TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

July 6, 1982

SQRD-50-328/81-40

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

Dear Mr. O'Reilly:

SEQUOYAH NUCLEAR PLANT UNIT 2 - CLASS 1E ELECTRICAL COMPONENTS FOR ERCW TRAVELING SCREENS - SQRD-50-328/81-40 - <u>FINAL REPORT</u>

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 SQN NEB 8126. Our first, second and third interim reports were submitted on June 17, August 3, 1981 and February 19, 1982, respectively. Enclosed is our final report on the subject deficiency.

If you have any questions, please call R. H. Shell at FTS 858-2676.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills

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, DC 20555

SEQUOYAH NUCLEAR PLANT UNIT 2
CLASS 1E ELECTRICAL COMPONENTS FOR ERCW TRAVELING SCREENS
10 CFR 50.55(e)
NCR SQN NEB 8126
FINAL REPORT

Description of Deficiency

Electrical components required for the operation of the ERCW traveling screens are not Class 1E. FSAR section 9.2.2 states that the screens are required for operation of the ERCW system. All electrical components essential to operation of the ERCW system are required to be Class 1E (IEEE Std. 308). This deficiency occurred because either a failure to specify that this equipment be Class 1E 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 traveling as required. This failure to travel could result in the screens becoming clogged and engineering 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 Action

TVA had previously evaluated the electrical components for the ERCW traveling screens and determined that the following components were not designed and procured as Class 1E.

(1) Differential level diaphragms
(2) Low speed detector switches
(3) Traveling screen drive motors

The final corrective actions will be as follows:

(1) TVA has reevaluated the differential level diaphragm and associated components and determined that its electrical components are Class 1E. Certain mechanical components associated with the differential level detection system cannot be seismically qualified. However, they have been installed in a fail safe operation. Therefore, these components will not need to be replaced.

(2) 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 was 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. Work will be completed before startup following the end of the first refueling outage.

(3) The traveling water screens drive motors were not initially designed and procured as Class 1E. Contact with the manufacturer has revealed that the existing motors can be qualified to meet Class 1E criteria. Therefore, the existing drive motors will be reclassified as Class 1E and appropriate documentation obtained from the manufacturer by September 1, 1982.