

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

USNRC REGION II
ATLANTA, GEORGIA

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June 24, 1983

WBRD-50-390/83-24
WBRD-50-391/83-23

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 - SPACING AND CLEARANCE IN HPFP
SPRINKLER SYSTEMS IN AUXILIARY BUILDING - WBRD-50-390/83-24,
WBRD-50-391/83-23- SECOND INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
L. Watson on March 31, 1983 in accordance with 10 CFR 50.55(e) as
NCR W-110-P. Our first interim report was submitted on April 28, 1983.
Enclosed is our second interim report. We expect to submit our next report
on or about October 5, 1983.

If you have any questions, please get in touch with R. H. Shell at
FTS 858-2088.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills
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
SPACING AND CLEARANCE IN HPPF SPRINKLER SYSTEMS IN AUXILIARY BUILDING
NCR W-110-P
WBRD-50-330/83-24, WBRD-391/83-23
10 CFR 50.55(e)
SECOND INTERIM REPORT

Description of Deficiency

Sprinkler systems located in the Auxiliary Building have not been installed in strict compliance with National Fire Protection Association (NFPA) Standard 13. TVA committed to compliance with this standard in a letter from J. E. Gilleland (TVA) to R. S. Boyd (NRC) dated April 18, 1977.

The deviations from NFPA 13 are of the following types:

1. Sprinkler head located less than six feet apart with no intervening structure or baffle to prevent cold soldering.
2. Sprinkler head spray patterns significantly reduced by proximity of seismically qualified pipe hangers, HVAC duct, conduit, cable trays, and pipe.
3. Incomplete sprays coverage due to item number 2.
4. Sprinkler heads located beyond maximum allowable distance below ceiling with no heat collectors.
5. Sprinkler heads damaged by construction activities.

The root cause of this nonconforming condition was due to the following circumstances. A working agreement between construction and design organizations to expedite resolution of interferences encountered in installing the fire protection sprinkler piping was initiated by an internal memorandum. TVA's Division of Construction (CONST) was to temporarily install fire protection piping to avoid interferences with other piping system which were already in place and make an effort to follow design routing as closely as practical. The temporary installation would then be given a preliminary approval by onsite design personnel and submitted to TVA's Division of Engineering Design (EN DES) by field change request (FCRs) for full design review before approving the final installation configuration. However, the temporary installation became the controlling factor in the design approval process. Thus complete review and coordination by affected design organizations were not accomplished. This is a violation of engineering procedure (EP) 4.03, "Field Change Requests Initiated by Construction." It has been determined that this particular violation of EN DES-EP 4.03 does not affect other TVA nuclear plants.

Interim Progress

An inspection team consisting of personnel from EN DES, CONST, and TVA's Division of Nuclear Power (NUC PR) have conducted a walk-down of the sprinkler systems within the reactor building, control building, auxiliary building, intake pumping station, diesel generator building, security power and back-up building, transformer yard, and unit 1 annulus. Existing discrepancies were identified and corrective actions are being determined. These actions will be implemented under engineering change notice (ECN) 3867.