

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
5th 157B Lookout Place

January 30 2 1986

WBRD-50-390/85-61
WBRD-50-391/85-57

U.S. Nuclear Regulatory Commission
Region II
Attention: Dr. J. Nelson Grace, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Dear Dr. Grace:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - CATEGORY I AND I(L) INSTRUMENT BOLTING
REQUIREMENTS - WBRD-50-390/85-61, WBRD-50-391/85-57 - SECOND INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
Al Ignatonis on November 12, 1985 in accordance with 10 CFR 50.55(e) as NCR
WBN 6397. NCR WBN 6449 was later added to cover the deficiency for unit 2.
Our first interim report was submitted on January 3, 1986. Enclosed is our
second interim report. We expect to submit our next report on or about
April 30, 1986.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY


R. L. Gridley
Manager of Licensing

Enclosure

cc: Mr. James Taylor, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Records Center (Enclosure)
Institute of Nuclear Power Operations
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ENCLOSURE
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
CATEGORY I AND I(L) INSTRUMENT BOLTING REQUIREMENTS
WBRD-50-390/85-61 AND WBRD-50-391/85-57
NCRs WBN 6397 AND 6449
10 CFR 50.55(e)
SECOND INTERIM REPORT

Description of Deficiency

During a review of tightness of unistrut clamps, component cooling level transmitter 2-LI-70-99A-B was observed as having a loose bolt attaching the mounting bracket to the mounting plate. On further review, it was discovered that instruments 1-FIS-74-12, 1-FIS-74-24, 1-FI-67-245, 1-FI-67-247, and 2-FI-70-200 were mounted to mounting plates with round-head machine screws (at least one per instrument) instead of bolts. All of the above instruments are seismic category I or I(L) and have documented installation inspections. However, Watts Bar Nuclear Plant (WBN) Quality Control Procedure (QCP) 3.06-7, does not require inspection for bolt type or tightness. Mounting bolts are normally supplied by the vendor with the instruments; therefore, mounting details outlined in TVA drawing series 47W600 do not specify type of bolting required for attaching instruments to mounting plates. In the absence of bolting requirements, TVA's Office of Construction (OC) has installed instruments using inconsistent fastener material and methods.

As a follow-up to the above deficiency which applies to units 1 and 2 instrumentation transferred from the OC to the Office of Nuclear Power (MUC PR), TVA has subsequently issued a nonconformance report (NCR) WBN 6449 for unit 2 instrumentation that has not been transferred to MUC PR to document a deficiency in procedure as to the type or tightness of category I/I(L) instrument fasteners. This NCR will also be included in the scope of this 10 CFR 50.55(e) report.

Safety Implications

Failure to implement adequate fastener and inspection requirements for category I/I(L) instrument mounting has resulted in inconsistent installation methods and material. Had this condition remained uncorrected, during a design basis seismic event the improper mounting could result in instrument inaccuracy or failure, leading to possible crucial judgment errors by the plant operator and/or protection channel failures which could adversely affect the safe operation of the plant.

Interim Progress

A sampling program has been initiated to review existing instrument installations in an effort to determine the extent of the fastener problem. Samples shall be taken from locally mounted and local panel mounted instruments in both units 1 and 2. A minimum of 100 instruments (70 local panel mounted and 30 locally mounted) shall be sampled. In addition, engineering change notice (ECN) 5957 is being issued to provide fastener specifications for seismic attachments of instruments.

Our next report will be provided to the NRC on or about April 30, 1986.