

SOUTH CAROLINA ELECTRIC & GAS COMPANY

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O. W. DIXON, JR.  
VICE PRESIDENT  
NUCLEAR OPERATIONS

September 28, 1984

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

Subject: Virgil C. Summer Nuclear Station  
Docket No. 50/395  
Operating License No. NPF-12  
Generic Letter 84-15  
Diesel Generator Reliability

Dear Mr. Denton:

This letter is provided in response to Generic Letter 84-15, "Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability." South Carolina Electric and Gas Company (SCE&G) maintains two (2) diesel generators at the Virgil C. Summer Nuclear Station. These diesel generators are 12 cylinder, V-configuration with a 4,250KW continuous rating. They were manufactured by Fairbanks Morse and are equipped with prewarm systems designed to maintain lube oil and jacket water cooling systems between 100°F and 140°F.

The diesel generators are currently tested in accordance with the requirements of Regulatory Guide 1.108, Revision 1, August 1977, and the Technical Specifications for the facility. Fast starts from ambient normal standby conditions verify the capability of the diesel generators to:

- 1) Accelerate to rated speed, voltage, and frequency in  $\leq$  10 seconds.
- 2) Synchronize and load to  $\geq$  4,250 KW within  $\leq$  60 seconds.

Test starts with the prewarm systems as described above do not constitute "Cold Starts" per criteria established in Generic Letter 83-41, "Fast Cold Starts of Diesel Generators." SCE&G considers the present testing and surveillance programs at the Virgil C. Summer Nuclear Station sufficient to demonstrate the reliability of the diesel generators. However, the proposed Technical Specification changes outlined in Generic Letter 84-15 should help to further decrease engine wear and improve diesel engine reliability.

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Mr. Harold R. Denton  
Generic Letter 84-15  
Diesel Generator Reliability  
September 28, 1984  
Page #2

The Virgil C. Summer Nuclear Station maintains a record which itemizes the demands and failures experienced by each diesel generator in the manner outlined in Regulatory Guide 1.108, Item C.3.a. Additionally, a yearly data report is maintained for each diesel generator's reliability in accordance with NUREG 0737, Item II.K.3.17. The number of valid tests and failures for the two (2) diesel generators for the Virgil C. Summer Nuclear Station is listed in Attachment I to this letter.

The Virgil C. Summer Nuclear Station does not have a formal diesel generator reliability program for attaining and maintaining a reliability goal as addressed in Generic Letter 84-15. However, the reliability of the diesel generators is maintained by the below actions and is considered to be adequate based on the test results documented in Attachment I.

- 1) Surveillance Testing performed in accordance with the requirements of Technical Specification 3.8.1.1 and Regulatory Guide 1.108.
- 2) In accordance with NUREG-0737, Item II.K.3.17, a program has been established using existing plant procedures for data collection including Emergency Core Cooling System (ECCS) outage times, duration and cause of the outage, components involved in the outage, and corrective action taken. A plant procedure for removal and restoration of station equipment provides measures for data collection. The ECCS data taken by this procedure will be reviewed by appropriate plant personnel to determine if improvements to availability of ECCS is needed.
- 3) As stated by the NRC, upon completion of modifications addressed in the Safety Evaluation Report, Section 9.5.4 (by startup after the first refueling outage), the design of the diesel generators and their auxiliary systems will be in conformance with the recommendations of NUREG/CR-0660. Conformance with the recommendations provides reasonable assurance of continued diesel generator reliability.

SCE&G has, however, performed a review of the sample diesel generator Technical Specification changes found in the Attachment to Enclosure 1 and Appendix A of Generic Letter 84-15. SCE&G's position is that these proposed Technical Specification changes do provide for increased diesel engine reliability. These changes are beneficial because they help to reduce the number of fast starts without prelube, thus decreasing possibility of additional engine wear. These proposed Technical Specifications,

Mr. Harold R. Denton  
Generic Letter 84-15  
Diesel Generator Reliability  
September 28, 1984  
Page #3

if determined by the Staff to be acceptable, would help to provide the Virgil C. Summer Nuclear Station with a formal reliability program for the diesel engines.

If you have any further questions, please advise.

Very truly yours,



O. W. Dixon, Jr.

AMM/OWD/gj  
Attachment:

cc: V. C. Summer	C. A. Price
T. C. Nichols, Jr./O. W. Dixon, Jr.	C. L. Ligon (NSRC)
E. H. Crews, Jr.	K. E. Nodland
E. C. Roberts	R. A. Stough
W. A. Williams, Jr.	G. Percival
D. A. Nauman	C. W. Hehl
J. P. O'Reilly	J. B. Knotts, Jr.
Group Managers	NPCF
O. S. Bradham	File

ATTACHMENT I

DIESEL GENERATOR A

Last 100 Valid Demands\*

<u>Starts</u>	<u>Failures</u>
36	0

Last 20 Valid Demands

<u>Starts</u>	<u>Failures</u>
20	0

DIESEL GENERATOR B

Last 100 Valid Demands\*

<u>Starts</u>	<u>Failures</u>
41	1**

Last 20 Valid Demands

<u>Starts</u>	<u>Failures</u>
20	0

\* Have not had 100 valid demands to date

\*\* Failure occurred 12/18/82, 33 valid starts since that event