

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

October 26, 1982

WBRD-50-390/82-58  
WBRD-50-391/82-55

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:

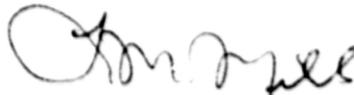
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - CONCRETE ANCHORAGE FREE EDGE  
VIOLATION - WBRD-50-390/82-58, WBRD-50-391/82-55 - SECOND INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector D. Quick on May 28, 1982 in accordance with 10 CFR 50.55(e) as NCR 4068R. Our first interim report was submitted on June 24, 1982. Enclosed is our second interim report which includes an expanded description of the deficiency. We expect to submit our next report on or about February 15, 1983.

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, D.C. 20555

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## ENCLOSURE

### WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 CONCRETE ANCHORAGE FREE EDGE VIOLATION

NCR 4068R

WBRD-50-390/82-58, WBRD-50-391/82-55

10 CFR 50.55(e)

### SECOND INTERIM REPORT

#### Description of Deficiency

In some instances, the G-32 specifications for space limitations for adequate spacing of anchor bolts have been violated. The bolts were spaced such that their right circular cone area for pullout is truncated. This represents a loss-of-concrete support for the bolt within the cone itself. These bolts are attached to a nonload bearing wall and are, in some instances, installed in grout instead of concrete. Grout has little or no resistance to pullout.

Also, there are several walls in the auxiliary building and control building which contain contraction joints and/or gaps as part of their design. These discontinuities are not always readily apparent. They must, however, be considered free edges for the purpose of anchor bolt installation. They occur mainly in non-structural (partition and shield) walls and fall into two categories - horizontal and vertical.

The horizontal gaps occur where partition and shield walls intersect the ceiling. These walls were designed with a two inch space at the top so that the ceiling above will not bear directly upon them. The two inch gap is obscured by a narrow mortar joint which was placed to prevent air flow. Since the mortar joint is not designed to transmit load, the joint must be considered a free edge. This circumstance occurs on all shield and partition walls in the control and auxiliary buildings. Specifically these show up on the following concrete drawing series: 41N483, 368, 370, 372, 383, 373, or 391 in the auxiliary building and 41N483 in the control building.

The vertical contraction joints are usually located in these same nonload bearing walls where they intersect columns or structural walls.

The perimeter walls of these buildings as well as the "C3" and "C11" walls in the control building; the "A5," "A11," "U," "X," and "Y" in the auxiliary building and various other structural walls are not subject to these problems.

The apparent cause is that this free-edge was not discernible at the time of inspection and installation of the anchor bolts.

#### Interim Progress

All walls which have these potential problems have been reinspected. A memorandum has been written to all supervisors responsible for the installation and inspection of anchor bolts advising them of the problems associated with the subject deficiency. Information concerning violation of free edge distances is still being evaluated.