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PEARSON,M.P. Carolina Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 93-019-00:on 931112,considered plant to be degraded condition due to EDGs A & B being inoperable.Cause of EDG A failure attributed to misadjusted automatic voltage control knob.Cause of EDG B failure unknown.w/931222 ltr.

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CP&L

Carolina Power & Light Company
Robinson Nuclear Plant
PO Box 790
Hartsville SC 29550

DEC 22 1993

Robinson File No: 13510C
Serial: RNP/93-3190
(10CFR50.73)

United States Nuclear Regulatory Commission
Attn: Document Control Desk
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H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261
LICENSE NO. DPR-23
LICENSEE EVENT REPORT NO. 93-019-00

Gentlemen:

The enclosed Licensee Event Report (LER), is submitted in accordance with 10 CFR 50.73 and NUREG 1022, Supplements No. 1 and 2.

Very truly yours,

300054

Marc P. Pearson
Plant General Manager

RDC:sgk
Enclosure
c: Mr. S. D. Ebneter
Mr. W. T. Orders
INPO

IE22
1/1

Enclosure to Serial: RNP/93-3190

NRC FORM 366 (5-92) | U.S. NUCLEAR REGULATORY COMMISSION | APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
H. B. ROBINSON UNIT NO. 2	05000 261	1 OF 3

TITLE (4)
DEGRADED CONDITION DUE TO EMERGENCY DIESEL GENERATOR INOPERABILITY

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
11	22	93	93	-- 019 --	00	12	22	93		05000
									FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	N
POWER LEVEL (10)	0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

	20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)
	20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(c)
	20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		OTHER
	20.405(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		(Specify in Abstract below and in Text, NRC Form 366A)
	20.405(a)(1)(iv)	X	50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)		
	20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
R. D. Crook, Sr. Specialist-Regulatory Affairs	(803) 383-1179

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
X	YES (If yes, complete EXPECTED SUBMISSION DATE).	No		1	22	94

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On November 22, 1993, H. B. Robinson Unit 2 was in cold shutdown condition for a forced outage. While performing a scheduled surveillance test for the "A" Emergency Diesel Generator (EDG), the licensee Control Operator reported that when he field flashed the "A" EDG the voltage did not automatically come up to the 480 volts required for operability. The "B" EDG was then tested, and subsequently failed to start. Because evidence existed that both EDG's were not operable with the plant previously at operating conditions, the plant was considered to have been in a degraded condition at that time.

The cause of the "A" EDG failure is attributed to a misadjusted automatic voltage control knob on the Generator Control Panel. The primary cause of the "B" EDG failure was associated with the air start distributor, but the specific initiating event is unknown.

This event had no impact on plant safety. Calculations have been performed which indicate that, although the "B" EDG was considered inoperable with the voltage setting below the required value of 480 volts, the safety function would have been met.

This report is submitted pursuant to 10 CFR 50.73(a)(2)(ii).

NRC FORM 366A (5-92)
U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95

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LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
H. B. Robinson, Unit No. 2	505000	93	-- 019 --	00	2 OF 3

XT (If more space is required, use additional copies of NRC Form 366A) (7)

I. DESCRIPTION OF EVENT

On November 17, H. B. Robinson Unit 2 was taken to cold shutdown condition for a forced outage. On November 22, 1993, while performing scheduled surveillance test OST-401, "Emergency Diesels" for the "A" Emergency Diesel Generator (EDG), the licensee Control Operator reported that when he field flashed the "A" EDG that the voltage came up to only 440 volts rather than the 480 volts required for operability. After noting that the automatic voltage control knob on the Generator Control Panel had been turned to the minimum position, he adjusted the voltage to 480 volts and the test was completed satisfactorily. Because the EDG did not automatically come up to its required voltage, the ability of the diesel to perform its intended safety function prior to the testing was questioned.

The "B" EDG was then tested under OST-401, and subsequently failed to start. An investigation was initiated to repair the EDG and to evaluate the failure mode.

The NRC was notified on November 22 at 0854 hours via the ENS of the EDG inoperability in accordance with 10 CFR 50.72(b)(2)(i) of a degraded condition found while shutdown. Because evidence existed that both EDG's were not operable with the plant previously at operating conditions, the plant was considered to have been in a degraded condition at that time.

II. CAUSE OF EVENT

The cause of the "A" EDG failure is attributed to personnel error. The cause for the misadjusted automatic voltage adjustment knob may be related to recent painting of the Generator Control Panel. Results of the investigation indicate that the automatic voltage control knob was rotated in the counter clockwise (lower) direction between November 8 and November 22, 1993, when the plant was at power operations. Both EDG Generator Control Panels (on which these knobs are located) were painted on the morning of November 11 as a part of generic building painting upgrade. However, this cause is viewed as preliminary, and the investigation is ongoing.

The root cause of the "B" EDG failure is currently unknown. The Air Start Distributor is currently undergoing analysis to determine the failure mechanism. A supplement to this LER will be submitted to provide the results of the Root Cause Analysis.

NRC FORM 366A (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
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LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
H. B. Robinson, Unit No. 2	505000	93	-- 019 --	00	3 OF 3

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

III. ANALYSIS OF EVENT

This event had no impact on plant safety. Calculations performed by the licensee's Nuclear Engineering Department indicate that, although the "B" EDG was considered inoperable with the voltage setting at 440 versus the required value of 480 volts, the safety function would have been met. The EDG would have been able to supply the voltage necessary for vital equipment required for safe shutdown.

During the time that both Emergency Diesel Generators were inoperable, the off-site power source was available. The assumed loss of both EDGs concurrent with a total loss of AC power for the vital AC busses is beyond the plants design basis as provided in Chapter 15 of the Updated Final Safety Analysis Report. However, plant procedure EPP-1, "Loss of All AC Power" provides guidance for mitigating the consequences of such an event. This procedure provides steps for restoring AC power, and provides contingency actions if AC power cannot be restored. Also, the Dedicated Shutdown System would be available to provide the capability to safely maintain the unit in hot shutdown, and to continue to cold shutdown if required.

This report is submitted pursuant to 10 CFR 50.73(a)(2)(ii)(A).

IV. CORRECTIVE ACTIONS

Corrective action for the incorrect setting for the "A" EDG includes the addition of scales to allow determining the position of the knobs for both EDGs. The settings are being checked each shift to verify their position. Additionally, protective clear plastic covers have been placed over the knobs to prevent inadvertent operation.

Corrective actions for the "B" EDG will be taken commensurate with the root cause of the failure.

V. ADDITIONAL INFORMATION

A. Component Failures

None

B. Previous Similar Events

None