFR Part 21 applicable to this deficiency.

If you have any questions concerning this matter, 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

Mr. James McFarland (Enclosure)
Senior Project Manager
Babcock & Wilcox Company
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ENCLOSURE
BELLEFONTE NUCLEAR PLANT UNIT 1
REACTOR COOLANT PUMP IMPELLER TO SHAFT MISMATCH
NCR'S 1596 AND 1589
BLRD-50-438/81-61
10 CFR 50.55(e)
FIFTH INTERIM REPORT

Description of Deficiency

During testing conducted by the pump vendor (Bingham-Willamette, Portland, Oregon), the impeller for reactor coolant pump 1P1A2 expanded slightly because of thermal effects. To correct this condition, the vendor removed some material from the impeller. The removal of this material resulted in improper dimensional contact for the impeller shaft and restriction sleeve, which prevents acceptable fitup of the impeller to the shaft. The unacceptable fitup was discovered during pump installation at the plant site. Onsite review of the vendor's data package for this pump revealed discrepancies in the documentation for posttest inspection. The data package states that the impeller taper was reground and the impeller refit before shipment; but in actuality, the impeller was never refit. These deficiencies resulted from inadequate inspection to verify and document proper fitup after regrinding the impeller. Nonconformance report (NCR) 1589 documents the unacceptable fitup, and NCR 1596 describes the documentation discrepancies in the data package.

This deficiency does not exist for the other three unit 1 reactor coolant pumps. Proper impeller-shaft fitup has not yet been verified at the plant site for the unit 2 pumps; however, the vendor has confirmed that of the eight Bellefonte reactor coolant pumps (four per unit), only the impeller for pump 1P1A2 was reground. The shaft for unit 2 pump 2P1A1 was returned to the vendor for remachining because it lacked a keyway. This condition was documented by NCR 1388.

Interim Progress

NCR 1589

The shaft and impeller for pump 1P1A2 were returned to the vendor for remachining. The remachining has been completed and the impeller and shaft have been returned to the plant site.

NCR 1596

On September 15, 1982, B&W informed TVA that the schedule for submittal of revised documentation has slipped to December 1, 1982. After submittal, TVA will evaluate this document and forward more information in its next report.