NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES 8/31/85

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 2

TITLE (4)
Reactor Protection System Actuation - 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)
									N/A	0 5 0 0 0
1 1	0 8	8 5	8 5	0 4 0	0 0	1 2	3 0	8 5	N/A	0 5 0 0 0

OPERATING MODE (9):

POWER LEVEL (10):

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

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)
R. L. Teuteberg, Regulation and Compliance Engineer	3 0 5 2 4 5 - 2 9 1 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	I G	R J X	P 3 2 3	Y					
X	I G	A M P	W 1 2 0	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)

Event:

On November 11, 1985, while Unit 3 was in a hot standby condition preparing to cooldown for a planned maintenance outage, a subcritical reactor trip occurred. Just prior to this event, all control and shutdown rods were manually inserted to their full length. Upon decreasing to below 1.0 E-10 amperes/neutron/cm^2/sec on both intermediate range detectors, one of two source range nuclear instrumentation system (NIS) channels, N-32, failed to re-energize automatically as designed. An attempt was made to re-energize the N-32 NIS source range channel by pulling and re-inserting the instrument low-voltage fuses. Upon re-insertion of these fuses, a high level reactor trip signal was generated in the reactor protection system (RPS), which opened reactor trip breakers as designed.

Cause of Event:

The cause of high level source range reactor trip was the removal and re-insertion of N-32 instrument power fuses, without first placing the channel's level trip switch in the bypass position as required by Off-Normal Operation Procedure 12108, "Source Range Nuclear Instrumentation Malfunction".

Corrective Actions:

1) The NIS N-32 high voltage power supply was replaced due to a failure of this power supply to the source range detector.
2) After replacement of the N-32 power supply, a complete loss of count rate on the N-32 channel occurred. A capacitor in the signal path from the detector to the channel's pre-amplifier section had failed and was replaced.
3) Post-maintenance testing and adjustments were satisfactorily performed on the NIS N-32 channel in accordance with plant procedures.
4) The operator involved was counseled by supervisory personnel to exercise greater care in following plant procedures. The health and safety of the public were not affected. Similar occurrence: LER 250-84-021.

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

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

Event:

On November 11, 1985, at 23:02, while Unit 3 was in a hot standby condition preparing to cooldown for a planned maintenance outage, a subcritical reactor trip occurred. Just prior to this event, all control and shutdown rods were manually inserted to their full length. Upon decreasing to below 1.0 E-10 amperes/neutron/cm^2/sec on both intermediate range detectors, one of two source range nuclear instrumentation system (NIS) channels, N-32, failed to automatically re-energize as designed. An attempt was made to re-energize the N-32 NIS source range channel by pulling and re-inserting the instrument low-voltage power fuses. Upon re-insertion of these fuses, a high level reactor trip signal was generated in the reactor protection system (RPS), which opened reactor trip breakers as designed.

Cause of Event:

The cause of the reactor trip was the manual re-insertion of NIS N-32 instrument power fuses while attempting to energize this channel. The RPS reactor trip signal opened reactor trip breakers, because the N-32 channel level trip switch had not been placed in the bypass position prior to pulling and re-inserting the instrument power fuses as required by Off-Normal Operating Procedure (ONOP) 12108, "Source Range Nuclear Instrumentation Malfunction".

Analysis of Event:

At the time of the event, Unit 3 was in a hot standby condition with both control and shutdown rod banks fully inserted into the core. When the reactor trip signal was generated, the reactor trip breakers opened as designed. A post trip review was performed to assess the proper operation of safety-related equipment. The post trip review established that the behavior of pertinent plant parameters for the reactor coolant system and steam generators responded as expected for a subcritical reactor trip of this kind. Based on the above, the health and safety of the public were not affected.

Corrective Actions:

The following corrective actions were taken after the event:

1) The high voltage power supply for the NIS N-32 detector was replaced due to the failure of the power supply circuitry.
2) Upon replacement of the high voltage power supply, a second failure was identified. The NIS N-32 channel failed with a complete loss of count rate. A capacitor, which passes the detector input signal to the pre-amplified section of this NIS channel, had failed and was replaced.
3) Post-maintenance testing and adjustments on the power supply were performed in accordance with Maintenance Procedures MP 12107.2, "Source Range NI-High Voltage and Discriminator Voltage Adjustments", and MP 12107.2 "Source Range NI-Adjustments".
4) The operator involved was counseled by supervisory personnel to exercise greater care in following plant procedures.
5) Upon completion of the post trip review and scheduled maintenance activities, the unit was placed on the line at 14:18 on December 5, 1985.

Additional Information:

The source range detectors are Westinghouse Model WL-23706 proportional counters. The power supply for the NIS N-32 circuitry that was replaced was a Model UPMD-X54-MI power supply manufactured by Power Designs, Inc. The input capacitor for the N-32 channel Westinghouse pre-amplifier which was replaced was manufactured by Plastic Capacitor Corporation, Part No. HG 25-503.

Similar occurrence: LER 250-84-021.

P.O. BOX 029100 MIAMI, FL 33102

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FLORIDA POWER & LIGHT COMPANY

DEC 30 1985

L-85-480

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

Gentlemen:

Re: Reportable Event 85-40
Turkey Point Unit 3
Date of Event: November 30, 1985
Reactor Protection System Actuation - Reactor Trip

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

Very truly yours,

C. O. Woody
Group Vice president
Nuclear Energy

COW/PLP:mls

Attachment

cc: Dr. J. Nelson Grace, Region II, USNRC
Harold F. Reis, Esquire
File 933.1

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