

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
5N 157B Lookout Place

AUG 11 1986

WBRD-50-390/86-59

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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:

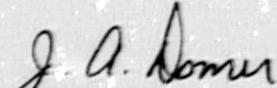
WATTS BAR NUCLEAR PLANT - UNIT 1 - QUALIFICATION OF ASCO SOLENOID OPERATED
VALVE CONDUIT CONNECTION CONFIGURATIONS - WBRD-50-390/86-59 - INTERIM REPORT

The subject deficiency was initially reported to NRC-Region II Inspector Morris Branch on July 11, 1986, in accordance with 10 CFR 50.55(e) as NCR W-416-P. Enclosed is our interim report. We expect to submit our final report by January 8, 1987.

If there are any questions, please get in touch with J. A. McDonald at (615) 365-8527.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



J. A. Doner
Mr. L. Gridley, Director
Nuclear Safety and Licensing

Enclosure

cc (Enclosure):

Mr. James Taylor, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20585

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

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNIT 1

QUALIFICATION OF ASCO SOLENOID OPERATED VALVE CONDUIT CONNECTION CONFIGURATIONS

WBRD-50-390/86-59

NCR W-416-P

10 CFR 50.55(e)

INTERIM REPORT

Description of Deficiency

Automatic Switch Company (ASCO) solenoid operated valves (SOVs) that require seismic mounting have been identified as being installed at Watts Bar Nuclear Plant (WBN) with conduit condulet configurations which have not been seismically qualified. In some cases, certain types of equipment are provided with manufacturer's "pigtail" cables that require field terminations or splicing to the TVA field cable. For the ASCO SOVs, condulets have been installed to the valve housing to permit this splice installation. In consideration of this additional condulet, a sketch of a typical field installation was approved by TVA's Division of Nuclear Engineering (DNE). However, this sketch did not address all the possible acceptable installations. As a result, DNE had not fully evaluated or provided adequate details for all installation configurations in which condulets have been installed to the ASCO SOVs.

Although the root cause has not been determined, the condition can be attributed to a lack of interface control between equipment which is seismically qualified and electrical wiring and conduit serving the equipment. Typically, the applicable TVA design drawings indicate the conduit size, type, and identifier, but do not detail all field material used at the conduit interfaces for equipment.

Safety Implications

All conduit connection configurations identified on ASCO SOVs that require seismic mounting have not been seismically qualified. Without further evaluation of the enveloping configurations, there is inadequate assurance that the valves could perform their design functions during a design basis seismic event. Consequently, this condition could adversely affect the safety of operations of the plant.

Interim Progress

TVA is continuing to investigate this deficiency, and is proceeding to determine various acceptable conduit condulet installation configurations for use with the ASCO SOVs that require seismic mounting. TVA is also evaluating this deficiency for applicability to other seismically mounted devices. TVA will provide the final report for this item to the NRC by January 8, 1987.