

830 Power Building

FEB 23 1978

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 1217
230 Peachtree Street, NW.
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - REPORTABLE CONDITION IN ICE
CONDENSER COLLAR STUDS IN CRANE WALL - NCR 12 (SITE NO. 1013R) - FINAL
REPORT

The subject reportable condition was initially reported to NRC-OIE
Region II, Inspector Bruce Cochran, on January 23, 1978. Enclosed is
our final report.

Very truly yours,

J. E. Gilleland
Assistant Manager of Power

Enclosure

cc: Dr. Ernst Volgenau, 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 REPORTABLE CONDITION IN ICE CONDENSER COLLAR STUDS IN CRANE WALL NCR 12 (SITE NO. 1013R)

Final Report

Description of Condition

Contrary to the design requirements listed in the Watts Bar Nuclear Plant FSAR, ice condenser collar studs over 5/8 inch in diameter were not tested for impact with the Charpy V-Notch (CVN) test. The CVN test requirements were not included in the original purchase specifications for these studs.

Safety Implication Statement

The ice condenser collar studs fasten the ice condenser lattice frames to the cranewall. The use of unqualified studs may have compromised the integrity of the ice condenser under all design loads.

Corrective Action

As soon as the deficiency was discovered, samples of the ice condenser collar studs were taken to TVA's Singleton Lab for CVN testing. The results of these tests indicated that the studs did not meet the CVN specifications. Following these tests, TVA consulted Westinghouse on an alternative test to qualify the ice condenser collar studs. Westinghouse indicated that the Hammer Bend test, as outlined in AWS D.1.1, paragraph 4.2.9.1.1, was a more meaningful test for these studs. Additionally, TVA required that a flexure test, as outlined in AWS C.5.4, paragraph 7.2.2.1, also be performed. The ice condenser collar studs from the Watts Bar Nuclear Plant met or exceeded the requirements set forth in these two AWS Standards when tested at temperatures of 70°F, 20°F, and -20°F. Based on the satisfactory completion of these tests, TVA and Westinghouse believe that the ice condenser studs are tough enough to adequately support design loads.

The Watts Bar Nuclear Plant FSAR will be revised to include the new testing requirements for the ice condenser collar studs.