OFFICIAL COPY

To: Don Quick

400 Chestnut Street Tower II

July 10, 1981 From: David Lambert

SQRD-50-328/81-22

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:

SEQUOYAH NUCLEAR PLANT UNIT 2 - FLOW DEFICIENCY IN ERCW SYSTEM - SQRD-50-328/81-22 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. V. Crlenjak on March 4, 1981, in accordance with 10 CFR 50.55(e) as NCR SQN SWP 8107. Interim reports were submitted on April 3, April 27, and May 28, 1981. Enclosed is our final report.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

~~RL:DAK:ATK~~
~~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

SEQUOYAH NUCLEAR PLANT UNIT 2
FLOW DEFICIENCY IN ERCW SYSTEM
SQRD-50-328/81-22
10CFR50.55(e)
FINAL REPORT

Description of Deficiency

During the preoperational test of the unit 2 Essential Raw Cooling Water System (ERCW) which simulated the worst operating case, which is unit 1 in hot standby condition and unit 2 in a post LOCA condition, with the loss of (1) offsite power, (2) downstream dam, and (3) train B diesel generators, the flow rate requirements to several components required for safe shutdown could not be met. The total system flow rate measured in the test was approximately 2,500 gpm less than the required design flow rate of 22,000 gpm. A portion of the flow deficiency can be attributed to the excessive pressure drop across the strainers, which has been covered by another nonconformance report (NCR SQNEES8006 R1).

Safety Implications

The flow deficiencies in certain loops of the ERCW System indicated a possible inadequacy of these loops' capability to remove the specific heat load required of them under the worst condition of two-unit operation. Failure to remove sufficient heat from the components served by the ERCW could result in loss of equipment necessary for a safe shutdown and ultimately in excessive core damage.

Corrective Action

In our last report on this subject, we stated that unit 2 will not be operated when the ERCW cooling water inlet temperature exceeds 75°F. Subsequent reevaluation of the heat loads on various components and cleaning of certain portions of the piping and equipment have allowed us to remove this limitation. Preoperational test results now show that flow to individual components is sufficient for the design basis accident with operation of units 1 and 2 for ERCW cooling water inlet temperature up to the design basis temperature of 82°F.

TVA is evaluating the design basis flows to develop flow versus temperature limitations for all components. This data will be used in an inservice surveillance program being formulated by TVA and for continued operating guidelines for the plant.

TVA is also evaluating the system to identify any additional changes that would improve the overall performance of the ERCW system.