

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

January 27, 1983

WBRD-50-390/83-02  
WBRD-50-391/83-02

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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:

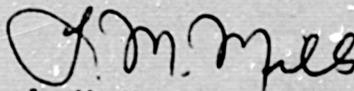
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - AUXILIARY INSTRUMENT ROOM FIRE DOOR  
FAILURE - WBRD-50-390/83-02, WBRD-50-391/83-02 - FIRST INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector  
R. V. Crlenjak on December 29, 1982 in accordance with 10 CFR 50.55(e) as NCR  
WBN MEB 8207. Enclosed is our first interim report. We expect to submit our  
next report on or about May 20, 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  
AUXILIARY INSTRUMENT ROOM FIRE DOOR FAILURE  
10 CFR 50.55(e)  
WBRD-50-390/83-02, WBRD-50-391/83-02  
NCR WBN MEB 8207  
FIRST INTERIM REPORT

Description of Deficiency

The double fire doors (C24) at the west end of the unit 2 auxiliary instrument room on control building elevation 713.0 failed during a CO<sub>2</sub> fire protection system concentration test conducted as part of preoperational test TVA-35A. The doors, which were designed to open into the room, were blown outward, hinges were bent, hinge screws were sheared, and the door frame was bent and separated from the wall. The failure occurred just prior to the end of a timed CO<sub>2</sub> discharge when the room pressure had reached approximately 12 inches of water and when the CO<sub>2</sub> concentration had reached 52 percent. The test acceptance criteria for concentration was 50 percent.

Identical doors did not fail during a concentration test conducted in the unit 1 auxiliary instrument room. No damage has resulted from over-pressurization in previous CO<sub>2</sub> system tests in other areas at Watts Bar and at other TVA nuclear plants except as noted in Sequoyah Nuclear Plant nonconformance report SQNMEB7942 (dated December 5, 1979). This exception involved a structural deficiency that was peculiar to Sequoyah.

Although room pressure was monitored during the concentration tests, no acceptance criteria for the pressure was specified in the preoperational test instruction. Such criteria were omitted since the personnel establishing the preoperational test requirements did not expect room pressures during the concentration test that would result in any structural damages.

Interim Progress

TVA is currently evaluating the door failure and the pressure limiting structural elements associated with doors, walls, and ventilation ducting in all CO<sub>2</sub> protected areas at Watts Bar. Before continuing the CO<sub>2</sub> concentration test at Watts Bar, acceptance criteria will be established for maximum allowable room pressures and procedures will be established for stopping a test before these pressures are exceeded.