

Attachment to AECM-83/0628

TYPE ALL REQUIRED

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

SYSTEM CODE 0 9		CAUSE CODE E E		CAUSE SUBCODE G		COMPONENT CODE I N S T R U				COMP. SUBCODE C		VALVE SUBCODE Z	
7	8	9	10	11	12	13	14	15	16	17	18	19	20
LER/RO REPORT NUMBER 17		EVENT YEAR 8 3		SEQUENTIAL REPORT NO. 1 4 0		OCCURRENCE MODE /		REPORT TYPE 0 3		REVISION NO. L		Q	
21	22	23	24	25	26	27	28	29	30	31	32		
ACTION TAKEN A		FUTURE ACTION 18		EFFECT ON PLANT Z		SHUTDOWN METHOD Z		HOURS 0 0 0 0		ATTACHMENT SUBMITTED Y		NPRD-4 FORM SUB. N	
33	34	35	36	37	38	39	40	41	42	43	44	PRIME COMP. SUPPLIER A	
19	20	21	22	23	24	25	26	27	28	29	30	COMPONENT MANUFACTURER D 0 5 5	
31	32	33	34	35	36	37	38	39	40	41	42	43	44

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

7	8	9	10	11	12
FACILITY STATUS			OTHER STATUS	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION

ACTIVITY		CONTENT		RELEASED OF RELEASE		AMOUNT OF ACTIVITY		LOCATION OF RELEASE	
1	6	2	33	2	34	NA		NA	

1	7	0	0	0	37	Z	38	NA
7	8	9	11	12	13			80

7 8 9 11 12 80

LOSS OF OR DAMAGE TO FACILITY (43) 8310120419 831003

PUBLICITY (45)
 ISSUED DESCRIPTION
 2 0 1 1 44 NA
 NRC USE ONLY

7 8 9 10 68 69 80

D. E. Cathey

PHONE: _____

SUPPLEMENTARY INFORMATION TO
LER 83-140/03 L-0

Mississippi Power & Light Company
Grand Gulf Nuclear Station - Unit 1
Docket No. 50-416

Technical Specification Involved: 4.8.1.1.3
Reported Under Technical Specification: 6.9.1.13.c

Event Narrative:

As part of an 18 month LOCA/LOP Division I Diesel Generator test on September 2, 1983, a loss of power to the Division I ESF bus was manually initiated. The Diesel Generator auto-started and loaded onto the bus, but did not regulate the bus voltage during the load-shedding sequence. The voltage dipped below 70% at least twice, resulting in three auto-starts of the LPCS pump and two auto-starts of the RHR "A" pump. The Diesel Generator was loaded to 3000 kw (43% load) and run for 3 hours. This is considered a valid failure per Regulatory Guide 1.108, para. C.2.e.(5). This is the third failure in the last 100 valid tests. The surveillance test interval is presently 7 days. A successful 24 hour test run had been completed just prior to the LOCA/LOP test.

The initial investigation found a SCR burned out in the auto-voltage regulator circuit. The spare SCR bank in the Diesel Generator control panel was used to replace the failed SCR bank. The Diesel Generator was then manually restarted seven hours after the initial failure for a maintenance and troubleshooting test. An SCR in the spare bank immediately burned out. The Diesel Generator was loaded to 7000 kw (100% load) for 30 minutes. This is considered a non-valid failure per Regulatory Guide 1.108, para. C.2.e.(7).

The Diesel Generator was manually started on September 4, 1983, to further investigate and troubleshoot the failed auto-voltage regulator. Per Regulatory Guide 1.108, para. C.2.e.(7), this was not a valid test. The Diesel Generator was loaded to 3500 kw (50% load) for 8 hours and 20 minutes. The Diesel Generator was manually shutdown when a fuel oil fire erupted during the troubleshooting (Reference LER 83-126/01 T-0).

Subsequent to the fire, the regulator was removed and subjected to a thorough testing and troubleshooting procedure. An SCR, two integrated circuit chips, a potentiometer, and a remote gate firing module were found to have failed. The regulator was cleaned and the defective parts were replaced.

The LOCA/LOP test was reperformed successfully on September 21, 1983. No similar problems with the voltage regulator have occurred to date. The component which failed first and its failure mechanism is unknown.

There was no effect on the health and safety of the public nor was there a threat to plant safety. This is reported pursuant to Technical Specification 4.8.1.1.3 and 6.9.1.13.c. This is a final report.



MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

October 3, 1983 **03 OCT 83 A 8:30**

NUCLEAR PRODUCTION DEPARTMENT

U. S. Nuclear Regulatory Commission
Region II
101 Marietta St., N.W., Suite 2900
Atlanta, Georgia 30303

Attention: Mr. J. P. O'Reilly, Regional Administrator

Dear Mr. O'Reilly:

SUBJECT: Grand Gulf Nuclear Station
Unit 1
Docket No. 50-416
License No. NPF-13
File 0260/L-835.0
Division I Diesel Generator
Fails to Regulate Bus
Voltage During the Load
Shedding Sequence of a Loss
of Power Test
LER 83-140/03 L-0
AECM-83/0628

On September 2, 1983, the power to the Division I ESF bus was intentionally removed to perform a loss of power test on the Division I Diesel Generator. The Diesel Generator automatically started, but did not regulate bus voltage during the load shedding sequence. The voltage dipped below 70% at least twice, causing three automatic starts of LPCS and two automatic starts of RHR "A". This is reported pursuant to Technical Specification 4.8.1.1.3 and 6.9.1.13.c. Attached is LER 83-140/03 L-0 with Supplementary Information. This is a final report.

Yours truly,

for L. F. Dale
Manager of Nuclear Services

EBS/SHH:sap
Attachment

cc: (See Next Page)

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MISSISSIPPI POWER & LIGHT COMPANY

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