

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

September 10, 1981

WBPD-50-390/81-43
WBPD-50-391/81-42

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:

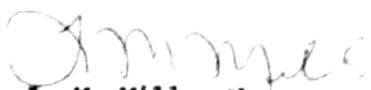
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - MOTORS RATED 440 VOLTS ON A 480-VOLT SYSTEM - WBPD-50-390/81-43, WBPD-50-391/81-42 - SECOND INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. V. Crlenjak on April 27, 1981 in accordance with 10 CFR 50.55(e) as NCR WBN EFB 8104. Our first interim report was submitted on May 27, 1981. Enclosed is our second interim report. We expect to submit our next report by October 16, 1981. This deficiency has also been reported on Sequoyah Nuclear Plant as nonconformance report SORD-50-327/81-36 (SQN EFB 8111).

If you have any questions, please get in touch with D. L. Lambert at PFS 857-2581.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



L. M. Mills, Manager
Nuclear Regulation and Safety



Enclosure

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

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ENCLOSURE
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
MOTORS RATED 440 VOLTS ON A 480-VOLT SYSTEM
10 CFR 50.55(e)
WBRD-50-390/81-34 and WBRD-50-391/81-42
SECOND INTERIM REPORT

Description of Deficiency

There are 14 motors that have a nameplate voltage rating of 440 volts ac and are supplied from the 480-volt ac Class 1E auxiliary power system of units 1 and 2. NEMA MG1-12.43, 1967, requires that induction motors must be capable of operating under the steady-state running conditions with a voltage variation of plus or minus 10 percent at rated frequency. The maximum voltage these motors can withstand is 484 volts. This contrasts with 506 volts that a motor rated 460 volts can withstand. TVA design allows a maximum voltage of 506 volts at the motor terminals, which is 15 percent above rated voltage for those motors rated 440 volts. This discrepancy was discovered in the preparation of the field nameplate verification list on the 480-volt shutdown board load.

Interim Progress

Since the first interim report was written, it has been determined that the diesel generator lube oil circulating pumps and the control bay sump pumps are not Class 1E and are not necessary for safe shutdown of the plant. Only the auxiliary feedwater pump lube oil pumps remain to be qualified.

TVA is in the process of contacting the vendors of the affected motors to determine if the motors are actually rated 460 volts ac or if the motors can withstand a normal operating voltage of the 460 volts plus 10 percent or 506 volts. If the former is correct, the vendor will be requested to supply new nameplates indicating the correct rating. If the latter is true, the vendor will be requested to submit documentation supporting their judgment. If both are false, new motors rated 460 volts will be required.