

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA TENNESSEE 37401
400 Chestnut Street Tower II

August 29, 1983

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WBRD-50-390/83-46
WBRD-50-391/83-45

U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

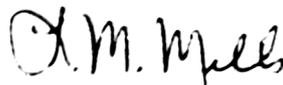
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - ROUTING OF RADIOACTIVE AND
NONRADIOACTIVE SYSTEM INSTRUMENT LINES - WBRD-50-390/83-46, WBRD-50-391/83-45 -
FIRST INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector Linda Watson on July 29, 1983 in accordance with 10 CFR 50.55(e) as NCR WBN W-130-P. Enclosed is our first interim report. We expect to submit our next report on or about October 4, 1983.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY



L. M. Millis, Manager
Nuclear Licensing

Enclosure

cc (Enclosure):

Mr. Richard C. DeYoung, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Records Center
Institute of Nuclear Power Operations
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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
ROUTING OF RADIOACTIVE AND NONRADIOACTIVE SYSTEM INSTRUMENT LINES
NCR W-130-P
WBRD-50-390/83-46, WBRD-50-391/83-45
10 CFR 50.55(e)
FIRST INTERIM REPORT

Description of Deficiency

TVA drawing 47W600-0-4 requires that systems which present a radiation hazard must have instrument panel drains routed to the closed drain systems and any high point vents must also have the drain line routed to closed drain systems. Instruments from these systems are often installed on the same local panel with instruments from other plant systems which do not present a radiation hazard. When the 47W600 series drawings show a closed drain panel, all instruments installed on that panel, regardless of system number, are shown routed to the closed drain and hence the high point vents are also field routed to the closed drain. This presents the possibility of radiation entering systems not containing radioactive materials through instrument sense line drain valves and high point vent valves. In addition, this practice allowed nitrogen from a cold leg accumulator No. 4 pressure transmitter high point vent to enter the component cooling system via the high point vent for the loop 4 reactor coolant pump's (RCP) motor oil cooler flow transmitter. Enough nitrogen entered the system to cause the component cooling system pumps to cavitate. This is a source of potential common mode failure for this system.

Interim Progress

TVA is reviewing the system design and configuration in order to identify any inherent design weaknesses and to evaluate the options available for resolution of the concern. Two of the options presently being considered are rerouting of the nonradioactive hazard drain and vent lines and the imposition of administrative controls to ensure that no crosstie is open. TVA will submit another report by October 4, 1983, when our evaluation is complete.