TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

September 7, 1982

WBRD-50-390/82-23
WBRD-50-391/82-21

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

Dear Mr. O'Reilly:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - ISOLATION VALVES ADDED TO WASTE GAS DECAY TANK VENT LINE VIOLATE PRESSURE RELIEF REQUIREMENTS - WBRD-50-390/82-23, WBRD-50-391/82-21 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. V. Crlenjak on February 10, 1982 in accordance with 10 CFR 50.55(e) as NCR WBN SWP 8203. Interim reports were submitted on March 15 and May 28, 1982. Enclosed is our final report.

If you have any questions, please get in touch with R. H. Shell at FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

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, D.C. 20555

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
ISOLATION VALVES ADDED TO WASTE GAS DECAY TANK VENT LINE
VIOLATE PRESSURE RELIEF REQUIREMENTS
10 CFR 50.55(e)
NCR WBN SWP 8203
WBRD-50-390/82-23, WBRD 50-391/82-21
FINAL REPORT

Description of Deficiency

Isolation valves (524 and 525) for radiation monitor (RE-90-118) added to the waste gas decay tanks vent line by Engineering Change Notice (ECN) 1993 (to comply with NUREG-0472) result in violation of ANSI B31.1 which requires that there be no stop valves downstream of a pressure relief valve. The relief valves protect the safety Class III waste gas decay tanks from overpressurization. The assignable cause of this deficiency is failure to recognize the code conflict on the part of the systems designer and reviewer who should have known of this requirement.

Safety Implications

Closing isolation valves 524 and 525 during the calibration of radiation monitor (RE-90-118) would result in blockage of the pressure relief valves for the waste gas decay tanks. This could lead to the possible overpressurization and rupture of these tanks, thereby releasing radioactive gas in the auxiliary building.

Corrective Action

TVA ECN 3419 has been initiated to change the tie-in of the relief valve manifold line to a point downstream of valve 524 to be in compliance both with ANSI B31.1, section 122.6.1 and NUREG-0472. This change will be completed before fuel loading of unit 1. To prevent recurrence, a note has been added to the piping drawing referencing ANSI B31.1, section 122.6.1 and NUREG-0472; additionally, TVA's Quality Assurance Branch has written a memorandum informing all projects to check their waste disposal system for this condition. Actions to prevent recurrence concerning improper review and coordination will be addressed in our response to audit M 81-13, Deficiency No. 5, Generic Deficiency in Design Review.