REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8802290156 DOC. DATE: 88/02/22 NOTARIZED: NO DOCKET #
FACIL: 50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250
AUTH. NAME AUTHOR AFFILIATION
SALAMON, G. Florida Power & Light Co.
CONWAY, W. F. Florida Power & Light Co.
RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 88-002-00: on 880115, RCS pressure decreased to 625 psig & accumulators started to inject. Caused by defective controller for Valve PCV-3-455B. Controller for Valve PCV-3-455B replaced. W/880222 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 5
TITLE: 50.73 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
	EDISON, G	1	1			
INTERNAL:	ACRS MICHELSON	1	1	ACRS MOELLER	2	2
	AEOD/DOA	1	1	AEOD/DSP/NAS	1	1
	AEOD/DSP/ROAB	2	2	AEOD/DSP/TPAB	1	1
	ARM/DCTS/DAB	1	1	DEDRO	1	1
	NRR/DEST/ADS7E4	1	0	NRR/DEST/CEB8H7	1	1
	NRR/DEST/ESB 8D	1	1	NRR/DEST/ICSB7A	1	1
	NRR/DEST/MEB9H3	1	1	NRR/DEST/MTB 9H	1	1
	NRR/DEST/PSB8D1	1	1	NRR/DEST/RSB 8E	1	1
	NRR/DEST/SGB 8D	1	1	NRR/DLPQ/HFB10D	1	1
	NRR/DLPQ/QAB10A	1	1	NRR/DOEA/EAB11E	1	1
	NRR/DREP/RAB10A	1	1	NRR/DREP/RPB10A	2	2
	NRR/DRIS/SIB9A1	1	1	NRR/PMAS/ILRB12	1	1
	REG FILE 02	1	1	RES TELFORD, J	1	1
	RES/DE/EIB	1	1	RES/DRPS DIR	1	1
	RGN2 FILE 01	1	1			
EXTERNAL:	EG&G GROH, M	5	5	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			

TOTAL NUMBER OF COPIES REQUIRED: LTTR 46 ENCL 45

NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Turkey Point Unit 3	0 5 0 0 0 2 5 0	1 OF 0 4

TITLE (4) Reactor Coolant System Pressure Decrease Due to Malfunctioning Pressurizer Spray Valve Causes Partial Accumulator Discharge

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	1 5	8 8	8 8	0 0 2	0 0	0 2	2 2	8 8	N/A	0 5 0 0 0
									N/A	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 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
	AREA CODE
Gabe Salamon, Compliance Engineer	3 0 5 2 4 6 - 6 5 6 0

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	A B	P C 0	B 0 1 1 5	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 15, 1988, Unit 3 was being cooled down and depressurized. Pressurizer spray valve PCV-3-455B was identified as having erratic operation on January 11, 1988, and a Plant Work Order to correct the problem was issued. With the Reactor Coolant System (RCS) temperature at 400 degrees F and pressure at approximately 950 psig, it was decided to slow the cooldown rate from 90 degrees F per hour to about 20 degrees per hour, due to the shortly upcoming shift turnover. At 0650, as the cooldown rate was being decreased, the pressurizer level started to increase. At this point, the Reactor Control Operator (RCO) secured charging pump 3A. An adjustment was made to valve PCV-3-455B at 0650 in order to decrease RCS pressure. By 0730, shortly after turnover, RCS pressure decreased to 625 psig and the accumulators started to inject. Upon noticing the RCS pressure drop, an RCO immediately closed PCV-3-455B and terminated the RCS pressure decrease. Approximately 65 gallons of water were injected into the RCS. The primary cause of the event was a defective controller for valve PCV-3-455B. Contributing causes were the RCO's failure to note the decreasing RCS pressure in time to take prompt corrective action, and a miscommunication between the oncoming and the offgoing RCO's. The controller for valve PCV-3-455B was replaced. This event will be discussed during the next cycle of operator requalification.

IE22 1/1

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Turkey Point Unit 3	0 5 0 0 0 2 5 0	8 8	— 0 0 2	— 0 0	0 2 OF 0 4

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

EVENT

On January 15, 1988, Unit 3 was being cooled down and depressurized. Turkey Point Unit 3 has two pressurizer spray control valves (EIIS:AB). Spray control valve PCV-3-455B is supplied from reactor coolant loop B and spray control valve PCV-3-455A is supplied from loop C. Valve PCV-3-455B was identified as having erratic operation on January 11, 1988. A Plant Work Order to correct the problem was issued at that time. At the time of the event, a cooldown was in progress using valve PCV-3-455B because the C Reactor Coolant Pump (RCP) was shut down. The C RCP was shutdown rather than the A RCP, because of concerns about restarting the A RCP, which had known seal leak-off problems.

With the Reactor Coolant System (RCS) temperature at 400 degrees F and pressure at approximately 950 psig, it was decided to slow the cooldown rate from 90 degrees F per hour to about 20 degrees per hour. This decision was made due to the shift turnover which was coming up shortly, and the need to realign certain Safety Injection (SI) valves. It was felt that these parameters would result in the RCS temperature decreasing to about 380 degrees F at approximately the same time as the shift turnover meeting was concluded. At that time, the SI valves could be realigned and the accumulators isolated.

On January 15, as the cooldown rate was being decreased, the pressurizer level started to increase. This was determined to be caused by decreasing RCS shrink rate coincident with 2 charging pumps (EIIS:CB) operating in manual. The increasing pressurizer level resulted in increased RCS pressure, which in turn caused the Overpressure Mitigation System (OMS) Actuation Alarm to come in. At this point, the Reactor Control Operator (RCO) secured one of the charging pumps (3A) in order to stop the pressurizer level and the resulting RCS pressure increase. Valve PCV-3-455B was in manual to control RCS pressure, with both backup pressurizer heaters on to assist in hydrogen scavenging. Under these conditions, an approximately 12% spray was used to hold RCS pressure constant. An adjustment was made at 0650 to increase the spray to about 25% in order to decrease RCS pressure, with the spray being returned to about 12% to stabilize RCS pressure. RCS pressure can be monitored using either the Qualified Safety Parameter Display System (QSPDS), which indicates the pressure digitally (EIIS:IP), or using the analog gauges on Vertical Panel B (VPB) (EIIS:JL).

Until shift turnover, RCS pressure was monitored using QSPDS, but due to shift turnover and going over the console with the relief RCO, the RCO found it more convenient to observe the analog gauges on the VPB instead of walking over to the QSPDS display screen. It is more difficult to detect trends on the analog gauges than on QSPDS due to the scaling of the analog gauges. Approximately 10 minutes after the off-shift RCO left the site, at 0730, the B accumulator Hi/Lo Pressure annunciator (EIIS:IB) alarmed when RCS pressure decreased to approximately 625 psig and the accumulators started to inject. A and C accumulators alarmed subsequently. Upon noting the RCS pressure drop, an RCO immediately closed PCV-3-455B thereby terminating the RCS pressure decrease. All three accumulators (EIIS:BQ) discharged water, with a total of approximately 65 gallons being injected into the RCS.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Turkey Point Unit 3	0 5 0 0 0 2 5 0	8 8	— 0 0 2	— 0 0	0 3 OF 0 4

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

CAUSE OF EVENT

The primary cause of the event was a defective controller for valve PCV-3-455B. The controller failed due to random component failure. The erratic operation first noted on January 11 resulted in excessive spray flow with the resultant RCS depressurization below the accumulators nitrogen pressure. Contributing causes were:

1) the RCO's failure to note the decreasing RCS pressure in time to take prompt corrective action, and thereby avoid the accumulators discharging, and

2) miscommunication between the oncoming and the offgoing RCO's.

The RCO's failure to note the RCS pressure transient was due to an ongoing turnover process during which the entire unit status was being reviewed without specific attention being directed to RCS pressure, and the less sensitive nature of the analog gauges as compared to the digital QSPDS.

Prior to turnover, the offgoing RCO adjusted PCV-3-455B to stabilize the RCS at about 950 psig. He told the oncoming RCO that the RCS pressure decrease was terminated and that the unit was stabilized. He did not state the stabilized RCS pressure. Following turnover, the oncoming RCO noted that the RCS pressure was slightly above 700 psig, but did not conclude that RCS pressure was decreasing.

ANALYSIS OF EVENT

The accumulators discharged as required upon the RCS pressure decreasing below the accumulators pressure. As the total accumulator water discharged was only approximately 65 gallons, Tcold was not noticeably affected. This was confirmed by observing the Safety Assessment System. The accumulator levels did not decrease below the Lo-Lo setpoint. The inadvertent discharge of accumulators is not possible with plant conditions other than those during this event. Based on the above, the health and safety of the public were not affected.

CORRECTIVE ACTIONS

1) The transient was terminated almost immediately by the RCO closing valve PCV-3-455B.

2) The controller for valve PCV-3-455B was replaced.

3) This event will be discussed during the next cycle of operator requalification to emphasise the need to monitor unit status at all times, and to assure that communications during turnover are complete.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Turkey Point Unit 3	0 5 0 0 0 2 5 0	8 8	— 0 0 2	— 0 0	0 4 OF 0 4

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

ADDITIONAL DETAILS

The controller is manufactured by Hagan Controls, model number 124.

Similar occurrences: none.

P. O. [redacted] 14000, JUNO BEACH, FL 33408-0420

FPL

FEBRUARY 2 2 1988

L-88-68
10 CFR 50.73

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

Gentlemen:

Re: Turkey Point Unit 3
Docket No. 50-250
Reportable Event: 88-02
Date of Event: January 15, 1988
Reactor Coolant System Pressure Decrease
Due to Malfunctioning Pressurizer Spray Valve
Causes Partial Accumulator Discharge

The attached Licensee Event Report (LER) is being submitted pursuant to the requirements of 10 CFR 50.73 to provide notification of the subject event. A week extension on the submittal of this LER was requested of and granted by the Region II Staff to allow more time to analyze the root cause of the event.

Very truly yours,

W. F. Conway
Senior Vice President - Nuclear

WFC/SDF/gp

Attachment

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

SDF/012.LER

IE22
1/1