

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9209220402 DOC. DATE: 92/09/17 NOTARIZED: NO DOCKET #  
 FACIL: 50-261 H.B. Robinson Plant, Unit 2, Carolina Power & Light Co 05000261  
 AUTH. NAME AUTHOR AFFILIATION  
 CROOK, R.D. Carolina Power & Light Co.  
 CHAMBERS, R.H. Carolina Power & Light Co.  
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 92-012-01: on 920619, RCS narrow-range resistance temp detectors tripped. Caused by temp module voltage spiking high, causing high delta temp signal on Loop 3. Surveillance test procedures will be revised. W/920915 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4  
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

## NOTES:

	RECIPIENT		COPIES			RECIPIENT		COPIES		
	ID CODE/NAME		LTTR	ENCL		ID CODE/NAME		LTTR	ENCL	
	PD2-1 LA		1	1		PD2-1 PD		1	1	
	MOZAFARI, B		1	1						
INTERNAL:	ACNW		2	2		AEOD/DOA		1	1	
	AEOD/DSP/TPAB		1	1		AEOD/ROAB/DSP		2	2	
	NRR/DET/EMEB 7E		1	1		NRR/DLPQ/LHFB10		1	1	
	NRR/DLPQ/LPEB10		1	1		NRR/DOEA/OEAB		1	1	
	NRR/DREP/PRPB11		2	2		NRR/DST/SELB 8D		1	1	
	NRR/DST/SICB8H3		1	1		NRR/DST/SPLB8D1		1	1	
	NRR/DST/SRXB 8E		1	1		<u>REG FILE</u> 02		1	1	
	RES/DSIR/EIB		1	1		RGN2 FILE 01		1	1	
EXTERNAL:	EG&G BRYCE, J.H.		2	2		L ST LOBBY WARD		1	1	
	NRC PDR		1	1		NSIC MURPHY, G.A		1	1	
	NSIC POORE, W.		1	1		NUDOCS FULL TXT		1	1	

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Carolina Power & Light Company

ROBINSON NUCLEAR PROJECT DEPARTMENT  
POST OFFICE BOX 790  
HARTSVILLE, SOUTH CAROLINA 29550  
**SEP 15 1992**

Robinson File No: 13510C

Serial: RNP/92-2379  
(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 NO. 92-012-01

Gentlemen:

The enclosed Supplemental Licensee Event Report (LER), is submitted in accordance with 10 CFR 50.73 and NUREG 1022, Supplements No. 1 and 2. This report provides information concerning the cause of the event that was not available at the time the original report was issued. The revised portions are indicated by a vertical bar in the right margin.

Very truly yours,

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

RDC:sgk

Enclosure

cc: Mr. S. D. Ebnetter  
Mr. L. W. Garner  
INPO

9209220402 920917  
PDR ADDCK 05000261  
S. PDR

JE221

EXPIRES: 4/30/92

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

**1. LICENSEE EVENT REPORT (LER)**

FACILITY NAME (1)

**H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2**

DOCKET NUMBER (2)

**05000261**

PAGE (3)

**1**

TITLE (4)

**REACTOR TRIP AT HOT SHUTDOWN DURING SURVEILLANCE TESTING**

EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQ. NO.	REV. NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER	
<b>06</b>	<b>19</b>	<b>92</b>	<b>92</b>	<b>-</b>	<b>012</b>	<b>-</b>	<b>01</b>	<b>09</b>	<b>17</b>	<b>92</b>	<b>05000</b>

  

OPERATING MODE (9)  POWER LEVEL (10)	<b>N</b>	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)								
		20.402(b)	20.405(c)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	73.71(b)				
		20.405(a)(1)(i)	50.36(c)(1)		50.73(a)(2)(v)	73.71(c)				
		20.405(a)(1)(ii)	50.36(c)(2)		50.73(a)(2)(vii)	OTHER (Specify in Abstract and Text)				
		20.405(a)(1)(iii)	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)					
		20.405(a)(1)(iv)	50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)					
		20.405(a)(1)(v)	50.73(a)(2)(iii)		50.73(a)(2)(x)					

LICENSEE CONTACT FOR THIS LER (12)

NAME

**R. D. CROOK, SR. SPECIALIST - REGULATORY COMPLIANCE**

TELEPHONE NUMBER

**(803)383-1179**

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

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/>	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

On June 19, 1992, H. B. Robinson Unit No. 2 was in hot shutdown and preparing for startup from a scheduled refueling outage. During surveillance testing which involved collection of cross calibration data for the Reactor Coolant System narrow range Resistance Temperature Detectors (RTD), a reactor trip occurred. At the time of the event, a Reactor Protection System bistable in Loop 1 was in the tripped condition due to a RTD time response failure, unrelated to the on-going surveillance testing. The trip occurred when a temperature module voltage spiked high, causing a high delta temperature signal on Loop 3. The plant was placed in stable condition, and an event investigation was initiated.

The cause of this event is attributed a combination of the response of the equipment being tested and the configuration of the system during the testing process. Corrective actions include procedural enhancements which will ensure the plant is placed in a conservative configuration during testing with a reactor protection loop in the tripped condition. There were no adverse safety consequences because the plant was shutdown at the time of the event.

This report is submitted pursuant to 10 CFR 50.73(a)(2)(iv):

EXPIRES: 4/30/92

# **LICENSEE EVENT REPORT (LER) TEXT CONTINUATION**

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)				PAGE (3)	
H. B. ROBINSON, UNIT NO. 2	05000261	YEAR		SEQ NO.		REV NO.	
		92	-	012	-	01	

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

## **I. DESCRIPTION OF EVENT**

On June 19, 1992, H. B. Robinson Unit No. 2<sup>1</sup> was in hot shutdown condition at 542 degrees F and preparing for startup from a scheduled refueling outage. At 2048 hours, with Surveillance Test EST-052, "Operational Alignment of Process Temperature Instrumentation" in progress, a reactor trip occurred. The Emergency Operating Procedures were entered, and the plant was placed in a stable condition. At the time of the event, the reactor protection Over Temperature Delta Temperature (OTΔT) bistable (TC-412C) associated with Reactor Coolant System (RCS) Loop 1 was in the tripped condition due to a Resistance Temperature Detector (RTD) time response failure, unrelated to the on-going surveillance testing.

The portion of the test being performed involved the collection of cross-calibration data for the RCS Narrow Range RTD's. The data is acquired using an RTD Test Panel external to the Reactor Protection and Control Analog Instrumentation cabinets (Hagan Racks) to switch between individual RTD's in order to measure their outputs at different temperature plateaus during heatup operations. On the test panel, individual switches are manually actuated to energize relays inside the test panel that divert the RTD input from the Hagan Rack Terminal Strip to the test meter used to measure the RTD resistance. These switches are actuated one at a time and each RTD output is restored to its Hagan Rack input before the next RTD is switched out of service to be measured. Four sets of data are taken in an alternate fashion (two sets in the order of Loop 1, then Loop 2, and lastly Loop 3, and two sets in reverse order) at each temperature plateau.

Data had been successfully acquired from Loops 1 and 2 without incident. However, during data collection for Loop 3, the temperature module voltage for TE-432B2 spiked high, due to the rapid removal of the input resistance when the test switch was actuated, causing the OTΔT trip setpoint to be exceeded. This, when combined with the pre-existing OTΔT bistable tripped for Loop 1, resulted in a reactor trip via the satisfaction of the required two out of three logic.

The NRC was notified of this event at 1221 hours via the ENS pursuant to 10 CFR 50.72(b)(2)(ii).

<sup>1</sup> H. B. Robinson Steam Electric Plant, Unit No. 2 is a Westinghouse Pressurized Water Reactor in commercial operation since March, 1971.

EXPIRES: 4/30/92

# **LICENSEE EVENT REPORT (LER) TEXT CONTINUATION**

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)				PAGE (3)
H. B. ROBINSON, UNIT NO. 2	05000261	YEAR		SEQ NO.		REV NO.
		92	-	012	-	01
						3

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

## II. CAUSE OF EVENT

An Adverse Condition Report<sup>2</sup> was initiated so that this event could be investigated and the root cause be determined. Subsequent investigation revealed that the circuit had performed as expected. The instrumentation was operating near the lower end of its calibration band, and when the test switch removed the RTD input, the circuit could respond in different ways, including tripping. Therefore, the cause of this event is a combination of the response of the equipment being tested and the configuration of the system during the testing process.

## III. ANALYSIS OF EVENT

There were no adverse safety consequences as a result of this event. The portion of the test being conducted at the time is not performed during power operations. The plant was in hot shutdown condition at the time of the event, safeguards systems performed as designed, and a significant transient did not occur. Plant Operations personnel maintained plant safety in accordance with established procedures.

This report is submitted pursuant to 10 CFR 50.73(a)(2)(iv).

## IV. CORRECTIVE ACTIONS

Surveillance test procedures will be revised to require the Plant to be placed in a conservative configuration prior to conducting the test with a reactor protection loop bistable in the tripped condition. This revision will be made prior the next scheduled performance during Refueling Outage 15.

## V. ADDITIONAL INFORMATION

### A. Previous Similar Events

None

### B. Component Failures

None

<sup>2</sup> Adverse Condition Report 92-222.