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Southern Nuclear Operating Company

*the southern electric system*

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

Joseph M. Farley Nuclear Plant  
Annual Diesel Generator Reliability Data Report For 1993

Gentlemen:

Provided as Attachment 1 is the Annual Diesel Generator (D/G) Reliability Data Report for 1993, which is submitted in accordance with Farley Nuclear Plant (FNP) Technical Specification 6.9.1.12. This report provides the number of tests (valid or invalid) and the number of failures for each D/G at FNP for 1993. Attachment 2 provides the information identified in Regulatory Position C.3.b of Regulatory Guide 1.108, Revision 1, August 1977, for the failure.

Please note that there were two Technical Specification revisions during 1993 that affected D/G testing and tracking of failures. The first revision was Technical Specification Amendments 98 (Unit 1) and 90 (Unit 2), effective June 20, 1993, which changed the tracking methodology regarding the number of D/G runs and failures. Prior to June 20, 1993, the D/G runs and failures were tracked by D/G type (2850 kW or 4075 kW). Per the above amendments, D/G runs and failures are tracked per each D/G (1-2A, 1B, 2B, 1C, 2C). This revision also modified Technical Specification Table 4.8-1, "Diesel Generator Test Schedule," which specifies the testing frequency based on the number of D/G failures.

The second revision affecting this report was Technical Specification Amendments 101 (Unit 1) and 93 (Unit 2), effective October 21, 1993, which defined the 2C D/G as the Alternate AC (AAC) source instead of an emergency D/G. The 2C D/G will be tested and maintained per the Station Blackout AAC Reliability Program. Due to this Technical Specification revision, 2C D/G runs and failures after October 21, 1993, are not included in this report.

If there are any questions, please advise.

Respectfully submitted,

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*Dave Morey*  
Dave Morey

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cc and attachment lists: See next page.

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cc: U. S. Nuclear Regulatory Commission, Washington, DC  
Mr. B. L. Siegel

U. S. Nuclear Regulatory Commission, Region II  
Mr. S. D. Ebnetter, Regional Administrator  
Mr. T. M. Ross, Senior Resident Inspector

Attachments

1. Annual D/G Reliability Data Report for 1993
2. Information Identified in Regulatory Position C.3.b of Regulatory Guide 1.108, Revision 1, August 1977

ATTACHMENT 1

ANNUAL DIESEL GENERATOR RELIABILITY DATA REPORT FOR 1993

ANNUAL DIESEL GENERATOR RELIABILITY DATA REPORT FOR 1993

Diesel Generator	1-2A	1B	2B	1C	2C	Totals
Valid Successful Tests	27	25	25	28	22	127
Invalid Tests	17	15	17	18	20	87
Valid Failures	0	0	0	0	1	1
Invalid Failures	0	0	0	0	0	0

ATTACHMENT 2

INFORMATION IDENTIFIED IN REGULATORY POSITION C.3.B OF  
REGULATORY GUIDE 1.108, REVISION 1, AUGUST 1977

## 2C D/G FAILURE ON 10-13-93

At 0403 on 10-11-93, while performing normal surveillance on the 2C D/G, it was noted that the voltage regulator was not responding to operator input.

Investigation determined that the automatic voltage control (AVC) relay was found to have an open coil. In addition, the undervoltage (SV-1) relay was found to have pitted contacts and the main plunger was intermittently sticking or binding.

The relays were thoroughly inspected and/or bench tested. It was determined that the failure of the AVC relay coil was due to excessive coil currents caused by poor contact mating and resultant contact arcing in the SV-1 relay. The poor contact mating, arcing, and pitting of the SV-1 relay were a result of damage to the SV-1 plunger, shaft, and core assembly due to wear.

The AVC and SV-1 relays were replaced and the diesel was tested satisfactorily. The 2C D/G was unavailable for 23.7 hours. This failure was the second failure in the last 100 valid tests, and the first failure in the last 20 valid tests.

After this failure the surveillance schedule remained at once per 31 days, which is in conformance with the Joseph M. Farley Technical Specifications, Table 4.8-1, "Diesel Generator Test Schedule." Table 4.8-1 deviates from the test schedule contained in Regulatory Position C.2.d in Regulatory Guide 1.108, Revision 1, August 1977; however, as noted on the cover page, this table was modified per Technical Specification Amendments 98 (Unit 1) and 90 (Unit 2).

After October 21, 1993, the 2C D/G test schedule was performed in accordance with the Station Blackout AAC Reliability Program.