TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401

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December 2, 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 - REVISED PIPE BREAK LOCATIONS - NCR WBN CEB 8010 - FINAL REPORT

The subject condition was initially reported to NRC-OIE Inspector R. W. Wright on October 30, 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

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
REVISED PIPE BREAK LOCATIONS
NCR WBN CEB 8010
10 CFR 50.55(e)
FINAL REPORT

Description of Deficiency

During a TVA evaluation update of piping analyses performed by EDS Nuclear, Incorporated, and others, it was discovered that certain TVA design groups were not using the contractor's latest revisions of break location summaries for the design of pipe rupture protective devices. These summaries postulate locations of pipe breaks and break types in high energy piping. Break locations and/or types of breaks have changed on numerous high energy lines due to revised stresses and/or usage factors. As a result, additional sleeves, barriers, and restraints may be required.

Safety Implications

The piping in question is located in various safety-related systems, including the Residual Heat Removal System and the Safety Injection System. Because of the revised pipe break locations, some protective devices may not be located in the proper positions. As a result, equipment necessary for the safe shutdown of the plant could have been damaged, which could have adversely affected the safety of the plant.

Corrective Action

TVA is reviewing new break locations and break types resulting from the revised analyses of the high energy lines. Design changes on protective devices will be made as required. Modifications will be completed by August 1981 for unit 1 and May 1982 for unit 2. The importance of careful handling of break location summaries has been emphasized to responsible design groups to prevent recurrence.