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ACCESSION NBR: 9411010225 DOC. DATE: 94/10/20 NOTARIZED: NO DOCKET #
 FACIL: 50-251 Turkey Point Plant, Unit 4, Florida Power and Light Co 05000251
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 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 94-005-00: on 940924, Unit 4 manually tripped. Caused by manual actuation. Light bulb & socket replaced. W/941020 ltr.

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OCT 20 1994

L-94-252
10 CFR 50.73

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

Gentlemen:

Re: Turkey Point Unit 4
Docket No. 50-251
Reportable Event: 94-005-00
Manual Reactor Trip

The attached Licensee Event Report, 251/94-005-00, is being provided in accordance with 10 CFR 50.73(a)(2)(iv).

If there are any questions, please contact us.

Very truly yours,

T. F. Plunkett
Vice President
Turkey Point Plant

JEK

enclosure

cc: Stewart D. Ebner, Regional Administrator, Region II,
USNRC
Thomas P. Johnson, Senior Resident Inspector, USNRC,
Turkey Point Plant

010001

9411010225 941020
PDR ADDCK 05000251
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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) TURKEY POINT UNIT 4										DOCKET NUMBER (2) 05000251		PAGE (3) 1 OF 3	
TITLE (4) MANUAL REACTOR TRIP DUE TO PARTIAL LOSS OF ROD POSITION INDICATOR													
EVENT DATE (5)			LER NUMBER(6)			RPT DATE (7)			OTHER FACILITIES INV. (8)				
MON	DAY	YR	YR	SEQ #	R#	MON	DAY	YR	FACILITY NAMES			DOCKET # (5)	
09	24	94	94	005	00	10	20	94					
OPERATING MODE (9)		3		<u>10 CFR 50.73(a)(2)(iv)</u>									
POWER LEVEL (10)		0%											
LICENSEE CONTACT FOR THIS LER (12)													
J. E. Knorr, Regulation and Compliance Engineer										TELEPHONE NUMBER			
										305-246-6757			
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)													
CAUSE	SYSTEM	COMPONENT	MANUFACTURER			NPRDS?	CAUSE	SYSTEM	COMPONENT	MANUFACTURER			NPRDS?
X	AC	ZI	G272			NO							
SUPPLEMENTAL REPORT EXPECTED (14) NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>								EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR	
(If yes, complete EXPECTED SUBMISSION DATE)													
ABSTRACT (16)													
<p>On September 24, 1994, Unit 4 was manually tripped because of the partial loss of rod position indication. Unit 4 was in Mode 3 in the process of a reactor startup with one shutdown bank fully withdrawn and one shutdown bank and all control banks fully inserted. An operator noted that a position indicating light bulb for one rod in the fully inserted shutdown bank was not illuminated. The operator touched the light to check if the light was burned out and noted a flash. After the flash, the indicated position on the analog rod position indicating system for the withdrawn bank dropped to about 60% full scale. After the drop in rod position indication, a manual reactor trip was initiated. All systems responded as expected to the manual reactor trip.</p>													



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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME	DOCKET NUMBER	LER NUMBER	PAGE NO.
TURKEY POINT UNIT 4	05000251	94-005-00	02 OF 03

I. DESCRIPTION OF THE EVENT

On September 24, 1994, Unit 4 was manually tripped because of a partial loss of rod position indication [AC:ZI]. Unit 4 was in Mode 3 and in the process of a reactor startup. Shutdown bank A [AC:ROD] was fully withdrawn at 228 steps. All other shutdown banks and control banks were fully inserted. An operator was sent to a display panel [IG:PL] located on the back of the Unit 4 control boards in the control room to check on the condition of status lights. The rod position lights [AC:ZI] on the panel, for all rods not withdrawn (i. e., all rods except shutdown bank A), should have been in the 'lights on' condition. In this case, light number 4 in shutdown bank B, which should have been on, was not lit. The operator touched the light to ascertain whether the light bulb was burned out. When the light was touched, a flash occurred. At that time, the rod position indication for shutdown bank A dropped from 228 steps to an indicated 135 steps. However, shutdown bank A rods did not drop into the core until the manual reactor trip.

The decision was made to manually trip the plant, since the indicated position and demand position for shutdown bank A were far apart. All systems responded as expected to the manual reactor trip.

The NRCOC was notified at 0736 on September 24, 1994. This event is being reported in accordance with 10 CFR 50.73(a)(iv), as a manual actuation of the reactor protection system.

II. CAUSE OF THE EVENT

The immediate cause of the trip was a manual actuation. The manual actuation was selected because of the mismatch between the indicated position of shutdown bank A and the position indicated by the analog rod position indicating system.

The mismatch was caused by the following chain of events. When the operator touched the light bulb on the number 4 control board status light, the remaining short filament on the burned out bulb relanded inside the bulb and caused a higher current than usual. The fast acting breaker (# 20 on panel 4P07) for the rod deviation cabinet opened due to the higher current. This breaker provides power to the rod deviation cabinet. Upon the opening of the breaker, the impedance in the common circuit between the rod deviation cabinet and the rod position indication circuit decreased causing an approximate 60% of full scale reading on the analog rod position indication meter for shutdown bank A. See figure 1 on page 3.

III. ANALYSIS OF THE EVENT

At the time of the manual reactor trip, shutdown bank A rods were the only rods withdrawn. The reactor was in Mode 3. All rods returned to the bottom of the core upon the demand of the manual trip. No other engineered safety systems or reactor protection systems actuated during or after the trip. Therefore the health and safety of the public were not affected.



LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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IV. CORRECTIVE ACTIONS

1. The light bulb and socket were replaced.
2. The cause of the change in the analog rod position indication was verified by test.

V. ADDITIONAL INFORMATION

EIIS Codes are shown in the format [EIIS SYSTEM: IEEE component function identifier, second component function identifier (if appropriate)].

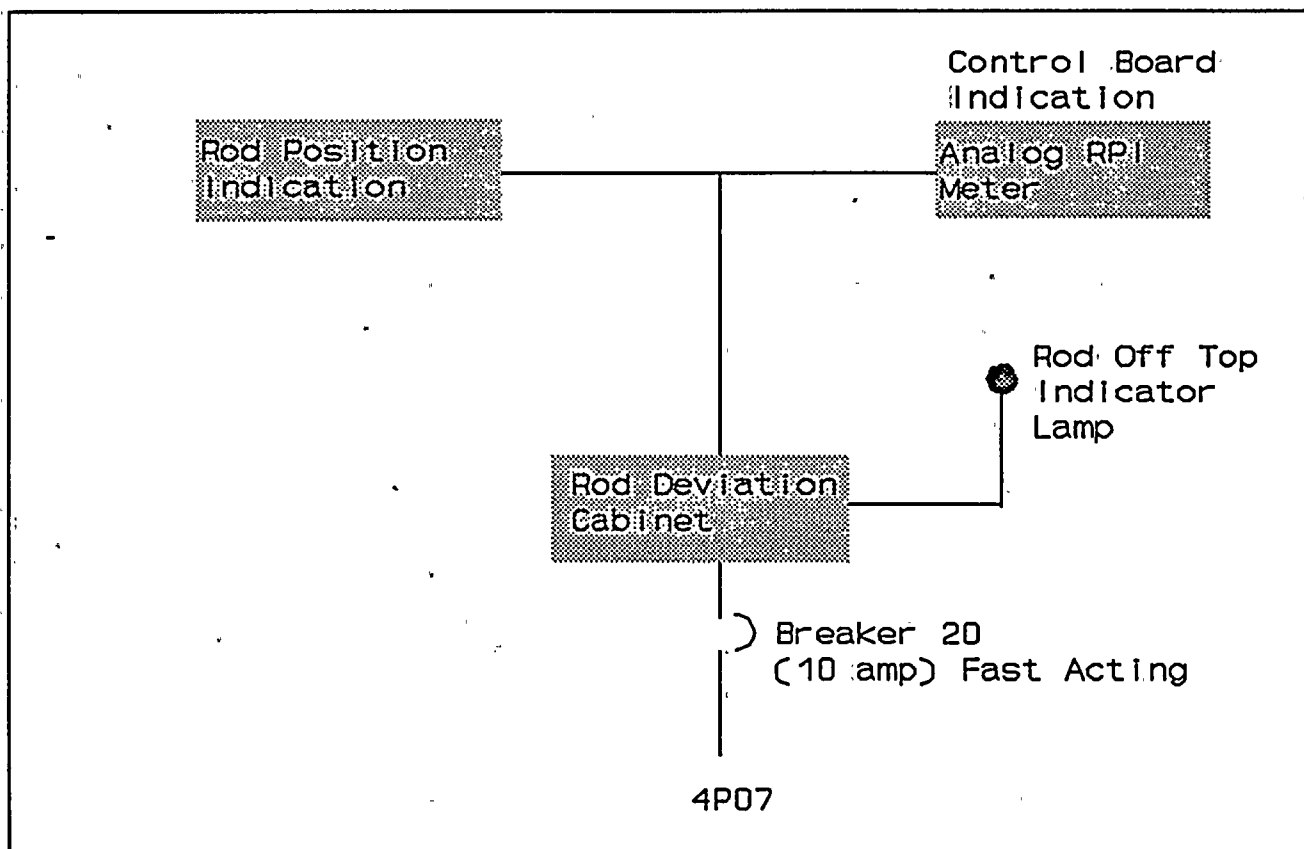


Figure 1.

