

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

July 6, 1982

WBRD-50-390/82-25

U.S. Nuclear Regulatory Commission  
Region II  
Attn: Mr. James P. O'Reilly, Regional Administrator  
101 Marietta Street, Suite 3100  
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

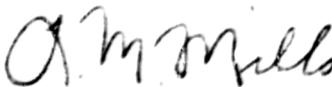
WATTS BAR NUCLEAR PLANT UNIT 1 - NUCLEAR INSTRUMENTATION SYSTEM (NIS)  
CONDUIT INSTALLATION - WBRD-50-390/82-25 - SECOND INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. V. Crlenjak on February 18, 1982 in accordance with 10 CFR 50.55(e) as NCR 3836R. Our first interim report was submitted on March 22, 1982. Enclosed is our second interim report. We expect to submit our next report on or about October 26, 1982.

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

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, DC 20555

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## ENCLOSURE

WATTS BAR NUCLEAR PLANT UNIT 1  
NUCLEAR INSTRUMENTATION SYSTEM (NIS) CONDUIT INSTALLATION  
NCR 3836R  
WRRD-50-390/82-25  
10 CFR 50.55(e)  
SECOND INTERIM REPORT

### Description of Deficiency

The electrical conduit system for the Nuclear Instrumentation System (NIS) cables was not installed per section 4.1 of the Westinghouse Electrical Corporation, Atomic Power Division, Instrumentation and Control Standards as noted on TVA conduit and grounding drawings.

In several instances, as specified in paragraph 2.3.5 of the above standard, minimum separation between the channel D NIS conduit system and potential electrical noise sources were not maintained.

The Westinghouse standard specifies a minimum separation of 2 feet from NIS conduits to electrical noise sources such as power circuits of 118 volts 10 amps and greater, fluorescent light fixtures, or circuits with switched loads such as relays or SCRs. A minimum separation of 6 feet from 460-volt (or higher) circuits is specified.

Due to the extreme congestion in the areas through which the NIS conduit system must be routed, it is virtually impossible to comply with the Westinghouse specified minimum NIS conduit separation from potential electrical noise source requirements.

This appears to be a condition that will also affect NIS channels E, F, G, and nondivisional circuits. As specific deficiencies are identified, they will be appropriately documented.

### Interim Progress

Additional deviations to the Westinghouse Standard for the Nondivisional and Channel E NIS circuits have been identified. In the initial review of Channels D and E conduit, TVA has found that 365 of the approximately 1000 identified conduit interferences contain low energy instrumentation cables which are not potential noise sources and will not require any corrective action.

TVA is continuing its investigation of the remaining NIS channels, F and G circuits, and is still in the process of determining what corrective action may be required to eliminate noise-induced problems with the NIS.