



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 11, 1996

50-259/
260/
296

Mr. Oliver D. Kingsley, Jr.
President, TVA Nuclear and
Chief Nuclear Officer
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

SUBJECT: BROWNS FERRY NUCLEAR PLANT UNITS 1, 2, AND 3 - SAFETY EVALUATION AND
REQUEST FOR ADDITIONAL INFORMATION REGARDING REACTOR BUILDING
RADIATION MONITORING EQUIPMENT (TAC NOS. M89680, M89681, AND M89682)

Dear Mr. Kingsley:

On April 13, 1993, the NRC staff issued amendments to the operating licenses for the Browns Ferry Nuclear Plant (BFN) Units 1, 2, and 3 which reflected replacement of analog components in the reactor building ventilation radiation monitoring (RBVRM) system with digital equipment. As part of its safety evaluation, the staff required the Tennessee Valley Authority (TVA) to perform a survey of electromagnetic interference and radio frequency interference at the site and to submit a report on the survey results to the staff. Interim operation of the digital equipment was accepted pending staff acceptance of the test results.

TVA submitted the requested test reports on December 23, 1993. The NRC staff requested additional information on this issue on December 8, 1994. TVA responded to this request on April 14, 1995. TVA also provided additional information on July 25, 1996 in response to verbal requests from the staff.

NRC staff conclusions based on information provided by TVA are documented in the enclosed safety evaluation (SE). The SE documents staff acceptance of administrative controls on portable radios and temporary equipment in the areas around the RBVRM sensors. The staff also finds that site surveys done in accordance with MIL-STD-462 to be consistent with commitments accepted by the staff in the SE of April 13, 1993.

The staff finds that susceptibility testing for radiated magnetic and electric field emissions performed in accordance with MIL STD-462D RS 101 and RS 103, and testing of conducted transient emissions in accordance with IEC 801-5 to be consistent with appropriate standards and practices. Therefore, these tests are acceptable.

As documented in the SE, the staff does not believe that susceptibility testing performed using IEC 801-4 techniques is equivalent to MIL STD-462D CS 114. Therefore, the staff concludes that TVA did not fulfill a commitment made in its letter of March 16, 1993 which described the proposed test program. Therefore, TVA is requested to perform a test consistent with MIL STD-462D CS 114, provide additional justification for use of IEC 801-4, or provide an acceptable alternative. The staff notes that the severity level

NRC FILE CENTER COPY

9612170109 961211
PDR ADOCK 05000259
P PDR

Mr. O. Kingsley, Jr.

- 2 -

specified by MIL STD-462D CS 114 may exceed the environment observed at BFN, so testing at a lower severity level, including appropriate margin, may be acceptable. Within 90 days of the date of this letter, TVA is requested to provide a schedule and description of a susceptibility test which will fulfill the commitment of the March 16, 1993 letter, or additional justification of the adequacy of IEC 801-4.

The staff finds that the conclusions expressed in the safety evaluation of April 13, 1993 regarding the acceptability of operations are still valid, pending closure of issues associated with the susceptibility testing.

Please call me at (301)415-1470 if you have any questions regarding this topic.

Sincerely,

Original signed by

Joseph F. Williams, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-259, 50-260, and 50-296

Enclosure: See next page

cc w/enclosure: See next page

Distribution

Docket File

PUBLIC

BFN Rdg.

S. Varga

J. Zwolinski

OGC

ACRS

E. Merschhoff, RII

E. Lee

T. Harris [TLH3] (ltr/SE)

DOCUMENT NAME: G:\BFN\M89680.RAI

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	PDII-3/PM	<input checked="" type="checkbox"/>	PDII-3/LA	<input checked="" type="checkbox"/>	BC/HICB*	<input checked="" type="checkbox"/>	PDII-3/D	<input checked="" type="checkbox"/>
NAME	JWilliams		BClayton		JWermiel		FHebdon	
DATE	12/11/96		12/11/96		12/9/96		12/11/96	

*see previous concurrence

OFFICIAL RECORD COPY

Mr. Oliver D. Kingsley, Jr.
Tennessee Valley Authority

BROWNS FERRY NUCLEAR PLANT

cc:

Mr. O. J. Zeringue, Sr. Vice President
Nuclear Operations
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. Mark O. Medford, Vice President
Engineering & Technical Services
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. R. D. Machon, Site Vice President
Browns Ferry Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Decatur, AL 35609

General Counsel
Tennessee Valley Authority
ET 10H
400 West Summit Hill Drive
Knoxville, TN 37902

Mr. Raul R. Baron, General Manager
Nuclear Assurance and Licensing
Tennessee Valley Authority
4J Blue Ridge
1101 Market Street
Chattanooga, TN 37402-2801

Mr. Eugene Preston, Plant Manager
Browns Ferry Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Decatur, AL 35609

Mr. Pedro Salas, Manager
Licensing and Industry Affairs
Tennessee Valley Authority
4J Blue Ridge
1101 Market Street
Chattanooga, TN 37402-2801

Mr. Timothy E. Abney, Manager
Licensing and Industry Affairs
Browns Ferry Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Decatur, AL 35609

Regional Administrator
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW., Suite 2900
Atlanta, GA 30323

Mr. Michael J. Morgan
Senior Resident Inspector
Browns Ferry Nuclear Plant
U.S. Nuclear Regulatory Commission
10833 Shaw Road
Athens, AL 35611

Chairman
Limestone County Commission
310 West Washington Street
Athens, AL 35611

State Health Officer
Alabama Department of Public Health
434 Monroe Street
Montgomery, AL 36130-1701