



Tennessee Valley Authority, Post Office Box 2000, Decatur, Alabama 35609-2000

April 10, 1997

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

Gentlemen:

In the Matter of	)	Docket Nos. 50-259
Tennessee Valley Authority	)	50-260
		50-296

BROWNS FERRY NUCLEAR PLANT (BFN) UNITS 1, 2, AND 3 - RESPONSE  
TO THE NUCLEAR REGULATORY COMMISSION (NRC) REQUEST FOR  
ADDITIONAL INFORMATION (RAI) REGARDING TECHNICAL  
SPECIFICATION (TS) NO. 316 - TVA'S PROPOSED UPGRADE OF THE  
REACTOR BUILDING VENTILATION RADIATION MONITORING SYSTEM (TAC  
NOS. M89680, M89681, AND M98682)

This letter provides TVA's response to the request for  
additional information sought by the NRC Staff in their  
December 11, 1996 safety evaluation (SE). NRC requested TVA  
provide a schedule and description of a susceptibility test  
that will fulfill one of the commitments made by the letter  
issued March 16, 1993.

On April 13, 1993, the NRC Staff issued amendments to the  
operating licenses for Browns Ferry Units 1, 2, and 3 that  
reflected replacement of the analog Reactor Building  
Ventilation Radiation Monitoring System (RBVRM) with a  
digital system. Interim operation of the digital system was  
accepted pending staff acceptance of test results which  
demonstrated the RBVRM system tolerance to electromagnetic  
and radio frequency interferences. NRC requested that TVA  
perform a survey of the electromagnetic and radio frequency

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interferences at BFN and submit a report to the staff. The staff also noted that the appropriate design changes were to be implemented during the BFN Unit 2 Cycle 6 Refueling Outage.

By letter issued March 16, 1993, TVA proposed testing that would resolve NRC questions surrounding the digital equipment. On December 23, 1993, TVA submitted test reports demonstrating satisfactory electromagnetic radio frequency interference tests and onsite surveys for the digital RBVRM equipment. The letter also described administrative controls that are in place that assure that interference from portable radios and temporary equipment in the areas of the RBVRM equipment do not affect system operation.

TVA performed the proposed susceptibility testing as described by the March 16, 1993, letter with the exception of the following: (1) Conducted Transient Emissions was not performed in accordance with American National Standards Institute/Institute Of Electrical and Electronic Engineers (ANSI/IEEE) C37.90.1, instead testing was performed in accordance with International Electrotechnical Commission (IEC) Standard 801-5. (2) Conducted continuous signal emissions testing was not performed in accordance with Military-Standard (MIL-STD)-462D, CS114. However, it was performed in accordance with a similar testing method, IEC Standard 801-4.

The NRC staff issued a SE on December 11, 1996, based on information previously provided by TVA. In the SE, the staff concluded that TVA's administrative controls for the use of portable radios and temporary equipment in areas around the RBVRM equipment sensors were acceptable. The staff also found that the surveys done in accordance with MIL-STD-462 to be consistent with the test proposed in the March 16, 1993, letter.

Susceptibility testing for radiated and electric field emissions performed in accordance with MIL-STD-462D, RS101 and RS103, and testing of conducted transient emissions in accordance with IEC Standard 801-5 was found consistent with appropriate standards and practices. However, the staff did not find that susceptibility testing performed in accordance with IEC Standard 801-4 techniques to be equivalent to MIL-STD-462D, CS114. Therefore, the staff requested that a test in accordance with MIL-STD-462D, CS114, be performed or

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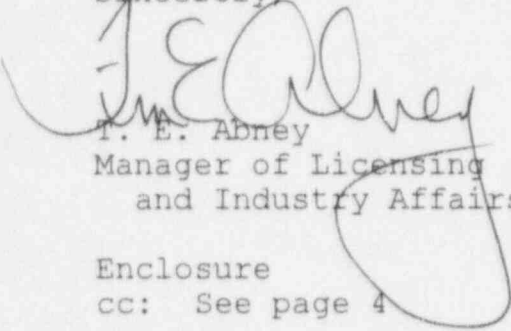
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provide additional justification for the use of IEC Standard 801-4, or an acceptable alternative.

TVA will test the RBVRMS consistent with MIL-STD-462D, CS114 at a severity level to ensure equipment operation in BFN's EMI environment, with adequate margin. TVA will provide the test results by September 15, 1997.

The enclosure contains the commitment made in this reply. If you have any questions regarding this reply, please contact me at (205) 729-2636.

Sincerely,



T. E. Abney  
Manager of Licensing  
and Industry Affairs

Enclosure

cc: See page 4

Mr. Mark S. Lesser, Branch Chief  
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ENCLOSURE

TENNESSEE VALLEY AUTHORITY  
BROWNS FERRY NUCLEAR PLANT (BFN)  
UNITS 1, 2,,AND 3

RESPONSE TO THE NUCLEAR REGULATORY COMMISSION REQUEST FOR  
ADDITIONAL INFORMATION (RAI) REGARDING TECHNICAL  
SPECIFICATION (TS) NO. 316 - TVA'S PROPOSED UPGRADE OF THE  
REACTOR BUILDING VENT RADIATION MONITORING SYSTEM

COMMITMENT

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TVA will test the RBVRMS consistent with MIL-STD-462D, CS114 at a severity level to ensure equipment operation in BFN's EMI environment, with adequate margin. TVA will provide the test results by September 15, 1997.