

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)										DOCKET NUMBER (2)		PAGE (3)	
Brunswick Steam Electric Plant Unit 2										0 1 5 0 0 0 3 2 1 4		1 OF 0 1 2	

TITLE (4)

Automatic Reactor Scram Resulting From Main Turbine Moisture Separator Reheater High Level

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)
11	2	7	84	84	-	01	8	-	00	1 2 2 7 8 14	0 5 0 0 0 1 1
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OPERATING MODE (9)

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

POWER LEVEL (10)

01918

20.402(b)	20.405(c)	X	60.73(a)(2)(iv)	73.71(b)
20.406(a)(1)(i)	50.38(e)(1)		60.73(a)(2)(v)	73.71(c)
20.406(a)(1)(ii)	50.36(c)(2)		60.73(a)(2)(vii)	
20.406(a)(1)(iii)	50.73(a)(2)(i)		60.73(a)(2)(viii)(A)	
20.405(a)(1)(iv)	50.73(a)(2)(ii)		60.73(a)(2)(viii)(B)	
20.405(a)(1)(v)	50.73(a)(2)(iii)		60.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME										TELEPHONE NUMBER		
M. J. Pastva, Jr., Regulatory Technician										AREA CODE	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 NPPDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPPDS	

SUPPLEMENTAL REPORT EXPECTED (14)

EXPECTED SUBMISSION DATE (15)

 YES (If yes, complete EXPECTED SUBMISSION DATE) NO

MONTH DAY YEAR

| | |

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

On 11-27-84, at 1023, a Unit 2 automatic reactor scram occurred due to a main turbine trip and stop valve closure caused by a main turbine moisture separator (MSR) high level actuation trip signal. At the time Unit 2 was operating at 98% power. In addition the unit low pressure coolant injection (LPCI) subsystem loop B and Reactor Core Isolation Cooling System were inoperable. However, the redundant unit LPCI loop A, both core spray subsystems, and the High Pressure Coolant Injection System were operable.

During the scram recovery, reactor level was controlled by use of the reactor condensate main steam driven feed pumps. Reactor pressure was automatically controlled by the main turbine bypass system. The reactor recirculation pump B did not automatically run back to minimum speed and was manually run back.

The MSR high level trip resulted from failure of the unit east MSR high level actuation trip switch to reset within the design ten-second time delay following a spurious high level. Crud accumulation in the instrument internals of the level switch, 2-MD-LSH-MS-2, caused the instrument float to mechanically bind and prevent resetting. The instrument internals of LSH-MS-2 were cleaned; the switch was calibrated and returned to service. Reactor recirculation pump B did not run back due to a bad reset potentiometer in the pump controller, which was then replaced.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104
EXPIRES 8/31/85

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

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

On November 27, 1984, at 1023, an automatic reactor scram of Unit 2 occurred due to a main turbine trip and stop valve closure caused by a main turbine moisture separator-reheater (MSR) high level trip signal. A unit scram recovery was carried out. Reactor level was controlled through use of the unit reactor condensate main steam driven feed pumps. Reactor pressure, which peaked at 1032 psi, was automatically controlled through use of the main turbine bypass control system. Reactor recirculation pump B did not automatically run back to minimum operating speed and was manually run back. At the time of this event, Unit 2 was operating at 98% power and preconditioning to 100% power was in progress. In addition, the unit low pressure coolant injection (LPCI) subsystem loop B was inoperable due to excessive seat leakage past the loop inboard Primary Containment Isolation Valve (PCIV), 2-E11-F015B. Also, the unit Reactor Core Isolation Cooling System was inoperable due to failure of the inservice test requirement for pump-developed pressure as a function of pump flow criteria. However, the redundant unit LPCI subsystem loop A, both unit reactor core spray subsystem loops, and the unit High Pressure Coolant Injection System were operable. Following the unit scram recovery, while subsequently placing the unit residual heat removal (RHR) subsystem loop A into reactor shutdown cooling, the loop steam condensing piping encountered an apparent water hammer which consequently rendered the loop inoperable. Reactor shutdown cooling was then established utilizing main condenser cooling. Refer to LER 2-84-14 for more information concerning the inoperability of RHR subsystem loop A.

The investigation of this event determined the incurred MSR high level trip resulted from failure of the unit east MSR high level actuation switch, 2-MD-LSH-MS-2, to reset within its design ten-second actuation time delay following a spurious MSR high level. An examination of the instrument internals revealed the instrument float was sticking in the actuated position, thereby preventing reset. The sticking problem with 2-MD-LSH-MS-2 is attributed to crud buildup on the switch internal mechanism. The instrument, 2-MD-LSH-MS-2, Part No. 402-XS-M-14, was cleaned and tested for proper operation. A calibration of 2-MD-LSH-MS-2 showed the instrument actuation trip setpoint was within the specified tolerance. A calibration check of the respective west MSR high level actuation switch, 2-MD-LSH-MS-1, revealed the instrument actuated within tolerance but would not reset when the instrument float chamber was empty. An inspection of 2-MD-LSH-MS-1 instrument internals revealed the instrument float plunger was loose, thereby causing the float to hang up. The float plunger was tightened and the instrument was returned to service. Troubleshooting the problem which prevented the automatic run back of reactor recirculation pump B revealed the pump controller reset potentiometer was defective. The pump controller, 2-B32-R622B, Part No. 50-543041DAAZIPBE, was replaced, functionally tested, and the pump was returned to service.

As a result of this event, applicable plant procedures regarding the periodic testing of the Units 1 and 2 east and west MSR high level switches will be revised to ensure the instruments are checked for possible mechanical binding problems within the instruments.

CP&L

Carolina Power & Light Company

Brunswick Steam Electric Plant

P. O. Box 10429
Southport, NC 28461-0429
December 27, 1984

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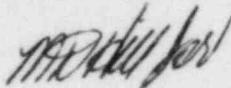
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BRUNSWICK STEAM ELECTRIC PLANT UNIT 2
DOCKET NO. 50-324
LICENSE NO. DPR-62
LICENSEE EVENT REPORT 2-84-18

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/smp/LETSMP

Enclosure

cc: Mr. R. C. DeYoung
Mr. J. P. O'Reilly

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