ACCELERATED DOCUMENT DISTRIBUTION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9302020423 DOC.DATE: 93/01/26 NOTARIZED: NO DOCKET #
FACIL:50-335 St. Lucie Plant, Unit 1, Florida Power & Light Co. 05000335
AUTH.NAME AUTHOR AFFILIATION
TURNER,S.E. Florida Power & Light Co.
SAGER,D.A. Florida Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 93-001-00:on 930108,four safety injection header isolation valves open to their operational position due to engineered safety feature subgroup relay failure.Operations restored HPSI & LPSI valve lineup.W/930126 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 ID CODE/NAME	COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL
	PD2-2 LA	1	1	PD2-2 PD	1	1
	NORRIS,J	1	1			
INTERNAL:	ACNW	2	2	ACRS	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
	REG FILE 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

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK, ROOM P1-37 (EXT. 504-2065) TO ELIMINATE YOUR NAME FROM DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

FULL TEXT CONVERSION REQUIRED
TOTAL NUMBER OF COPIES REQUIRED: LTTR 31 ENCL 31

A0-4

FPL

P.O. Box 128, Ft. Pierce, FL 34954-0128

January 26, 1993

L-93-020
10 CFR 50.73

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

Re: St. Lucie Unit 1
Docket No. 50-335
Reportable Event: 93-001
Date of Event: January 8, 1993
Safety injection header isolation valves open due to subgroup relay failure.

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

Very truly yours,

D. A. Sager
Vice President
St. Lucie Plant

DAS/JWH/kw

Attachment

cc: Stewart D. Ebneter, Regional Administrator, USNRC Region II
Senior Resident Inspector, USNRC, St. Lucie Plant

DAS/PSL #848-93

010117

FPL Facsimile of NRC Form 366 (6-89)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
St. Lucie Unit 1	0 5 0 0 0 3 3 5	1 OF 0 3

TITLE (4) Four Safety Injection header isolation valves open to their operational position due to an Engineered Safety Feature subgroup relay failure.

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 1	0 8	9 3	9 3	0 0 1	0 0	0 1	2 6	9 3	N/A	0 5 0 0 0
									N/A	0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR : (Check one or more of the following) (11)							
POWER LEVEL (10)	1 0 0		20.402(b)		20.405(c)	X	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 below and in Text NRC Form 366A)
			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	TELEPHONE NUMBER
S. E. Turner, Shift Technical Advisor	AREA CODE 4 0 7 4 6 5 - 3 5 5 0

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS
X	J E	R L Y	C 6 4 9	Y						

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)

On January 8, 1993, at 0900 hours with Unit 1 in Mode 1 at 100% power, the Assistant Nuclear Plant Supervisor noticed that two of the High Pressure Safety Injection and two of the Low Pressure Safety Injection header valves on the 'B' header were open. The valves HCV-3616, HCV-3625, HCV-3626 and HCV-3645 are normally shut and are opened with a Safety Injection Actuation Signal (SIAS). Troubleshooting the cause of the valve openings showed that a subgroup actuation relay in the Engineered Safety Features Actuation System (ESFAS) actuation circuitry had failed. When it failed in its deenergized state HCV-3616, HCV-3625, HCV-3626 and HCV-3645 opened to their SIAS positions. This failure did not effect the operability of the Safety Injection System. The unit remained at 100% power.

The root cause of the event was a failed ESFAS subgroup actuation relay. By 1230 hours the relay had been replaced and tested. The valve lineup was restored. The failed relay will be sent to a laboratory for a failure analysis.

DESCRIPTION OF THE EVENT

On January 8, 1993, at 0900 hours with Unit 1 in Mode 1 at 100% power, the Assistant Nuclear Plant Supervisior noticed that two of the High Pressure Safety Injection (HPSI) (EIIS:BQ) header valves and two of the Low Pressure Safety Injection (LPSI) (EIIS:BP) header valves on the 'B' header were open to their Safety Injection Actuation Signal (SIAS) position. The valves HCV-3616, HCV-3625, HCV-3626 and HCV-3645 are normally shut and are opened with a SIAS.

An Instrumentation & Controls (I&C) supervisor commenced troubleshooting and found that the cause of the valve openings was the failure of subgroup actuation relay K602A in the Engineered Safety Features Actuation System (ESFAS) (EIIS:JE) circuitry. By 1230 hours the relay was replaced and the new relay tested by verifying all components operated satisfactory. The valves were placed in their normally closed position.

CAUSE OF THE EVENT

The root cause of the event was the failure of the SIAS subgroup relay K602A. The relay coil opened causing the coil to fail to its deenergized state. This caused the valves to open to their SIAS position. This relay is in the actuation section of the ESFAS. This was a single component failure event. No ESFAS measurement setpoint was reached and no actuation signal was generated.

ANALYSIS OF THE EVENT

This event is reportable under 10CFR50.73(a)(2)(iv). No actuation logic was completed as described in NUREG 1022. The event is an invalid relay actuation due to a subgroup relay failure. Since the valves were positioned to their SIAS position there was no effect on the operability of the safety injection system.

Based on a search of NPRDS this model of relay is common throughout the plant and exhibits a high degree of reliability.

Thus, the health and safety of the public was not endangered at any time during this event.

CORRECTIVE ACTIONS

1. The failed K602A relay was replaced by the I&C Department.
2. I&C tested the new relay by verifying all components actuated by the subgroup relay operated satisfactorily.
3. Operations restored the HPSI and LPSI valve lineup.
4. The I&C Department will send the failed relay to a laboratory for a failure analysis.

ADDITIONAL INFORMATION

Failed Component Identification:

K602A relay
Model number: 4CP36AF
Manufacture: C649- Couch, Boston, Mass.

Previous Similar Events

The only previous similar LER at St. Lucie was LER 335-90-009-00, Engineered Safety Feature Valve Closure Due to a Failed Relay.