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REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8809190175 DOC.DATE: 88/09/14 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 88-017-00:on 880815,control room ventilation sys out of svc in excess of TS time limit due to intermittent failure.
W/8 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 4
TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

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RIDS/ADDS

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 3

TITLE (4) Control Room Ventilation System Out of Service in Excess of Technical Specification Time Limit Due to Intermittent Circuit 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 8	1 5	8 8	8 8	— 0 1 7	— 0 0	0 9	1 4	8 8	Turkey Point Unit 4	0 5 0 0 0 2 5 1
										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)	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)	X 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
Gabe Salamon, Compliance Engineer	AREA CODE 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	V I	T C							

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 July 14, 1988, Control Room Ventilation System (CRVS) fan SF-1B was found off and fan SF-1A running at the conclusion of the Process Radiation Monitoring Test. These are redundant fans providing emergency air flow for the CRVS. On July 31, 1988, fan SF-1B was started manually when Process Radiation Monitor R-11 (Containment Particulate Radiation Monitor) was taken out of service. The fan continued to run until 1420 on August 2, 1988, when it tripped on actuation of high flow switch FS-6659B, causing fan SF-1A to auto-start on low flow. During investigation into the failure, it was determined that flow elements FE-6659A and B (low and high flow respectively) had been installed 180 degrees from the correct orientation. The flow switches were then oriented correctly, however the Resistance Thermocouple Device (RTD) bridge circuit was found to be drifting, and could not be calibrated. The circuit was replaced and FS-6659B recalibrated successfully. It is believed that the drifting bridge circuit was the most probable cause of the July 14 and August 2, 1988 events. A Plant Change/ Modification (PCM) will be generated in order to provide positive indication to the operators if fan SF-1B has tripped and is locked out.

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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 1 7	— 0 0	0 2 OF 0 3

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

EVENT

On July 14, 1988, Control Room Ventilation System (CRVS) (EIIS:VI) fan SF-1B was found off and fan SF-1A running at the conclusion of procedure 4-OSP-067.1, Process Radiation Monitoring Test. These are redundant fans providing emergency air flow for the CRVS. During normal operation, fan SF-1B is on and fan SF-1A is off. Fan SF-1A starts upon sensing low flow. It was not known at the time whether SF-1B had failed to start due to seal-in of its lockout relay (2XHIFL) at some previous time, or had operated for a short time and tripped on a high flow signal from flow switch FS-6659B. At this time, procedure 0-OSP-025.1, CRVS Operability Test, was performed satisfactorily with fan SF-1B starting and being tripped per procedure.

Following the above event, temporary procedure TP-450, Flow Switch Calibration, was satisfactorily performed, but lockout relay 2XHIFL was found to be sealed in at the end of the calibration procedure. This was apparently due to a contact race when the flow switch was energized. Although 2XHIFL required the high flow signal present for 30 seconds to seal in, the normally closed flow switch required 20 to 40 seconds to warm up and stabilize before opening. The reset pushbutton was then depressed, and the logic portions of TP-450 were repeated, verifying that performance of the procedure sealed in 2XHIFL. At 0145 on July 16, On-The-Spot-Change (OTSC) 6015 was made to TP-450 to depress the reset pushbutton at the conclusion of the procedure.

On July 31, 1988, fan SF-1B was started manually when Process Radiation Monitor R-11 (Containment Particulate Radiation Monitor) (EIIS:IL) was taken out of service. The fan continued to run until 1420 on August 2, 1988, when it tripped on actuation of high flow switch FS-6659B, causing fan SF-1A to auto-start on low flow. During investigation into the failure, it was determined that flow elements FE-6659A and B (low and high flow respectively) had been installed 180 degrees from the correct orientation. The flow switch vendor was contacted and the flow switches were oriented correctly, then TP-450 was performed on FS-6659A and B. During this test, the Resistance Thermocouple Device (RTD) bridge circuit was found to be drifting, and could not be calibrated. The circuit was replaced and FS-6659B recalibrated successfully. The CRVS was returned to service at 2100 on August 4, 1988.

An investigation into the above events determined on August 15, 1988, that the root cause of both events was the intermittently failing bridge circuit. Because the bridge circuit's operability could not be assured, the CRVS is considered to have been out of service between July 14, and August 4, 1988.

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 1 7	— 0 0	0 3 OF 0 3

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

CAUSE OF EVENT

An investigation into the July 14, 1988 event identified a deficiency within procedure TP-450, in that the procedure did not reset lockout relay 2XHIFL upon conclusion of the procedure. A search was then initiated to determine whether TP-450 had been performed in the interval between the last successful operation of the system on July 6, and the discovery that fan SF-1B was not running on July 14. The search did not identify any performance of TP-450 between the above dates.

Following the August 2 event, it was determined that flow elements FE-6659A and B (low and high flow respectively) had been installed 180 degrees from the correct orientation. The flow switch vendor was contacted and the flow switches were oriented correctly, then TP-450 was performed on FS-6659A and B. During this test, the Resistance Temperature Device (RTD) bridge circuit was found to be drifting, and could not be calibrated. The circuit was replaced and FS-6659B recalibrated successfully.

Since the drifting bridge circuit presented an intermittent problem, the exact failure could not be duplicated. However, it is believed that the drifting bridge circuit was the most probable cause of the July 14 and August 2, 1988 events.

ANALYSIS OF EVENT

During the time that the bridge circuit was subject to drift, fan SF-1A of the CRVS was capable of performing its intended function in the event that the drifting bridge circuit would have caused fan SF-1B to trip. Based on the above, the health and safety of the public were not affected.

CORRECTIVE ACTIONS

1) The bridge circuit was replaced.

2) A Plant Change/Modification (PCM) will be generated in order to provide positive indication to the operators if fan SF-1B has tripped and is locked out.. It is expected that the PCM will be issued by November 1, 1988, with implementation being completed by March 1, 1989.

ADDITIONAL INFORMATION

Similar occurrences: none.

Manufacturer: Fluid Components, Inc. Model No.: FR72-4.

P. O. BOX 14000, JUNO BEACH, FL 33408

FPL

SEPTEMBER 14 1988

L-88-410
10 CFR 50.73

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

Gentlemen:

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Reportable Event: 250-88-17
Date of Event: August 15, 1988
Control Room Ventilation System Out of Service in Excess of Technical Specification Time Limit
Due to Intermittent Circuit Failure

The attached License Event Report (LER) is being submitted pursuant to the requirements of 10 CFR 50.73 to provide notification of the event.

Very truly yours,

DA Sager

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

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