

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Brunswick Steam Electric Plant	DOCKET NUMBER (2) 0 5 0 0 0 3 2 4	PAGE (3) 1 OF 0 2
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TITLE (4)  
Safety Relief Valves Exceeded Setpoints During Testing at Wyle Laboratories

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 5	2 2	8 4	8 4	0 0 7	0 0	0 6	2 1	8 4			0 5 0 0 0																																			
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;">OPERATING MODE (9) 4</td> <td colspan="11">THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)</td> </tr> <tr> <td rowspan="5">POWER LEVEL (10) 0 0 0</td> <td>20.402(b)</td> <td>20.406(e)</td> <td>50.73(a)(2)(iv)</td> <td>73.71(b)</td> </tr> <tr> <td>20.406(a)(1)(i)</td> <td>50.36(c)(1)</td> <td>50.73(a)(2)(v)</td> <td>73.71(c)</td> </tr> <tr> <td>20.406(a)(1)(ii)</td> <td>50.36(c)(2)</td> <td>X 50.73(a)(2)(vii)</td> <td rowspan="3">OTHER (Specify in Abstract below and in Text, NRC Form 358A)</td> </tr> <tr> <td>20.406(a)(1)(iii)</td> <td>50.73(a)(2)(i)</td> <td>50.73(a)(2)(viii)(A)</td> </tr> <tr> <td>20.406(a)(1)(iv)</td> <td>50.73(a)(2)(ii)</td> <td>50.73(a)(2)(viii)(B)</td> </tr> <tr> <td>20.406(a)(1)(v)</td> <td>50.73(a)(2)(iii)</td> <td>50.73(a)(2)(x)</td> <td></td> </tr> </table>												OPERATING MODE (9) 4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)											POWER LEVEL (10) 0 0 0	20.402(b)	20.406(e)	50.73(a)(2)(iv)	73.71(b)	20.406(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)	20.406(a)(1)(ii)	50.36(c)(2)	X 50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 358A)	20.406(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	20.406(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	20.406(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	
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LICENSEE CONTACT FOR THIS LER (12)

NAME Terrel E. Cribbe - Regulatory Specialist	TELEPHONE NUMBER 9 1 9 4 5 7 - 2 3 1 4
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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
X	A	D	R	V	T	0	2	0	Y

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)  NO

EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

During a Unit 2 refueling/maintenance outage, ASME-required functional testing of the unit's 11 safety relief valves (S/RVs), B21-F013A, B, C, D, E, F, G, H, J, K, and L, revealed that F013L would not lift and F013E, F, J, and K each lifted at pressures above their specified setpoint tolerances. Test data provided by Wyle Laboratories indicates the valve test failures occurred due to friction in the valves' labyrinth seal guide areas. All eleven valves have been refurbished, recertified, and received for reinstallation prior to initial startup of the unit for cycle 6 operation. The BWR Owners' Group has recommended improvement in maintenance practices which are directed at the specific causes of setpoint drift. These improved maintenance practices have been implemented as of May 1984. It is felt that these improved maintenance practices will reduce the frequency of recurrence.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)  Brunswick Steam Electric Plant Unit 2	DOCKET NUMBER (2)  0 5 0 0 0 3 2 4	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 4	- 0 0 7	- 0 0	0 2	OF	0 2

TEXT (If more space is required, use additional NRC Form 368A's) (17)

During testing of the Unit 2 main steam relief valves at Wyle Laboratories, 5 of the 11 valves tested exhibited initial actuation pressures higher than the 1 percent tolerance range specified in the technical specifications. The BWR Owners' Group, through its SRV setpoint drift testing and evaluation program, has concluded that:

SRV setpoint drift originates from only two causes. The first and most prominent is high friction in the labyrinth seal guide area associated with a clearance less than the minimum required by design. The second cause, which occurs only infrequently, is pilot disc-to-seat sticking associated with corrosion at the pilot disc-to-seat interface.

The data for the setpoint drift associated with these valves indicate the cause to be increased labyrinth seal friction. The valves associated with this report are Model 7567F, manufactured by Target Rock Corporation.

The overpressure protection system must accommodate the most severe pressurization transient. This transient is the closing of all main steam isolation valves. BWRs employing the two-stage SRVs have sufficient margin to tolerate SRV drift and/or valve failure.

Of the five valves exhibiting setpoint drift, only one would not lift during the initial testing. The testing was terminated on this valve prior to exceeding the valve design rating of 1250 psig. The four other valves exhibited drifts of between 17 and 95 psig.

Improved maintenance practices recommended by the BWR Owners' Group were implemented in May 1984. This includes specific testing to identify origins of any drift found during the as-received testing of the SRVs at Wyle Laboratories and refurbishment/maintenance which is directed at the specific cause of the setpoint drift.

# CP&L

Carolina Power & Light Company

Brunswick Steam Electric Plant

P. O. Box 10429

Southport, NC 28461-0429

June 21, 1984

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SERIAL: BSEP/84-1522

NRC Document Control Desk

U. S. Nuclear Regulatory Commission

Washington, DC 20555

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 2

DOCKET NO. 50-324

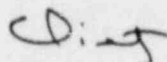
LICENSE NO. DPR-62

LICENSEE EVENT REPORT 2-84-7

Gentlemen:

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

MJP/jlh/LETJH1

Enclosure

cc: Mr. J. P. O'Reilly

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11