

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8709080436 DOC. DATE: 87/08/31 NOTARIZED: NO DOCKET #  
 FACIL: 50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250  
 AUTH. NAME AUTHOR AFFILIATION  
 WAGER, V. Florida Power & Light Co.  
 WOODY, C. O. Florida Power & Light Co.  
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-022-00: on 870731, operator demonstrated known  
 spurious & spiking problem in nuclear instrumentation sys  
 intermediate range channels, by opening drawer for sys.  
 Caused by faulty locking mechanism. W/870831 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 ENCL		RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD2-2 LA	1 1		PD2-2 PD	1 1
	McDONALD, D	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
	DEDRO	1 1		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/SGB	1 1
	NRR/DLPQ/HFB	1 1		NRR/DLPQ/QAB	1 1
	NRR/DOEA/EAB	1 1		NRR/DREP/RAB	1 1
	NRR/DREP/RPB	2 2		NRR/PMAS/ILRB	1 1
	REG FILE 02	1 1		RES DEPY GI	1 1
	RES TELFORD, J	1 1		RES/DE/EIB	1 1
	RGN2 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

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Turkey Point Unit 3										DOCKET NUMBER (2) 0   5   0   0   0   2   5   0					PAGE (3) 1 OF 0   3					
TITLE (4) Reactor Trip Breakers Open on Unit 3 While at Cold Shutdown Due To Spurious Spike Actuating the Intermediate Range Low Power High Flux Reactor Trip																				
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	7	3	1	8	7	8	7	0	2	2	0	0	0	8	3	1	8	7	N/A	0   5   0   0   0
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																		
5		20.402(b)				20.405(c)				<input checked="" type="checkbox"/> 50.73(a)(2)(iv)				73.71(b)						
POWER LEVEL (10)		0   0   0				20.405(a)(1)(i)				50.73(a)(2)(v)				73.71(c)						
		20.405(a)(1)(ii)				50.38(c)(1)				50.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Text, NRC Form 368A)						
		20.405(a)(1)(iii)				50.38(c)(2)				50.73(a)(2)(vii)(A)										
		20.405(a)(1)(iv)				50.73(a)(2)(i)				50.73(a)(2)(viii)(B)										
		20.405(a)(1)(v)				50.73(a)(2)(ii)				50.73(a)(2)(ix)										
LICENSEE CONTACT FOR THIS LER (12)																				
NAME Virgil Wager, Licensing Engineer										TELEPHONE NUMBER										
										AREA CODE 3   0   5										
										2   4   6   -   6   4   7   6										
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																				
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs										
B	I   G   N	2   0   3	P   3   2   3	Yes																
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR				
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)												<input checked="" type="checkbox"/> NO								

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On July 31, 1987, Unit 3 was at Cold Shutdown (Mode 5). At 0548, the Reactor Trip Breakers (RTB) were closed for maintenance and testing by Westinghouse and FPL Instrument and Control personnel. A spurious spiking problem was known to exist in the Nuclear Instrumentation System (NIS) Intermediate Range (IR) cabinet. A Plant Work Order had been submitted to the I&C department to make the necessary repairs to NIS Ch-36. At 0717, the operator on shift demonstrated to the on-coming operator the known spurious spiking problem in the Nuclear Instrumentation System Intermediate Range Channels. The drawer for NIS Ch-32 was pulled open and caused NIS Ch-36 to spike high. The spurious spike actuated the IR Low Power High Flux Reactor Trip Alarm and opened the RTB's. Investigation of the problem revealed a faulty locking mechanism on the 25 volt power supply connector for NIS Ch-36. The locking mechanism was replaced and the power supply cables for NIS Ch-32 and NIS Ch-36 were re-routed in the NIS cabinet so they would not interfere with each other in the course of maintenance and testing of the IR channels.

8709080436 870831  
PDR ADDCK 05000250  
S PDRIs 22  
1/1

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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   7	—   0   2   2	—   0   0	0   2	OF	0   3

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

EVENT

On July 31, 1987, at 0548, with Unit 3 was at Cold Shutdown (Mode 5), the Reactor Trip Breakers (RTB) were closed for maintenance work and testing by Westinghouse and FPL Instrument and Control (I&C) Department personnel. A spurious spiking problem was known to exist in the NIS Intermediate Range (IR) cabinet. When the drawer for NIS Ch-32 was pulled out, NIS Ch-36 would spike high and actuate the alarm for the IR Low Power High Flux Reactor Trip. The RTB's would also trip open if they were closed at the time. A Plant Work Order had been submitted to the I&C department to make the necessary repairs to NIS Ch-36. At 0717, the operator on shift demonstrated to the on-coming operator the known spurious spiking problem in the Nuclear Instrumentation System (NIS) Intermediate Range Channels. The drawer for NIS Ch-32 was opened, causing NIS Ch-36 to spike high resulting in the actuation of the Intermediate Range Low Power High Flux Reactor Trip and the opening of the RTB's. A Post Trip Review was performed to verify the cause of the opening of the Reactor Trip Breakers. The only result of the NIS Ch-36 spike was the opening of the breakers by the associated reactor trip relays. Investigation by the I&C personnel revealed a faulty locking mechanism on the 25 volt power supply connector (EIIS:CBL3) for NIS Ch-36. The faulty locking mechanism was replaced. Additionally, the cables for NIS Ch-36 and NIS Ch-32 were rerouted in the cabinet so they would not interfere with each other during the course of maintenance and testing of the IR channels.

CAUSE OF EVENT

The cause of the RTB's opening at 0717, was the demonstration by the on shift operator to the on-coming operator, of the known spiking problem in the IR channels while the RTB's were closed. When the drawer for NIS Ch-32 was pulled out, the High Voltage and Signal Cable would pull on the 25 volt power supply connector for NIS Ch-36. A faulty locking mechanism on the 25 volt power supply connector for NIS Ch-36 permitted the connector to break contact. This resulted in NIS Ch-36 spuriously spiking high and actuating the Intermediate Range Low Power High Flux Reactor Trip Alarm and opening the RTB's.

ANALYSIS OF EVENT

At the time of the event Unit 3 was at Cold Shutdown (Mode 5). The RTB's were closed for routine testing. The RTB's opened, as designed, upon receipt of the Intermediate Range Low Power High Flux Reactor Trip signal. No other component or system was affected by the opening of the RTB's. There were no transients as a result of the RTB's opening. Based on the above the health and safety of the public were not affected.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

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   7	—	0   2   2	—	0   0	0   3 OF 0   3

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

CORRECTIVE ACTION

- 1) The I&C Department personnel replaced the faulty locking mechanism for the connector on the 25 volt power supply to NIS Ch-36.
- 2) The power cables for NIS Ch-32 and NIS Ch-36 were rerouted in the NIS cabinet so they will not interfere with each other during maintenance and testing activities.
- 3) This event will be reviewed in the Licensed Operator Requalification program. Emphasis will be placed on the correct response to malfunctioning instrument channels.
- 4) The operator involved was counseled by supervisory personnel to exercise greater care in following plant procedures.

ADDITIONAL DETAILS

Manufacturer: Power Design Incorporated, Model UPM-44K  
Similar Occurrence: LER 250-85-040.





AUGUST 31 1987

L-87-360  
10 CFR 50.73

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

Gentlemen:

Re: Turkey Point Units 3  
Docket No. 50-250  
Reportable Event: 87-22  
Date of Event: July 31, 1987  
Reactor Trip Breakers Open on Unit 3 While at  
Cold Shutdown Due to Spurious Spike Actuating the  
Intermediate Range Low Power High Flux Reactor Trip

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,

A handwritten signature in dark ink, appearing to read "C. O. Woody".

C. O. Woody  
Group Vice President  
Nuclear Energy

COW/SDF/gp

Attachment

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

*Handwritten:* 1222  
11