

ACCESSION NBR: 8706180498 DOC. DATE: 87/05/27 NOTARIZED: NO DOCKET #  
 FACIL: 50-261 H. B. Robinson Plant, Unit 2, Carolina Power & Light Co 05000261  
 AUTH. NAME AUTHOR AFFILIATION  
 SAYRE, D. Carolina Power & Light Co.  
 MORGAN, R. E. Carolina Power & Light Co.  
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-004-00: on 870427, discovered three flow transmitters on RCS Loop C out of calibr. Caused by small undetected air leak in test equipment. Transmitters recalib using valid test equipment. W/870527 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 3  
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

## NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD2-1 LA	1 1	PD2-1 PD	1 1
	ECCLESTON, K	1 1		
INTERNAL:	ACRS MICHELSON	1 1	ACRS MOELLER	2 2
	AEOD/DOA	1 1	AEOD/DSP/ROAB	2 2
	AEOD/DSP/TPAB	1 1	DEDRO	1 1
	NRR/DEST/ADE	1 0	NRR/DEST/ADS	1 0
	NRR/DEST/CEB	1 1	NRR/DEST/ELB	1 1
	NRR/DEST/ICSB	1 1	NRR/DEST/MEB	1 1
	NRR/DEST/MTB	1 1	NRR/DEST/PSB	1 1
	NRR/DEST/RSE	1 1	NRR/DEST/SGB	1 1
	NRR/DLPQ/HFB	1 1	NRR/DLPQ/QAB	1 1
	NRR/DOEA/EAB	1 1	NRR/DREP/RAB	1 1
	NRR/DREP/RPB	2 2	NRR/PMAS/ILRB	1 1
	NRR/PMAS/PTSB	1 1	REG FILE 02	1 1
	RES DEPY GI	1 1	RGN2 FILE 01	1 1
EXTERNAL:	EG&G GROH, M	5 5	H ST LOBBY WARD	1 1
	LPDR	1 1	NRC PDR	1 1
	NSIC HARRIS, J	1 1	NSIC MAYS, G	1 1

NRC Form 366  
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) H. B. Robinson Steam Electric Plant Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 2 6 1 1 OF 0 2				PAGE (3) 1 OF 0 2	
TITLE (4) Reactor Coolant Loop Flow Transmitter Calibration															
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 4	2 7	8 7	8 7	0 0 4	0 0	0 5	2 7	8 7					0 5 0 0 0		
OPERATING MODE (9) N		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)													
POWER LEVEL (10) 0		20.402(b)				20.406(c)				50.73(a)(2)(iv)				73.71(b)	
		20.406(a)(1)(i)				50.38(c)(1)				50.73(a)(2)(v)				73.71(c)	
		20.406(a)(1)(ii)				50.38(c)(2)				50.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)	
		20.406(a)(1)(iii)				X 50.73(a)(2)(i)				50.73(a)(2)(vii)(A)					
		20.406(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(vii)(B)					
		20.406(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(x)					
LICENSEE CONTACT FOR THIS LER (12)															
NAME Don Sayre										TELEPHONE NUMBER AREA CODE 8 0 3 3 8 3 - 1 2 4 2					
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	A B	I F T	R 3 6 9	N											
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR	
YES (If yes, complete EXPECTED SUBMISSION DATE) X NO															
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)															
<p>On April 27, 1987, three (3) flow transmitters on Reactor Coolant System (RCS) Loop "C" were determined out of calibration. The transmitters provide measurement of loop flow on the suction to Reactor Coolant Pump "C" (RCP-C). Each provides a signal to the Reactor Protection System (RPS) and a corresponding flow indicator on the Unit 2 RTGB. Each flow channel is calibrated during refueling at full load flow and temperature such that 100 percent (%) equals full flow. A trip setting at 91% of full flow assures the reactor will trip at 90%, as required by Technical Specification. The transmitters' calibration would have resulted in a reactor trip at about 89.6% of full flow. Although this would have been below the Technical Specification limit, it is 2.6% above the 87% established in the assumptions used in the design basis accident analysis (FSAR).</p> <p>The most likely cause of the calibration errors was a small air leak in the test equipment which went undetected by the I&amp;C Technician performing the calibration, possibly because of the full-face respirator he was wearing at the time of the calibration.</p> <p>All three (3) transmitters have been recalibrated using known valid test equipment and returned to service. I&amp;C personnel have been reminded to identify any as-found calibration deviation or discrepancy for further evaluation by supervision. Previous operating history has been reviewed to assure the reactor coolant loop trip setpoint was never approached during the period the transmitters were out of calibration.</p>															
8706180498 870527 PDR ADOCK 05000261 S PDR															

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)  H. B. Robinson Unit 2	DOCKET NUMBER (2)  0   5   0   0   0   2   6   1   8   7   —   0   0   4   —   0   0	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

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

Event Description

On April 27, 1987, three (3) flow transmitters on RCS Loop "C" were determined out of calibration. The transmitters are located on the suction to RCP-C to provide measurement of RCS flow rate. Each transmitter provides a signal to the RPS and a corresponding flow indicator on the Unit 2 RTGB. Each flow channel is calibrated during refueling at full load flow and temperature such that 100% equals full flow. A trip setting of 91% of full flow assures the reactor will trip at 90%, as required by Technical Specification 2.3.1.2 to provide protection against loss of primary coolant flow.

Review of the Unit 2 Operations Shift Log indicated that the three (3) transmitters (FT-434, FT-435, and FT-436) were at 104% throughout Cycle 11 operation. Analysis of calibration data showed the transmitters would have initiated a reactor trip at about 89.6%, 0.4% below the Technical Specification requirement of 90%. It should be noted that the design accident analysis (DBA) for a loss of forced reactor coolant flow involves an established conservative condition so that a reactor trip results on low flow minus 3%, i.e., 87%. Therefore, the transmitters would have initiated a reactor trip well above the DBA limit (FSAR).

Cause

The most likely cause of the miscalibration of the instruments was a small undetected leak in the tubing from the test equipment to the transmitter during the 1986 calibration. This was determined by analyzing the 1986 calibration results and attempting to recreate errors in the calibration techniques which would have caused the observed deviation.

The I&C Technician who performed the calibrations in question was wearing a full-face respirator at the time, for radiological protection, and may not have been able to detect a small air leak in the test equipment.

Corrective Action

The three (3) transmitters have been recalibrated using known valid test equipment and returned to service. I&C Technician Foremen have been instructed to identify all calibration deviations and discrepancies for further evaluation and resolution by their supervision. Cycle 11 operation history data has been reviewed to assure that the reactor coolant loop trip setpoint was never approached during the period the transmitters were out of calibration.



Carolina Power & Light Company

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MAY 27 1987

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(10CFR50.73)

United States Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D. C. 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
DOCKET NO. 50-261  
LICENSE NO. DPR-23  
LICENSEE EVENT REPORT 87-007<sup>4</sup>

Dear Sir:

The enclosed Licensee Event Report (LER) is submitted in accordance with the Licensee Event Report System of 10CFR50.73. The format of the LER follows the recommendations of NUREG-1022 of September 1983.

Very truly yours,

R. E. Morgan  
General Manager  
H. B. Robinson S. E. Plant

DAS:sdm

Enclosure

cc: J. N. Grace  
INPO  
H. E. P. Krug

IE22  
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