

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Brunswick Steam Electric Plant Unit No. 2	DOCKET NUMBER (2) 0 5 0 0 0 3 2 4	PAGE (3) 1 OF 0 3
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TITLE (4) Loss of Plant Emergency AC Bus E-4
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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 NAMES		DOCKET NUMBER(S)							
0	1	2	9	8	4	8	4	0	0	2	0	0	0	0	0			
0	1	2	9	8	4	0	0	2	0	0	0	3	0	2	8	4		
												0	5	0	0	0	0	0

OPERATING MODE (9) 1	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)				
	20.405(a)(1)(i)					50.36(a)(1)					<input type="checkbox"/> 50.73(a)(2)(v)					73.71(e)				
	20.405(a)(1)(ii)					50.36(a)(2)					<input type="checkbox"/> 50.73(a)(2)(vii)					OTHER (Specify in Abstract below and in Text, NRC Form 365A)				
	20.405(a)(1)(iii)					50.73(a)(2)(i)					<input type="checkbox"/> 50.73(a)(2)(viii)(A)									
	20.405(a)(1)(iv)					50.73(a)(2)(ii)					<input type="checkbox"/> 50.73(a)(2)(viii)(B)									
20.405(a)(1)(v)					50.73(a)(2)(iii)					<input type="checkbox"/> 50.73(a)(2)(x)										

LICENSEE CONTACT FOR THIS LER (12)																			
NAME M. J. Pastva, Jr., Regulatory Compliance Technician										TELEPHONE NUMBER 9 1 9 4 5 7 - 9 5 2 1									

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)											
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	
A	E	K	B	R	K	X	9	9	9	N	

SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO														

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

While placing an equipment clearance on emergency diesel generator (DG) No. 4, the DG output breaker 125 Vdc normal control power breaker was inadvertently deenergized. Upon reenergizing the breaker, the DG emergency bus E-4 undervoltage relay tripped, thereby, causing E-4 to deenergize and Group 3 and Group 6 isolations to occur. Bus E-4 was energized within four minutes by closing bus 2-C feeder breaker to E-4, and the Group 3 and Group 6 isolations were reset. The involved Auxiliary Operator had mistakenly assumed he was deenergizing the 125 Vdc normal control power breaker for DG No. 4, which is located in the DG local control panel. This breaker was not properly labeled; however, the DG output breaker 125 Vdc normal control power breaker was properly identified and labeled. A work request has been initiated to permanently identify and label 125 Vdc control power breakers to the plant emergency E-buses and DGs. The involved Auxiliary Operator was appropriately disciplined concerning his actions. This event did not affect the health and safety of the public.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

FACILITY NAME (1)  Brunswick Steam Electric Plant Unit No. 2	DOCKET NUMBER (2)  0   5   0   0   0   3   2   4   8   4   -   0   0   2   -   0   0   0   2   OF   0   3	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

TEXT (If more space is required, use additional NRC Form 388A's) (17)

On January 29, 1984, at 0648 a plant Auxiliary Operator, while placing an equipment clearance on plant emergency ac diesel generator (DG) No. 4, deenergized the 125 Vdc normal control power supply breaker to the 4160 V output breaker of the DG. An undervoltage alarm annunciation for plant emergency ac bus E-4 occurred concurrent with a loss of power supply indication for all plant equipment powered from E-4. However, it was determined that no loss of power supply to E-4 had occurred. At the time of this occurrence, both Units 1 and 2 were at power operation of 98% and 94%, respectively.

At 0656 the involved plant Auxiliary Operator was directed by the Control Operator to reenergize the subject dc control power breaker. When he closed the breaker, the dc control power system for E-4 momentarily sensed an undervoltage condition of the bus and the bus feeder breaker automatically opened resulting in a loss of power supply to the following Unit 1 and 2 E-4 loads.

Unit 1

Conventional Service Water (CSW)  
Pump Motor 1A  
Residual Heat Removal (RHR)  
Pump Motor 1B  
RHR Service Water Pump Motor 1B  
\*

Unit 2

CSW Pump Motor 2B  
Nuclear Service Water  
Pump Motor 2B  
Control Rod Drive Pump Motor 2B  
Reactor Core Spray Pump Motor 2B  
RHR Service Water Pump Motor 2B  
RHR Pump Motor 2B  
\*

NOTE: \*The alternate power supply to the plant Fire Protection System pump motor was also lost due to the loss of E-4.

Also, concurrent with the loss of power to E-4, DG No. 4 automatically started; however, the DG 4160 V output breaker to E-4 had been racked out prior to the deenergization of E-4, thereby, preventing automatic reenergizing of the bus.

The deenergization of E-4 resulted in Group 3 and 6 primary containment isolations on Unit 2. These isolations were verified by the Control Operator observing the position indication lights of the subject Group 3 and 6 valves. These group isolations placed the unit in the most conservative mode. This would hold true for other postulated plant conditions; therefore, it is felt the event would not have been more severe under other plant conditions. This event had no effect on the health and safety of the public.

At 0700 the feeder breaker to E-4 was reclosed to resupply power to E-4. Normal power supply to the affected Unit 1 and 2 loads was reestablished and they were returned to service.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)  Brunswick Steam Electric Plant  Unit No. 2	DOCKET NUMBER (2)  0 5 0 0 0 3 2 4 8 4	LER NUMBER (8)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		— 0 0 2	— 0 0 0	0 3	OF	0 3	

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

This event occurred primarily as a result of the involved plant Auxiliary Operator not adhering to requirements in Section 3.4 of plant Operating Instruction, OI-13, and Section 4.1.3 of plant Equipment Clearance Procedure (Administrative Instruction, AI-58). Section 3.4 of OI-13 specifies:

If valve and/or breaker tags or labels are found to be missing from their respective components, the person performing the lineup shall circle the component number. It shall then be the responsibility of the Shift Foreman to ensure tags and/or labels are replaced as needed. Valves and breakers with no tags may only be operated in an emergency to protect equipment or personnel. LL prints and diagrams may be used to determine what loads are supplied from 120 volt breakers.

As specified by the involved equipment clearance tag sheet, the 4160 V output breaker of DG No. 4 was racked out by the involved plant Auxiliary Operator. The next step specified by the clearance tag sheet was to deenergize the 125 Vdc normal control power supply breaker for DG No. 4. The involved plant Auxiliary Operator mistakenly recollected, from prior on-shift lectures and a walk-through concerning 125 Vdc normal and alternate power supply breakers to the plant emergency ac buses and emergency ac diesel generators, that the 125 Vdc normal control power supply breaker was located in the DG 4160 V output breaker compartment. In addition, no identification labels or tags existed for the dc control power breaker mistakenly opened by the involved plant auxiliary.

The 125 Vdc normal control power supply breaker to DG No. 4, which should have been opened as per the clearance tag sheet, is, in fact, located in the DG local control panel located on the next lower elevation in the Diesel Generator Building.

Following the event at 0715, the 125 Vdc normal control power breaker to the 4160 output breaker of DG No. 4 was labeled for proper identification. In addition, a plant work request was generated to permanently label the 125 Vdc normal and alternate control power breakers of the plant emergency ac buses and DGs. The involved plant Auxiliary Operator was counseled concerning his actions and was appropriately disciplined.



CP&L  
Carolina Power & Light Company

Brunswick Steam Electric Plant  
P. O. Box 10429  
Southport, NC 28461-0429  
March 2, 1984

FILE: B09-13510C  
SERIAL: BSEP/84-0464

Mr. James P. O'Reilly, Administrator  
U. S. Nuclear Regulatory Commission  
Region II, Suite 3100  
101 Marietta Street N.W.  
Atlanta, GA 30303

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NO. 2  
DOCKET NO. 50-324  
LICENSE NO. DPR-62  
LICENSEE EVENT REPORT 2-84-2

Dear Mr. O'Reilly:

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

Very truly yours,

C. R. Dietz, General Manager  
Brunswick Steam Electric Plant

PMP/clh/LETC1

Enclosure

cc: Mr. R. C. DeYoung  
NRC Document Control Desk

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