



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

September 15, 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 VENT RADIATION MONITORING SYSTEM (RBVRM) (TAC NOS. M89680, M89681, AND M98682)

This letter provides the test report requested by NRC in their December 11, 1996, safety evaluation (SE) and request for additional information (RAI) regarding the digital RBVRM equipment.

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 Vent 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's tolerance to electromagnetic and radio frequency interferences. In the April 13, 1993 letter, NRC requested that TVA perform several in-plant and vendor bench tests to ensure that the electromagnetic and radio frequency interferences at BFN will not cause a common mode failure of the equipment, and submit the reports to the staff.

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The NRC staff issued the SE on December 11, 1996, based on information provided by TVA concerning: (1) administrative controls regarding the use of portable radios and temporary equipment and (2) EMI/RFI testing. In the SE, the staff concluded that administrative controls for the use of portable radios and temporary equipment in areas around the RBVRM equipment sensors was acceptable. The staff also found that the surveys performed in accordance with MIL-STD-462 to be consistent with the test proposed in the March 16, 1993, letter.

Also, 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. Accordingly, the staff requested that a test in accordance with MIL-STD-462D, CS114, be performed or additional justification be provided for the use of IEC Standard 801-4, or an acceptable alternative.

In a letter issued April 10, 1997, TVA committed to test the RBVRMS in a manner consistent with MIL-STD-462D, CS114, at a severity level that ensures equipment can operate in BFN's EMI environment and submit a report to NRC. TVA tested the RBVRMS in a method consistent with MIL-STD-462D, CS114 and has concluded that the installed RBVRM system at BFN is qualified to MIL-STD-462D, CS114, at a level of 103dB μ A over a frequency of 10kHz to 400MHz.

The enclosure contains the requested test report, "Qualification Plan and Report MIL-STD-462D, CS114, Conducted Susceptibility, Bulk Cable Injection NUMAC Reactor Building Vents Radiation Monitor TVA Browns Ferry Units 1, 2, and 3."

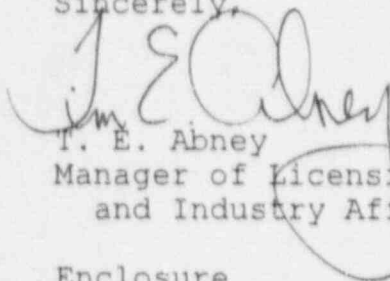
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There are no commitments made in this letter. If you have any questions regarding this, please contact me at (205) 729-2636.

Sincerely,



T. E. Abney
Manager of Licensing
and Industry Affairs

Enclosure

cc: 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

QUALIFICATION PLAN AND REPORT MIL-STD-462D, CS144
CONDUCTED SUSCEPTABILITY, BULK CABLE INJECTION NUMAC REACTOR
BUILDING VENTS RADIATION MONITOR (RBVRM)
TVA BROWNS FERRY UNITS 1, 2, AND 3

(SEE ATTACHED)