

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

April 9, 1982

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WBRC-50-390/81-53
WBRC-50-391/81-51

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:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - CLASS 1B ELECTRICAL COMPONENTS FOR
ERCW TRAVELING SCREENS - WBRC-50-390/81-53, WBRC-50-391/81-51 - FINAL
REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
R. V. Crlenjak on May 18, 1981 in accordance with 10 CFR 50.55(e) as NCR
WBRC NEB 8112. Interim reports were submitted on June 17 and August 3, 1981
and February 23, 1982. Enclosed is our final report. This deficiency was
also reported for Sequoyah Nuclear Plant unit 2 as NCR SQN NEB 8126.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure

cc: Mr. Richard C. DeYoung, 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
CLASS IE ELECTRICAL COMPONENTS FOR ERCW TRAVELING SCREENS
10 CFR 50.55(e)
WBRD-50-390/81-53, WLSO-50-391/81-53
NCR WBN NEB 6112
FINAL REPORT

Description of Deficiency

Electrical components required for the operation of the ERCW traveling screens are not Class IE. PSAP section 9.2.2 states that the components are required for operation of the ERCW System. All electrical components essential to operation of the ERCW System are required to be Class IE (IEEE Std. 308). This deficiency occurred because of either a failure to specify that this equipment be Class IE during preparation of procurement documents or to the unavailability of qualified equipment.

Safety Implications

Electrical and control equipment associated with the ERCW traveling screens could fail and result in the screens not operating as required. This failure could result in the screens becoming clogged and engineered safety features not being provided with cooling water. This condition could result in multiple failure of safety-related systems, thus endangering the safe operation of the plant.

Corrective Actions

TVA has evaluated the electrical components for the ERCW traveling screens and determined that the following components were not designed and procured as Class IE:

- (1) Low speed detector switches
- (2) Traveling screen drive motors

The final corrective actions for these components will be as follows:

- (1) For the low speed detector switches, TVA has performed a failure evaluation and determined that the failure mode of these components could result in the failure of the circuit feeding the drive motors. In order to prevent this type of failure, TVA will rewire the low speed detector switches so that their failure will not affect the operation of the screen drive motors. If a low speed detector switch were to fail and the traveling water screen became inoperable and if debris were to collect on the traveling screens, the differential level detection system would detect a flow restriction and alert the main control room.

- (2) The traveling water screens drive motors were not initially designed and procured as Class IE. Contact with the manufacturer has revealed that the existing motors can be qualified to meet Class IE criteria. Therefore, the existing drive motors will be reclassified as Class IE and appropriate documentation obtained from the manufacturer.

The work on the low speed detector switches will be completed by August 6 and the work on the traveling screen drive motors will be completed by June 6, 1982. To prevent recurrence, TVA will integrate the commitments in FSAR section 9.2.2, regarding requirements for the ERCW traveling screens to be Class IE, into Watts Bar Nuclear Plant Design Criteria No. WB-DC-20-20 by June 1, 1982.