

REGULATOR INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8705050385      DOC. DATE: 87/05/01      NOTARIZED: NO      DOCKET #  
 FACIL: 50-335 St. Lucie Plant, Unit 1, Florida Power & Light Co.      05000335  
 AUTH. NAME      AUTHDR AFFILIATION  
 GREEN, W. C.      Florida Power & Light Co.  
 WOODY, C. D.      Florida Power & Light Co.  
 RECIP. NAME      RECIPIENT AFFILIATION

SUBJECT: LER 87-008-00: on B70401, control room lost positive indication of motor breaker trip open capability for 1A LPSI pump. Caused by poor breaker auxiliary stab contact. LPSI pump breaker control fuse holders tightened. W/870501 ltr.

DISTRIBUTION CODE: IE22D      COPIES RECEIVED: LTR / ENCL / 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
	PD2-2 LA	1 1	PD2-2 PD	1 1
	TOURIGNY, E	1 1		
INTERNAL:	ACRS MICHELSON	1 1	ACRS MOELLER	1 1
	AEOD/DOA	1 1	AEOD/DSP/ROAB	2 2
	AEOD/DSP/TPAB	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/RSB	1 1
	NRR/DEST/SCB	1 1	NRR/DLPQ/HFB	1 1
	NRR/DLPQ/QAB	1 1	NRR/DOEA/EAB	1 1
	NRR/DREP/EPB	1 1	NRR/DREP/RAB	1 1
	NRR/DREP/RPB	2 2	NRR/PMAS/ILRB	1 1
	NRR/PMAS/PTSB	1 1	<del>REG FILE</del> 02	1 1
	RES SPEIS, T	1 1	RON2 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

TOTAL NUMBER OF COPIES REQUIRED: LTTR 41 ENCL 39

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) St. Lucie, Unit 1						DOCKET NUMBER (2) 0 5 0 0 0 3 3 5			PAGE (3) 1 OF 3		
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TITLE (4) APPARENT LOSS OF REDUNDANT LOW PRESSURE SAFETY INJECTION PUMPS DUE TO BREAKER PROBLEMS

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)
04	01	87	87	008	00	05	01	87	N/A		0 5 0 0 0
											0 5 0 0 0

OPERATING MODE (9) 3	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)	80.73(a)(2)(iv)	73.71(b)							
	20.406(a)(1)(i)	80.36(e)(1)	X 80.73(a)(2)(v)	73.71(c)							
	20.406(a)(1)(ii)	80.36(e)(2)	80.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 365A)							
	20.406(a)(1)(iii)	80.73(a)(2)(i)	80.73(a)(2)(vii)(A)								
	20.406(a)(1)(iv)	80.73(a)(2)(ii)	80.73(a)(2)(vii)(B)								
	20.406(a)(1)(v)	80.73(a)(2)(iii)	80.73(a)(2)(ix)								

LICENSEE CONTACT FOR THIS LER (12)

NAME W. C. Green, Shift Technical Advisor	TELEPHONE NUMBER AREA CODE 3 0 5 4 6 5 - 3 5 5 0
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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	B P	F U B	W 3 5 1	Y							
X	B P	B K R	W 3 5 1	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)

ABSTRACT

On April 1, 1987, while cooling the reactor coolant system in preparation of entering Mode 4 and initiating shutdown cooling, the control room lost positive indication of motor breaker trip open capability for the 1A Low Pressure Safety Injection (LPSI) pump. Also, the 1B LPSI pump, when given a start signal, would not start.

An ongoing investigation revealed the probable root cause of the event to be poor electrical contact of the breaker auxiliary stabs for the pumps.

The initial corrective actions were to examine suspect breaker control fuses. The fuse holders were examined and tightened. Also, the breakers were racked out and in again to assure proper contact was made. An inspection was made on all fuse holders in cubicles of non-running safety related equipment on both units. Until the breaker evaluation is completed, all safety related equipment breakers are being checked shiftly for proper indications.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)  St. Lucie, Unit 1	DOCKET NUMBER (2)  0 5 0 0 0 3 3 5	LER NUMBER (8)			PAGE (3)		
		YEAR 8 7	SEQUENTIAL NUMBER 0 0 8	REVISION NUMBER 0 0	0 2	OF	0 3

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

DESCRIPTION OF EVENT

On Wednesday, April 1, 1987, St. Lucie Unit #1 was preparing to enter Mode 4 from Mode 3 (400 psia and 400°F). The reactor coolant system (EIIS:AB) was being cooled down in preparation for repairs of the reactor vessel head inner "O" ring seal. At 0211 hours, the 1A Low Pressure Safety Injection (LPSI) pump (EIIS:BP) was started to warm up the shutdown cooling (EIIS:BP) piping prior to entry into Mode 4. An attempt was made to start the 1B LPSI pump but the pump failed to start. At 0214 hours, a report was received that the 1B LPSI pump suction side relief valve had lifted. The 1A LPSI pump was secured as a precautionary measure to prevent any possible damage to the pump. When the 1A LPSI pump was stopped, the pump breaker trip capability indication was lost so a restart was not attempted. A failure analysis completed several days later revealed that the breaker would have closed if a restart attempt had actually been made. An immediate investigation was performed by on shift utility maintenance and licensed operator personnel. They pulled both sets of control fuses on the 1A LPSI pump breaker and tightened the holders. The breaker was racked out and back in again and the pump breaker trip capability indication returned in the control room. The 1A LPSI pump was restarted at 0250 hours and returned to service. The same sequence of operations were performed on the 1B LPSI pump and it was restarted and returned to service at 0254 hours. The plant proceeded to Mode 5, cold shutdown to perform the above mentioned maintenance.

CAUSE OF THE EVENT

The probable root cause of the event has been determined to be poor breaker auxiliary stab contact. If the breaker auxiliary stabs do not make proper contact, the pump may not start or proper control room indications may be lacking. Further investigation into the event is ongoing to verify that this was the actual root cause of the problem.

ANALYSIS OF THE EVENT

The event is reportable under 10 CFR 50.73 (a)(2)(v) as any event or condition that could prevent the fulfillment of the safety function of a system needed to remove residual heat. An assessment of the event determined that the safety consequences were insignificant for the given plant conditions because the LPSI pumps were returned to service in a timely manner and because the steam generators were available to remove core residual heat. For other postulated conditions, the implications of the event may be of more concern.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		8   7	-   0   0   8	-   0   0	0   3	OF	0   3

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

CORRECTIVE ACTIONS:

1. The LPSI pump breaker control fuse holders were tightened and reinstalled. Also, the breakers were racked out and back in to assure proper breaker auxiliary stab contact.
2. An investigation was performed on all fuse holders of non-running safety equipment and visual verification was made of indicating lights on running safety equipment. Safety related pumps on Unit #2 were demonstrated operable by starting.
3. Until the breaker evaluation is completed, a shiftly inspection will be made to assure proper indicating lights are observed.
4. A Quality Team was assigned to resolve the problem associated with the LPSI pump breakers. Guidelines for trouble-shooting future problems of this type breaker is being established. A review of preventive maintenance for breakers is being performed with vendor support.

ADDITIONAL INFORMATION

Failed Component Information:

The fuse holders are Westinghouse Model No. 347A062H03.  
The feeder breakers are Westinghouse Model No. 50DHP250.

Previous Similar Events:

There have been no previous licensee event reports of losing redundant safety equipment due to fuse holder or breaker problems.



MAY 01 1987  
L-87-193  
10 CFR 50.73

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D. C. 20555

Gentlemen:

Re: St. Lucie Unit I  
Docket No. 50-335  
Reportable Event: 87-08  
Date of Event: April 1, 1987  
Apparent Loss of Redundant Low Pressure  
Safety Injection Pumps Due to Breaker Problems

The attached Licensee Event Report is being submitted pursuant to the requirements of 10 CFR 50.73.a. to provide notification on the subject event.

Very truly yours,

*H. M. Paduano Jr.*  
for C. O. Woody  
Group Vice President  
Nuclear Energy

COW/GRM/gp

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, St. Lucie Plant

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