

REGULARY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8805310322 DOC. DATE: 88/05/20 NOTARIZED: NO DOCKET #  
 FACIL: 50-261 H. B. Robinson Plant, Unit 2, Carolina Power & Light Co 05000261  
 AUTH. NAME AUTHOR AFFILIATION  
 LEGETTE, F. L. Carolina Power & Light Co.  
 MORGAN, R. E. Carolina Power & Light Co.  
 RECIPIENT NAME RECIPIENT AFFILIATION

SUBJECT: LER 88-009-00: on 880422, electro-hydraulic (E-H) sys  
 transient occurred resulting in reactor power exceeding Tech  
 Spec 3.3.1.1c power limit. Caused by faulted E-H relay card.  
 Subj relay card replaced. W/880520 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4  
 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
	LD, R	1 1		
INTERNAL:	ACRS MICHELSON	1 1	ACRS MOELLER	2 2
	AEDD/DOA	1 1	AEDD/DSP/NAS	1 1
	AEDD/DSP/ROAB	2 2	AEDD/DSP/TPAB	1 1
	ARM/DCTS/DAB	1 1	DEDRO	1 1
	NRR/DEST/ADS 7E	1 0	NRR/DEST/CEB 8H	1 1
	NRR/DEST/ESB 8D	1 1	NRR/DEST/ICSB 7	1 1
	NRR/DEST/MEB 9H	1 1	NRR/DEST/MTB 9H	1 1
	NRR/DEST/PSB 8D	1 1	NRR/DEST/RSB 8E	1 1
	NRR/DEST/SGB 8D	1 1	NRR/DLPQ/HFB 10	1 1
	NRR/DLPQ/QAB 10	1 1	NRR/DOEA/EAB 11	1 1
	NRR/DREP/RAB 10	1 1	NRR/DREP/RPB 10	2 2
	NRR/DRIS/SIB 9A	1 1	NRR/PMAS/ILRB12	1 1
	NUDOCS-ABSTRACT	1 1	<u>REG FILE</u> 02	1 1
	RES TELFORD, J	1 1	RES/DE/EIB	1 1
	RES/DRPS DEPY	1 1	RGN2 FILE 01	1 1
EXTERNAL:	EG&G WILLIAMS, S	4 4	FORD BLDG HOY, A	1 1
	H ST LOBBY WARD	1 1	LPDR	1 1
	NRC PDR	1 1	NSIC HARRIS, J	1 1
	NSIC MAYS, G	1 1		

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2	DOCKET NUMBER (2) 0 5 0 0 0 2 6 1	PAGE (3) 1 OF 3
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TITLE (4)  
REACTOR POWER EXCEEDING TECHNICAL SPECIFICATION LIMIT DUE TO PLANT TRANSIENT

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)																																																																																																																									
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<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;">OPERATING MODE (9) N</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) 060</td> <td>20.402(b)</td> <td>20.405(a)(1)(i)</td> <td>20.405(a)(1)(ii)</td> <td>20.405(a)(1)(iii)</td> <td>20.405(a)(1)(iv)</td> <td>20.405(a)(1)(v)</td> <td>20.405(c)</td> <td>50.38(c)(1)</td> <td>50.38(c)(2)</td> <td>50.73(a)(2)(i)</td> <td>50.73(a)(2)(ii)</td> <td>50.73(a)(2)(iii)</td> <td>50.73(a)(2)(iv)</td> <td>50.73(a)(2)(v)</td> <td>50.73(a)(2)(vii)</td> <td>50.73(a)(2)(viii)(A)</td> <td>50.73(a)(2)(viii)(B)</td> <td>50.73(a)(2)(x)</td> <td>73.71(b)</td> <td>73.71(c)</td> <td rowspan="5">OTHER (Specify in Abstract below and in Text, NRC Form 366A)</td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>												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) 060	20.402(b)	20.405(a)(1)(i)	20.405(a)(1)(ii)	20.405(a)(1)(iii)	20.405(a)(1)(iv)	20.405(a)(1)(v)	20.405(c)	50.38(c)(1)	50.38(c)(2)	50.73(a)(2)(i)	50.73(a)(2)(ii)	50.73(a)(2)(iii)	50.73(a)(2)(iv)	50.73(a)(2)(v)	50.73(a)(2)(vii)	50.73(a)(2)(viii)(A)	50.73(a)(2)(viii)(B)	50.73(a)(2)(x)	73.71(b)	73.71(c)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)																																																																																							
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LICENSEE CONTACT FOR THIS LER (12)

NAME F. L. Legette, Senior Reactor Operator	TELEPHONE NUMBER AREA CODE: 803 383-1253
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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	T	A	R L Y W	1 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)

On April 22, 1988, Unit 2 was operating at 60% reactor power, approximately 407 MWe Net. The Control Operator attempted to manually adjust the turbine load while in automatic control using the Electro-Hydraulic (E-H) Control System, a normal evolution. An E-H System transient resulted. The turbine decreased automatically to 356 MWe Net, then picked up load to 520 MWe Net, so that approximately 64.5% reactor power was achieved. The Senior Control Operator quickly placed the turbine in manual control and returned the turbine load to 410 MWe Net, approximately 60% reactor power. The transient lasted for approximately three minutes, during which time the reactor power exceeded the 60% (1380 MWt) power limit (Technical Specification 3.3.1.c).

Maintenance replaced a faulty E-H relay card which receives a signal from the Governor Valve Position Limiter. At the time of this writing an additional E-H Control Malfunction has caused a turbine trip and subsequent reactor trip on May 2, 1988. The results of the investigation regarding that event including relationship to this event will be discussed in a subsequent report (LER 88-010).

This LER is submitted pursuant to 10CFR50.73(a)(2)(i)(B).

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PDR ADOCK 05000261  
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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)  H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2	DOCKET NUMBER (2)  0 5 0 0 0 2 6 1 8 8	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 8	0 0 9	0 0	0 2	OF 0	3

TEXT (If more space is required, use additional NRC Form 365A's) (17)

DESCRIPTION OF EVENT

On April 22, 1988, Unit 2 was operating at 60% reactor power, approximately 407 MWe Net. The licensed Control Operator attempted to lower the valve position limiter to match Average Temperature (Tavg) with Reference Temperature (Tref). The turbine automatically decreased electrical load to 356 MWe Net, and then picked up load to 520 MWe Net, so that approximately 64.5% reactor power was achieved<sup>1,2</sup>. The licensed Senior Control Operator quickly placed the turbine in manual control and reduced the load to 410 MWe Net, approximately 60% reactor power. The transient lasted for approximately three minutes, during which time the reactor power exceeded the 60% (1380 MWt) power limit (Technical Specification 3.3.1.1c). This LER is submitted pursuant to 10CFR50.73(a)(2)(i)(B).

CAUSE OF EVENT

A faulted Electro-Hydraulic (E-H) Relay Card in the Governor Valve Position Limiter (VPL) circuitry caused the transient which resulted in reactor power exceeding the steady state 60% (1380 MW thermal) power limit for approximately three minutes.

ANALYSIS OF EVENT

A. Reason Reportable

This issue is reportable pursuant to 10CFR50.73(a)(2)(i)(B), as an operation or condition prohibited by the Plant's Technical Specifications.

B. Safety Assessment

Unit 2 is limited to 60% (1380 MW thermal) steady state reactor power because only one Safety Injection Pump is assumed available to remove decay heat during a design basis accident (Ref: LER 88-003). Sustained steady state reactor power operation greater than 60% could result in sufficient decay heat production to invalidate the analysis for one Safety Injection Pump. However, regarding this event, the power level for the short duration achieved was insignificant from a decay heat standpoint.

<sup>1</sup>H. B. Robinson Steam Electric Plant, Unit No. 2 is a Westinghouse 700 MW Pressurized Water Reactor Plant, in commercial operation since March 1971.

<sup>2</sup>EIIS Codes: System - TA; Component in RLY; Manufacturer - W120.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 8	0 0 9	0 0	0 3	OF	0 3

TEXT (If more space is required, use additional NRC Form 386A's) (17)

CORRECTIVE ACTION

The Senior Control Operator immediately restored reactor power within the Technical Specifications limit.

Licensee Maintenance personnel replaced the faulty E-H relay card which received a signal from the Turbine Governor Valve Position Limiter. At the time of this writing an additional E-H Control Malfunction has caused a turbine trip and subsequent reactor trip on May 2, 1988. The results of the investigation regarding that event including relationship to this event will be discussed in a subsequent report (LER 88-010).

ADDITIONAL INFORMATION

- A. Failed Component: E-H Relay #3 type Westinghouse #398737
- B. Previous Similar Events  
  
None



Carolina Power & Light Company

ROBINSON NUCLEAR PROJECT DEPARTMENT  
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HARTSVILLE, SOUTH CAROLINA 29550

MAY 20 1988

Robinson File No: 13510C

Serial: RNP/88-2432  
(10 CFR 50.73)

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 88-009-00

Gentlemen:

The enclosed Licensee Event Report (LER) is submitted in accordance with 10 CFR 50.73 and NUREG-1022 including Supplements No. 1 and 2.

Very truly yours,

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

FLL:lko

Enclosure

cc: Dr. J. N. Grace  
Mr. L. W. Garner  
INPO

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