

LICENSEE EVENT REPORT

U. S. NUCLEAR REGULATORY COMMISSION
UPDATE REPORT:
PREVIOUS REPORT DATE: 11-12-82CONTROL BLOCK: 1 2 3 4 5 6 1

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0	1	N	C	B	E	P	1	2	0	0	-	0	0	0	0	0	0	-	0	0	3	4	1	1	1	1	4		5										
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36										
LICENSEE CODE														LICENSE NUMBER										LICENSE TYPE												CAT		58	

0	1	L	6	0	5	0	-	0	3	2	5	7	1	0	1	0	8	2	8	0	5	1	8	8	4	9							
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36				
CON'T		REPORT SOURCE		DOCKET NUMBER										EVENT DATE										REPORT DATE									

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 While performing ADS Valve Operability Test, PT-11.1.2, at 200 psig reactor pressure

0 3 on 10-10-82, S/RV valve 1-B21-F013J failed to reclose until 50-100 psig reactor pres-

0 4 sure. Performance of this PT on 10-13-82 revealed S/RV valves 1-B21-F013D and E

0 5 would not open at 200 psig reactor pressure. However, while performing this PT on

0 6 10-14-82, S/RV F013E was manually opened, but responded slowly. In each case, the unit

C 7 was then placed into cold shutdown. Neither event affected the health and safety of

0 8 the public. Technical Specifications 4.5.2b, 6.9.1.9b

0	9	C	J	11	E	12	B	13	V	A	L	V	O	P	14	F	15	Z	16
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
SYSTEM CODE		CAUSE CODE		CAUSE SUBCODE		COMPONENT CODE								COMP. SUBCODE		VALVE SUBCODE			
EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE		REPORT TYPE		REVISION NO.											
17	LER/RO REPORT NUMBER	8	2	1	0	8	0	3	L	1									
ACTION TAKEN		FUTURE ACTION		EFFECT ON PLANT		SHUTDOWN METHOD		HOURS		ATTACHMENT SUBMITTED		NPRD-4 FORM SUB.		PRIME COMP. SUPPLIER		COMPONENT MANUFACTURER			
A		X		A		A		0080		Y		Y		N		T020			
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50		

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 F013J failed to reclose because its solenoid valve failed to close, attributed to

1 1 a faulty spring within the solenoid valve. The defective solenoid valve was replaced

1 2 along with the valve pilot assembly and F013J was tested satisfactorily. The problems

1 3 affecting F013D and E were not determined. Both valves were replaced in their

1 4 entirety and tested satisfactorily.

1	5	C	28	0	0	4	29	NA	30	B	31	Periodic Test	32
7	8	9	10	11	12	13	14	15	16	17	18	19	20
FACILITY STATUS		% POWER		OTHER STATUS		METHOD OF DISCOVERY		DISCOVERY DESCRIPTION					
ACTIVITY RELEASED		CONTENT OF RELEASE		AMOUNT OF ACTIVITY		LOCATION OF RELEASE							
Z		Z		NA		NA							
PERSONNEL EXPOSURES		TYPE		DESCRIPTION									
000		Z		NA									
PERSONNEL INJURIES		TYPE		DESCRIPTION									
000													
LOSS OF OF DAMAGE TO FACILITY		TYPE		DESCRIPTION									
Z													
PUBLICITY ISSUED		DESCRIPTION											
N													

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PDR ADOCK 05000325
S PDR

NAME OF PREPARER M. J. Pastva, Jr. PHONE 919-457-9521

NRC USE ONLY

LER ATTACHMENT - RO #1-82-108

Facility: BSEP Unit 1

Event Date: October 10, 1982

While performing the ADS System Valve Operability Test, PT-11.1.2, during Unit 1 startup at a reactor pressure of 200 psig, S/RV 1-B21-F013J failed to reclose until reactor pressure was 50-100 psig. The reactor was then placed in cold shutdown. On October 13, 1982, while performing this PT, S/RV valves 1-B21-F013D and E failed to open at a reactor pressure of 200 psig. Following this event, the unit was again placed into cold shutdown.

An inspection of the F013J, Model No. 7567F, revealed the F013J solenoid valve opened with noninterruptible instrument air still exhausting through the solenoid valve outlet port. When the solenoid valve air supply was isolated, the solenoid valve closed. The F013J solenoid valve was then removed and bench tested satisfactorily. An investigation of this problem by an on-site representative of the valve vendor concluded the unusual valve operation was caused by a faulty spring within the solenoid valve. The valve vendor, Target Rock Corporation, acknowledges that solenoid valve spring relaxation is a design problem, and consequently, they have developed a more reliable replacement spring. The design modification changed the material from the original 302SS to Inconel-718. This modification was completed for the solenoid valves in Unit 2 during the Unit 2 1982 refueling outage. The remaining Unit 1 solenoid valves were modified during the Unit 1 1983 refueling outage.

The problem solenoid valve on S/RV F013J was modified with the improved spring material. As a preventive measure, the valve pilot assembly was also replaced. During subsequent performance of PT-11.1.2 on October 13, 1982, F013J tested satisfactorily.

Following the discovery of problems affecting the opening capabilities of S/RV F013D and E, an inspection of both valves was performed. This inspection, which was conducted with the assistance of the valve vendor representative, was unsuccessful in determining what problems affected both valves. Both valves were replaced in their entirety and were tested satisfactorily. Also, the solenoid valves for these valves were modified with the improved spring material. It is felt the incurred F013D and E failures each resulted from one or both of the following identified two-stage S/RV generic problems:

1. High friction in the valve labyrinth seal guide area associated with a clearance less than minimum required by design.
2. Corrosion at the valve pilot valve seat-disc interface which results in sticking of the S/RV disc-to-seat assembly.

The BWR Owners' Group has concluded that the frequency of S/RV setpoint drift problems can be adequately controlled by improved maintenance practices during valve refurbishment/maintenance. Wyle Laboratory, which tests the setpoints of two-stage S/RVs, is currently revising their procedures as required to reflect the BWR Owners' Group recommendations. In addition, General Electric Company plans to issue a service/information letter regarding the suggested changes to S/RV procedures.

CP&L

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Carolina Power & Light Company

Brunswick Steam Electric Plant
P. O. Box 10429
Southport, NC 28461-0429
May 18, 1984

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SERIAL: BSEP/84-1168

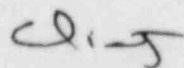
Mr. James P. O'Reilly, Administrator
U. S. Nuclear Regulatory Commission
Region II, Suite 3100
101 Marietta Street N.W.
Atlanta, GA 30303

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1
DOCKET NO. 50-325
LICENSE NO. DPR-71
SUPPLEMENT TO LICENSEE EVENT REPORT 1-82-108

Dear Mr. O'Reilly:

In accordance with Section 6.9.1.9b of the Technical Specifications for Brunswick Steam Electric Plant, Unit 1, 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

RMP/pms/LETPS1

Enclosure

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

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