DMB

TENNESSEE VALLEY AUTHORITY
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MAY 20 A9:36

May 16, 1986

WBRD-50-390/86-48
WBRD-50-391/86-45

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 - LEAKAGE IN LOWER SEALS OF THE ESSENTIAL RAW COOLING WATER CLUTCH ASSEMBLY - WBRD-50-390/86-48, WBRD-50-391/86-45 - INTERIM REPORT

The subject deficiency was initially reported to NRC-Region II Inspector Brian Debs on April 18, 1986 in accordance with 10 CFR 50.55(e) as NCR W-377-P. Enclosed is our interim report. We expect to submit our next report on or about July 16, 1986.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

R. L. Gridley, by RHS

R. L. Gridley, Director
Nuclear Safety and Licensing

Enclosure
cc: Mr. James Taylor, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Records Center (Enclosure)
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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
LEAKAGE IN LOWER SEALS OF THE ESSENTIAL RAW
COOLING WATER CLUTCH ASSEMBLY
WBRD-50-390/86-48, WBRD-50-391/86-45
NCR W-377-P
10 CFR 50.55(e)
INTERIM REPORT

Description of Deficiency

During a routine maintenance inspection of newly replaced seals on all the "B" train Siemens-Allis, 800 Hp, 1200 r/min, 6600V type ANV-OD essential raw cooling water (ERCW) pump motors (E-B, F-B, G-B, and H-B), the lower seals of the antireverse Formsprag-Warren clutches were found to be leaking grease. The grease was leaking into the oil of the upper bearing reservoir and splashing the oil on the clutch. Eight replacement seals had been ordered through a local distributor, Mechanical Drives, Incorporated. The seals were ordered by model number of the clutch and a description indicating that the seals should be adequate for a nonreverse backstop on a vertical motor.

Safety Implications

Excessive grease leakage into the upper bearing oil reservoir could significantly increase the viscosity of the oil (greater than 2 percent). This condition could result in complete loss of clutch lubricant during operation or overheating of the motor bearings due to this increased viscosity. Such conditions could result in complete loss of the ERCW pump. Because this is a common mode problem, more than one ERCW pump could be affected. Therefore, this condition could adversely affect the safe operation of the plant.

Interim Progress

Representatives from Siemens-Allis and Formsprag-Warren visited Watts Bar Nuclear Plant (WBN) on April 14 and 15, 1986, to inspect the clutch leakage. The manufacturers indicated that the purging of excess grease is normal for the clutch. However, it was also pointed out by the manufacturer that five of the clutches had the wrong seals. The replacement seals which were supplied to TVA were not adequate for vertical application.

TVA and the manufacturer representatives determined that the clutches still maintained adequate lubrication. Since the grease leakage increases the bearing oil viscosity, a minor modification to the oil baffle would need to be made to prevent the purged grease from leaking into the oil reservoir.

TVA is still in the process of investigating this condition. Our next report will be provided to NRC on or about July 16, 1986.