NRC FORM 366 (7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

UPDATE REPORT:
PREVIOUS REPORT DATE: 9-12-83

CONTROL BLOCK: (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

01 LICENSEE CODE: B S E P 2 (2) LICENSE NUMBER: 0 0 - 0 0 0 0 0 - 0 0 (3) LICENSE TYPE: 4 1 1 1 1 (4) CAT (5)

CON'T 01 REPORT SOURCE: L (6) DOCKET NUMBER: 0 5 0 - 0 3 2 4 (7) EVENT DATE: 1 0 1 0 8 2 (8) REPORT DATE: 0 2 1 0 8 4 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 During an orderly reactor shutdown, while attempting to automatically transfer bus 2D
03 from the unit auxiliary transformer (UAT) to the unit startup transformer (SAT), a
04 loss of 4160 V emergency bus E-3 occurred. In addition, No. 3 diesel generator was
05 determined to be inoperable. This event did not affect the health and safety of the
06 public.
07
08 Technical Specifications 3.8.1.1, 3.8.2.1, 6.9.1.9b

09 SYSTEM CODE: E B (11) CAUSE CODE: E (12) CAUSE SUBCODE: A (13) COMPONENT CODE: C K T B R K (14) COMP SUBCODE: F (15) VALVE SUBCODE: Z (16)

(17) LER/RO REPORT NUMBER: EVENT YEAR: 8 2 — SEQUENTIAL REPORT NO.: 1 2 3 / OCCURRENCE CODE: 0 3 REPORT TYPE: L — REVISION NO.: 3

ACTION TAKEN: D (18) FUTURE ACTION: X (19) EFFECT ON PLANT: A (20) SHUTDOWN METHOD: C (21) HOURS (22): 0 0 2 6 ATTACHMENT SUBMITTED: Y (23) NPRD-4 FORM SUB.: Y (24) PRIME COMP. SUPPLIER: L (25) COMPONENT MANUFACTURER: I 2 0 3 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 This event occurred because both the SAT output breaker and No. 3 diesel generator
11 output breaker failed to close when the UAT output breaker was opened. The UAT
12 breaker, Model No. 5HK350, was installed in place of the SAT breaker and power to E-3
13 was restored. Procedural changes were implemented to compensate for simultaneous
14 close and open signals to the diesel generator's output breakers under certain conditions.

15 FACILITY STATUS: X (28) % POWER: 0 1 7 (29) OTHER STATUS (30): NA METHOD OF DISCOVERY: A (31) DISCOVERY DESCRIPTION (32): Operational Event

16 ACTIVITY RELEASED: Z (33) CONTENT OF RELEASE: Z (34) AMOUNT OF ACTIVITY (35): NA LOCATION OF RELEASE (36): NA

17 PERSONNEL EXPOSURES NUMBER: 0 0 0 (37) TYPE: Z (38) DESCRIPTION (39): NA

18 PERSONNEL INJURIES NUMBER: 0 0 0 (40) DESCRIPTION (41): NA

19 LOSS OF OR DAMAGE TO FACILITY (43) TYPE: Z (42) DESCRIPTION: NA

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PDR ADOCK 05000324
S PDR

20 PUBLICITY ISSUED: N (44) DESCRIPTION (45)

NRC USE ONLY

NAME OF PREPARER: R. M. Poulk, Jr. PHONE: 919-457-9521

LER ATTACHMENT - RO #2-82-123

Facility: Unit No. 2 Event Date: October 10, 1982

While performing an orderly reactor shutdown, an attempt to manually transfer the power source to bus 2D from the unit auxiliary transformer (UAT) to the unit startup transformer (SAT) failed. When an attempt was made to effect an automatic transfer of the power source to bus 2D, a loss of voltage to 2D, and thus emergency bus E-3, occurred. The loss of bus E-3 rendered 2A core spray pump and 1A and 2A RHR pumps inoperable due to lack of their normal and emergency power supplies.

This event occurred when the UAT output breaker was manually opened and the SAT output breaker, ITE Model No. 5HK350, failed to automatically close in to supply bus 2D. Prior to this event, No. 3 diesel generator had been started under Control Room manual control and brought up to operating speed with the diesel generator output breaker open. This was done so that the diesel would be up to speed if the transfer failed. Emergency bus E-3 is normally supplied from bus 2D, and No. 3 diesel generator is the emergency standby power source to E-3. Immediately following the failure of the SAT output breaker, No. 3 diesel generator failed to close on bus E-3. This rendered bus E-3 dead which assisted in causing a scram and Group I isolation.

Shortly after this event, a quick trouble check of the SAT output breaker determined a problem within the breaker. The UAT output breaker was then installed in the SAT output breaker compartment and power to bus 2D was restored from the SAT within one hour and forty-five minutes of the event. In addition, bus E-3 reenergized. A close inspection and troubleshooting of the failed SAT output breaker revealed the breaker had failed to automatically close as a result of a sheared breaker charging spring motor actuator. The charging spring motor casing mounting screw had backed out of the motor housing causing the motor actuator to shear and separate from the breaker which prevented charging the breaker charging springs for breaker closing capability. The failed breaker from the SAT output breaker compartment was then repaired using a replacement charging motor assembly, tested satisfactorily for operation, and installed in the UAT output breaker compartment.

The failure of a breaker in this manner could prevent it from closing following a trip or a normal opening operation, thus causing a potential loss of power to its respective bus. A sufficient number of failures occurring at the same time could affect the operability of safety-related systems. These 4160 V breakers are located throughout the plant in both safety-related loads and balance-of-plant loads.

An investigation into the failure of the output breaker of No. 3 diesel generator to close in to bus E-3 revealed that simultaneous close and open signals to the breaker prevented automatic closing of the breaker on loss of

CP&L

Carolina Power & Light Company

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

February 10, 1984

FILE: B09-13510C
SERIAL: BSEP/84-0295

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
SUPPLEMENT TO LICENSEE EVENT REPORT 2-82-123

Dear Mr. O'Reilly:

In accordance with Section 6.9.1.9b of the Technical Specifications for Brunswick Steam Electric Plant, Unit No. 2, the enclosed supplemental Licensee Event Report is submitted. The original report fulfilled the requirement for a written report within thirty (30) days of a reportable occurrence and both are in accordance with the format set forth in NUREG-0161, July 1977.

Very truly yours,

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

MJP/mcg/LETCG2

Enclosure

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

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