

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

WBRD-50-390/83-70
WBRD-50-391/83-65

84 FEB 17 A 8:55 February 15, 1984

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:

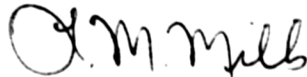
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - CONTROL ROOM PRESSURIZATION BOUNDARY
LOSS THROUGH FLOOR AND EQUIPMENT DRAINS -WBRD-50-390/83-70, WBRD-50-391/83-65 -
THIRD INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
P. E. Fredrickson on November 21, 1983 in accordance with 10 CFR 50.55(e) as NCR
WBN WBP 8335. Interim reports were submitted on December 21, 1983 and
January 24, 1984. Enclosed is our third interim report. We expect to submit
our next report on or about April 2, 1984.

If you have any questions, please get in touch with R. H. Snell at
FTS 858-2474.

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

Records Center (Enclosure)
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
CONTROL ROOM PRESSURIZATION BOUNDARY LOSS THROUGH FLOOR AND EQUIPMENT DRAINS
NCR WBN WBP 8335
WBRD-50-390/83-70, WEND-50-391/83-65
10 CFR 50.55(e)
THIRD INTERIM REPORT

Description of Deficiency

Floor and equipment drains as well as potable water lines which penetrate the floor slab of the main control room were designed without considering the need to prevent the loss of the main control room habitability system (MCRHS) pressure boundary. As such, a method to ensure that pipe traps maintain enough water to seal off the leak paths between the MCRHS and other areas during control room isolation has not been provided, nor are the pipes supported to maintain their pressure boundary in a seismic event.

The design discrepancy was discovered while implementing the corrective action for NCR WBN QAB 8204 (WBRD No. 50-390/82-71, 391/82-66). This was caused by a lack of procedural controls which would assure identification of all piping requiring seismic supports and would ensure that piping would be analyzed and supported.

Interim Progress

The floor and equipment drain lines are being redesigned and seismically supported to maintain both the pressure boundary and water seals in the traps. To maintain the water seals the traps are being moved from their present location at elevation 742' to a point just downstream from the last tributary branch line at elevation 750'-2" where a direct connection to the potable water system will provide a continuous drip supply of water to the seals.

The potable water system lines are being redesigned and seismically supported as follows:

1. Two check valves will be installed in the 2-inch potable water supply line. The pipe will be seismically supported to maintain its pressure boundary from the floor penetrations to the upstream check valve. Any pipe breaks upstream of the check valves will not cause depressurization of the control room.
2. A manually-operated butterfly valve will be installed in the 4-inch vent line just below the ceiling slab at elevation 722+'. The piping will be seismically supported to maintain pressure boundary integrity from the slab to the valve. Since the valve location is within the habitability zone, an operator can be dispatched to close this valve if necessary.
3. Two motor-operated plug valves will be installed in the 4-inch waste drain piping downstream of the last tributary branch line. The pipe will be seismically supported from the floor slab penetrations to the downstream valve. The control panel will be located within the habitability zone.

We will provide a final report on this matter upon completion of the piping analysis and determination of the support scheme.