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

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October 24, 1985

WBRD-50-390/85-42
WBRD-50-391/85-41

U.S. Nuclear Regulatory Commission
Region II
Attention: Dr. J. Nelson Grace, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Dear Dr. Grace:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - INAPPROPRIATE SEALS IN THE ESSENTIAL RAW COOLING WATER PUMP CLUTCH ASSEMBLY - WBRD-50-390/85-42, WBRD-50-391/85-41 - INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector Al Ignatonis on September 24, 1985 in accordance with 10 CFR 50.55(e) as NCR W-255-P. Enclosed is our interim report. We expect to submit our next report on or about February 11, 1986.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. A. Domer

J. W. Hufham, Manager
Licensing and Risk Protection

Enclosure
cc: Mr. James Taylor, 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

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
INAPPROPRIATE SEALS IN THE ESSENTIAL RAW COOLING WATER PUMP CLUTCH ASSEMBLY
WBRD-50-390/85-42, WBRD-50-391/85-41
NCR W-255-P
10 CFR 50.55(e)
INTERIM REPORT

Description of Deficiency

In correcting a deficiency in the Siemens-Allis 800 hp, 1200 r/min, 6600V, type ANV-OD essential raw cooling water (ERCW) pump motors' antireversing mechanisms (reported to NRC-Region II as WBRD-50-390/84-30 and 50-391/84-27) TVA identified a problem with the Formsprag clutches being used to correct the original discrepant condition. Inspection of one of the clutches revealed that the oil seal in the clutch was leaking lubricant. Further investigation revealed that this type of seal was normally used in horizontal applications. However, for the Watts Bar Nuclear Plant (WBN) ERCW pumps, the clutches are used in a vertical position.

The apparent cause of this deficiency was Siemens-Allis' failure to coordinate the clutch application at WBN with the clutch manufacturer which resulted in the wrong seals being used in the clutches supplied to TVA.

Safety Implications

Use of the incorrect seal in the Formsprag clutches could have led to a complete loss of clutch lubricant during operation and possible clutch burnout. This could subsequently cause a failure of the respective ERCW pump. Because this is a common mode problem, more than one ERCW pump could be affected within a short period of time. Postulated failures of these pumps could adversely affect plant safety.

Interim Progress

We returned the clutches to the vendor and had the seals replaced with ones suitable for vertical application as well as having the lubricant replaced with a type grease recommended by the clutch manufacturer. After modifications were completed, the clutches were returned to WBN and reinstalled in the pump motors. Formsprag personnel then visited the site and inspected and approved the application of the clutches to the WBN pump motors.

We are contacting Siemens-Allis to determine the corrective action required to prevent recurrence of this problem.

We expect to provide our next report on this matter on or about February 11, 1986.