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 50-259 Browns Ferry Nuclear Power Station, Unit 1, Tennessee 05000259
 50-260 Browns Ferry Nuclear Power Station, Unit 2, Tennessee 05000260
 50-296 Browns Ferry Nuclear Power Station, Unit 3, Tennessee 05000296
 50-327 Sequoyah Nuclear Plant, Unit 1, Tennessee Valley Auth 05000327
 50-328 Sequoyah Nuclear Plant, Unit 2, Tennessee Valley Auth 05000328

AUTH. NAME AUTHOR AFFILIATION
 MILLS, L.M. Tennessee Valley Authority
 RECIP. NAME RECIPIENT AFFILIATION
 DENTON, H.R. Office of Nuclear Reactor Regulation, Director

SUBJECT: Forwards response to Generic Ltr 84-15, "Proposed Staff Actions to Improve & Maintain Diesel Generator Reliability." Tech Spec revs to conform to approach contained in generic ltr will be submitted.

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TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

October 1, 1984

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Denton:

In the Matter of the)	Docket Nos. 50-259
Tennessee Valley Authority)	50-260
		50-296
		50-327
		50-328

Enclosed is our response to Generic Letter 84-15, Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability, dated July 2, 1984. Our response addresses the diesel generators at Browns Ferry (enclosure 1) and Sequoyah (enclosure 2). In both cases TVA will be submitting technical specification revisions to conform to the approach contained in the subject Generic Letter 84-15.

If you have any questions, please get in touch with us through either the Browns Ferry or Sequoyah Project Manager.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills
L. M. Mills, Manager
Nuclear Licensing

Subscribed and sworn to before
me this 1st day of Oct. 1984.

Paulette H. White
Notary Public
My Commission Expires 8-24-88

Enclosures
cc: See page 2

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Mr. Harold R. Denton

October 1, 1984

cc (Enclosures):

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Mr. R. J. Clark
Browns Ferry Project Manager
U.S. Nuclear Regulatory Commission
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Bethesda, Maryland 20814

Director of Nuclear Reactor Regulation
Attention: Ms. E. Adensam, Chief
Licensing Branch No. 4
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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ENCLOSURE 1
BROWNS FERRY NUCLEAR PLANT

1. REDUCTION IN NUMBER OF COLD FAST START SURVEILLANCE TESTS FOR DIESEL GENERATORS (DG)

Browns Ferry's diesel generators have an ac powered prelube pump and a water jacket heating system that keeps the diesel at approximately 140 degrees fahrenheit. These two systems, along with a preventive maintenance program, have kept Browns Ferry diesels reliability very high.

Browns Ferry currently has the earlier operating plant technical specifications that require diesel generator testing when emergency core cooling subsystems become inoperable. This has caused the diesels to be started five times more often this year as would be required without these starts. Technical specification changes are currently being prepared to delete these excessive starts and to allow the diesels to be fast started twice yearly as shown in the generic letter example technical specifications.

2. DIESEL GENERATOR RELIABILITY DATA

	Diesel Generator Identification							
	<u>1A</u>	<u>1B</u>	<u>1C</u>	<u>1D</u>	<u>3A</u>	<u>3B</u>	<u>3C</u>	<u>3D</u>
Failures/100	3	0	2	2	1	0	0	3
Failures/20	0	0	0	0	0	0	0	0

3. RELIABILITY PROGRAM

Browns Ferry currently has no system to keep an ongoing running total of diesel starts, currently these are no additional testing requirements if the diesel fails minimum reliability requirements. Along with our technical specification changes we plan to submit for part one of this response a DG qualification program similar to what is in Generic Letter 84-15. In this program a log of DG starts will be kept along with qualification criteria similar to what was presented in the generic letter.

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ENCLOSURE 2
SEQUOYAH NUCLEAR PLANT

1. REDUCTION IN NUMBER OF COLD FAST START SURVEILLANCE TESTS FOR DIESEL GENERATORS

Currently, the Sequoyah technical specifications require several starts of the diesel generators each year (from cold ambient conditions to full load within 10 seconds). TVA is preparing a technical specification change to reduce this to one fast start per diesel generator each 184 days. All other required diesel generator tests will allow a prelube period and a slow acceleration to rated speed and voltage. This provides assurance on a continuing basis that the diesel generators will fulfill their safety function but minimizes the degradation of the diesel generators due to testing. The proposed technical specification will conform to the NRC guidelines in Generic Letter 84-15.

2. DIESEL GENERATOR RELIABILITY

An operator log of all diesel generator start tests is maintained for Sequoyah. The test validity is determined and logged in accordance with Regulatory Guide (RG) 1.108. This data was summarized in Tables 1, 2, and 3 (attached). Basically, the data shows that Sequoyah diesel generators 1B-B, 2A-A, and 2B-B surpass the ultimate reliability goal of .99 which is set down in RG 1.108. The data also reveals that while the 1A-A diesel generator has not demonstrated a .99 reliability it does meet NRC goals of greater than or equal to .95 reliability set down in Generic Letter 84-15.

3. As stated in section 2 our proposed technical specification change will put a program in place that will ensure continued high reliability factors for the Sequoyah diesel generators. The proposed technical specification changes have only minor deviations from those suggested by NRC in Generic Letter 84-15. We anticipate submitting these proposed technical specification changes before December 31, 1984.

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TABLE 1

SEQUOYAH DIESEL GENERATOR RELIABILITY
MARCH 5, 1980 TO MAY 15, 1984

<u>Unit</u>	<u>Total Number of Valid Tests</u>	<u>Total Number of Valid Failures</u>	<u>Reliability</u>
1 A-A	132	4	.969
2 A-A	128	2	.984
1 B-B	147	2	.986
2 B-B	132	0	1.000

For the last 100 valid tests (table 2), the results show improvement as improved maintenance techniques were incorporated. The reliability for the last 20 valid tests is shown in table 3.

TABLE 2

SEQUOYAH DIESEL GENERATOR RELIABILITY
(last 100 starts)

<u>Unit</u>	<u>Number of Valid Tests</u>	<u>Number of Valid Failures</u>	<u>Reliability</u>
1 A-A	100	3	.970
2 A-A	100	0	1.000
1 B-B	100	0	1.000
2 B-B	100	0	1.000

TABLE 3

SEQUOYAH DIESEL GENERATOR RELIABILITY
(last 20 starts)

<u>Unit</u>	<u>Number of Valid Tests</u>	<u>Number of Valid Failures</u>	<u>Reliability</u>
1 A-A	20	1	.950
2 A-A	20	0	1.000
1 B-B	20	0	1.000
2 B-B	20	0	1.000

This data shows that the aggregate reliability for the last 400 valid tests has been greater than the .99 goal set in RG 1.108. This provides long-term proof of the standby ac power supply at Sequoyah. This data base will be used as a baseline data for the reliability program specified in the example technical specification changes to LCO 3.8.1.1.

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