

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

November 5, 1980

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 AND WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 -
AFWS DESIGN DEFICIENCY - NCR SQN EEB 8021 AND NCR WBN EEB 8007 - FINAL
REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
M. Thomas on October 7, 1980, in accordance with 10 CFR 50.55(e).
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

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 AND WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 AUXILIARY FEEDWATER SYSTEM DESIGN DEFICIENCY

SQN EEB 8021 AND WBN EEB 8007

10 CFR 50.55(e)

FINAL REPORT

Description of Deficiency

During a design review of the Class 1E control power channels, it was discovered that the turbine-driven auxiliary feedwater pumps at Watts Bar units 1 and 2 and Sequoyah unit 2 do not receive instrument control power from an electric channel that is distinct from the channels serving the electric pumps as stated in the FSAR's. As a result, a single failure could cause loss of the auxiliary feedwater system when needed following certain events. A major feedwater line rupture, on either steam generator 3 or 4, concurrent with loss of Channel 1-I vital instrument power for Watts Bar unit 1, Channel 2-III vital instrument power for Sequoyah unit 2 or Watts Bar unit 2, could prevent the Auxiliary Feedwater System from operating as required. The major line rupture could disable train B electric pump, and loss of the noted vital instrument power would disable both train A electric pump and the turbine-driven pump of the Auxiliary Feedwater Systems.

Safety Implications

The Auxiliary Feedwater System supplies, in the event of a loss of the main feedwater supply, sufficient feedwater to the steam generators to remove primary system stored and residual core energy. Loss of this safety system could adversely affect the safety of operations of the plant.

Corrective Action

Modifications will be made to provide a control power supply to the turbine-driven pump of the auxiliary feedwater system that is independent of the control power supplies for the motor-driven electric pumps. Modifications will be completed by September 1981 for Watts Bar unit 1, June 1982 for Watts Bar unit 2, and February 1981 for Sequoyah unit 2. All TVA design project managers have been notified of this problem to prevent any recurrence.

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November 5, 1980

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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 - ESSENTIAL RAW WATER COOLING WATER
PUMPS - NCR 2461R - FIRST INTERIM REPORT

The subject condition was initially reported to NRC-OIE Inspector M. Thomas on October 6, 1980, in accordance with 10 CFR 50.55(e). TVA considers 10 CFR 21 to be applicable to this nonconformance. Enclosed is our first interim report. We expect to provide additional information by January 22, 1981.

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

Enclosure

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Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

ENCLOSURE
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
ESSENTIAL RAW COOLING WATER PUMPS
NCR 2461R
10 CFR 50.55(e)
FIRST INTERIM REPORT

Description of Deficiency

The deficiency was identified as the result of an inspection of one essential raw cooling water (ERCW) pump to determine the origin of a noise during startup. The inspection revealed damage to the stud spacers and washers which hold down the antireverse backstop pins. This damage consisted of bent washers and spacers. Subsequent inspection revealed similar damage to the stud spacers and washers which hold down the antireverse backstop pins in the remaining ERCW pumps.

Corrective Action

The Tennessee Valley Authority (TVA) is presently coordinating an investigation with Siemens-Allis (S-A) concerning the damage associated with the antireverse backstop pins. One set of damaged washers and stud spacers have been returned to S-A for evaluation. S-A will recommend corrective action for TVA's review when their evaluation is complete.

In the interim, TVA has implemented a program to routinely inspect the ERCW pumps for excessive damage to the stud spacers or washers. Washers which exhibit excessive damage will be replaced with a commercial grade washer recommended by S-A. One ERCW pump is presently having this interim action taken and should be completed by November 15, 1980. Stud spacers which exhibit excessive damage will require the ERCW pump to be taken out of operation since no interim action has been recommended and approved.