



Carolina Power & Light Company

Brunswick Nuclear Plant
P.O. Box 10429
Southport, NC 28461-0429

FEB 21 1994

SERIAL: BSEP-94-0071
10CFR50.73

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

BRUNSWICK NUCLEAR PLANT UNIT 1
DOCKET NO. 50-325/LICENSE NO. DRP-71
LICENSEE EVENT REPORT 1-94-004

Gentlemen:

In accordance with the Code of Federal Regulations, Title 10, Part 50.73, Carolina Power & Light Company submits the enclosed Licensee Event Report. This report fulfills the requirement for a written report within thirty (30) days of a reportable occurrence and is submitted in accordance with the format set forth in NUREG-1022, September 1983.

Please refer any questions regarding this submittal to Mr. G. Honma at (910) 457-2741.

Very truly yours,

C. C. Warren, Director-Plant Operations (Acting)
Brunswick Nuclear Plant

MAT/mat

Enclosures

1. Licensee Event Report
2. Summary of Commitments

cc: Mr. S. D. Ebnetter, Regional Administrator, Region II
Mr. P. D. Milano, NRR Project Manager - Brunswick Units 1 and 2
Mr. R. L. Prevatte, Brunswick NRC Senior Resident Inspector

9403040311 940221
PDR ADOCK 05000325
S PDR

LICENSEE EVENT REPORT (LER)

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)

Brunswick Steam Electric Plant, Unit 1

DOCKET NUMBER (2)

05000325

PAGE (3)

1 of 3

TITLE (4)

Loss Of RPS Bus A Power And Associated ESF Actuations

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
01	26	94	94	- 04 -	00	02	21	94	FACILITY NAME	DOCKET NUMBER 05000
									FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following)(11)								
		20.402(b)		20.405(c)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)		73.71(b)		
POWER LEVEL (10)	0	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 and Text)		
		20.405(a)(1)(iv)		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

Mark A. Turkal, Project Engineer - Licensing

TELEPHONE NUMBER

(910) 457-3066

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/>	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e. approximately fifteen single space typewritten lines) (16)

At 1142 on January 26, 1994, with Unit 1 in Mode 4 (COLD SHUTDOWN), an operator error caused loss of power to Reactor Protection System (RPS) Bus A and associated Engineered Safety Feature (ESF) actuations. During performance of 1MST-DG11R1, "DG-1 Loading Test," 4160v Emergency Bus 1 was being powered from Diesel Generator #1 (DG-1). Preparations were being made to parallel Bus E1 with offsite power to restore the normal electrical lineup in accordance with O-OP-50.1, "Diesel Generator Emergency Power System Operating Procedure." While adjusting DG-1 speed, the operator erroneously lowered DG-1 frequency rather than raising the frequency causing Electrical Protection Assembly (EPA) breaker #2 to trip on under-frequency and a loss of RPS Bus A power. The loss of power resulted in the following ESF actuations:

1. Closure of 1-B21-F016, Main Steam Line Drain Inboard Isolation Valve.
2. Closure of 1-G31-F001, Reactor Water Cleanup Inboard Isolation Valve.
3. Isolation of Reactor Building HVAC.

The event is of minimal safety significance. Plant systems responded as designed. RPS A Bus power was restored at 1208.

The cause classification for this event per the criteria of NUREG-1022 is Personnel Error.

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNRB 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.

**LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION**

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Brunswick Steam Electric Plant Unit 1	05000325	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 of 3
		94	- 04 -	00	

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

TITLE

Loss Of RPS A Bus Power And Associated ESF Actuations

INITIAL CONDITIONS

On January 26, 1994, Unit 1 was in Mode 4 (COLD SHUTDOWN) in day 648 of the current outage. Bus E1 was being supplied by Diesel Generator #1 (DG-1). Plant procedure 1MST-DG11R1, "DG-1 Loading Test" was in progress.

EVENT NARRATIVE

At the time of the event, an operator was performing Section 8.6 of procedure 0-OP-50.1, "Diesel Generator Emergency Power System Operating Procedure." Section 8.6 of 0-OP-50.1 provides guidance for control room manual transfer of emergency bus supply from the diesel generator to the normal feeder. In preparation for returning Bus E1 to its normal feeder (Bus 1D), the operator was preparing to parallel Bus E1 with offsite power in accordance with Step 8.6.2.4 of 0-OP-50.1. This step requires the operator to adjust diesel generator speed using the diesel generator governor motor control switch as necessary so the synchroscope is rotating slowly in the "slow" direction. The operator observed that the synchroscope was rotating fast in the "fast" direction and mistakenly understood this to mean that DG-1 speed needed to be lowered. While adjusting the diesel generator speed in an attempt to match frequencies Electrical Protection Assembly (EPA) breaker #2 tripped on under-frequency, resulting in a loss of power to RPS Bus A.

The loss of power to RPS Bus A resulted in the following ESF actuations:

1. Closure of 1-B21-F016, Main Steam Line Drain Inboard Isolation Valve.
2. Closure of 1-G31-F001, Reactor Water Cleanup Inboard Isolation Valve.
3. Isolation of Reactor Building HVAC.

All systems responded as designed. Other valves receiving an isolation signal were already closed to support plant conditions and testing and, therefore, did not isolate. Both Standby Gas Treatment Trains were already running. Power to RPS A Bus was restored at 1208.

CAUSE OF EVENT

The cause classification for this event per the criteria of NUREG-1022 is Personnel Error. The operator performing procedure 0-OP-50.1 observed that the synchroscope was rotating fast in the "fast" direction and mistakenly confused the indication with that which is normally seen when loading a DG. As such, the operator believed that DG-1 speed needed to be lowered. While lowering DG-1 speed, EPA breaker #2 tripped, resulting in a loss of power to RPS Bus A at 1142.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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)	LER NUMBER (6)			PAGE (3)
Brunswick Steam Electric Plant Unit 1	05000325	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 of 3
		94	- 04 -	00	

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

CORRECTIVE ACTIONS

This event was reviewed with the involved operator. The review included: (1) a discussion of the need to improve self-checking, including the need to verify that indications are consistent with desired actions; (2) a review of the proper conduct of the evolution; and (3) a demonstration of proper conduct of the evolution by the operator.

A discussion of this event will be included in the next phase of Licensed Operator Regualification required reading.

SAFETY ASSESSMENT

This event is of minimal safety significance. Unit 1 was in Mode 4 (COLD SHUTDOWN) at the time. All systems responded as designed. Power to RPS A Bus was restored at 1208.

PREVIOUS SIMILAR EVENTS

There have been no LERs regarding misadjusting of frequency while paralleling a diesel generator with offsite power during the previous three years.

EIIS COMPONENT IDENTIFICATION

<u>System/Component</u>	<u>EIIS Code</u>
Reactor Protection System	JC
Engineered Safety Features	JE
Emergency Diesel Generator	EK

Enclosure
List of Regulatory Commitments

The following table identifies those actions committed to by Carolina Power & Light Company in this document. Any other actions discussed in the submittal represent intended or planned actions by Carolina Power & Light Company. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Manager-Regulatory Affairs at the Brunswick Nuclear Plant of any questions regarding this document or any associated regulatory commitments.

Commitment	
1.	A discussion of this event (as discussed in LER 94-04 and ACR 94-045) will be included in the next phase of Licensed Operator Regualification required reading.