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## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9108230165 DOC. DATE: 91/08/19 NOTARIZED: NO DOCKET #  
 FACIL: 50-250 Turkey Point Plant, Unit 3, Florida Power and Light Co 05000250  
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 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 91-002-00: on 910723, reactor protection sys actuation occurred. Caused by closing of reactor trip breakers w/o ensuring planned activities would affect only one protection channel. Personnel awareness increased. W/910819 ltr.

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**FPL**

P.O. Box 14000, Juno Beach, FL 33408-0420

**AUG 19 1991**

L-91-219A  
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: 91-002-00  
Date of Event: July 23, 1991  
Inadvertent Reactor Trip Signal due to Inadequate Work  
Controls

The attached Licensee Event Report 250-91-002-00 is being provided in accordance with the requirements of 10 CFR 50.73 (a)(2)(iv) to provide notification of the subject event.

Very truly yours,

T. F. Plunkett  
Vice President  
Turkey Point Nuclear

TFP/CLM/cm

enclosures

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

9108230165 910819  
PDR ADUCK 05000250  
S PDR

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# LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) <b>TURKEY POINT UNIT 3</b>										DOCKET NUMBER (2) <b>05000250</b>		PAGE (3) <b>1 OF 3</b>	
TITLE (4) <b>INADVERTENT REACTOR TRIP SIGNAL DUE TO INADEQUATE WORK CONTROLS</b>													
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)	
07	23	91	91	002	00	08	19	91					
OPERATING MODE (9)		N	<u>10 CFR 50.73(a)(2)(iv)</u>										
POWER LEVEL (10)		000											
LICENSEE CONTACT FOR THIS LER (12)													
David R. Powell, Superintendent of Licensing										TELEPHONE NUMBER			
										305-246-6559			
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)													
CAUSE	SYSTEM	COMPONENT	MANUFACTURER			NPRDS?	CAUSE	SYSTEM	COMPONENT	MANUFACTURER			NPRDS?
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>At 1126 on July 23, 1991, with both units shut down and defueled, a Reactor Protection System (RPS) actuation occurred. With RPS Channel I already actuated for maintenance work, an I&amp;C Specialist working in Channel III bumped a breaker, de-energizing the Eagle Partial Trip module. This resulted in actuation of RPS Channel 3 which made up a 2 out of 3 logic, generating a Reactor Trip Signal. This event was caused by licensed operators closing the reactor trip breakers without first ensuring that planned activities would affect only one protection channel at a time. All work in sensitive areas was stopped. Meetings were held to emphasize required work controls. Work is now allowed on only one channel/train at a time (work has been allowed in multiple channels during the dual unit outage). The Plant Supervisor - Nuclear and a member of the Configuration Control Team must approve all work before it can begin. Licensed operators must review the Sequence of Events (Recorder) once per shift. A special edition of the plant's weekly newsletter, and a Training Brief, were issued to increase plant personnel awareness.</p>													

# LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME	DOCKET NUMBER	LER NUMBER	PAGE NO.
TURKEY POINT UNIT 3	05000250	91-002-00	02 OF 03

## I. EVENT DESCRIPTION

At 1126 on July 23, 1991, with both units shut down and defueled, a Reactor Protection System (RPS) [EIIS:JC] actuation was initiated inadvertently. Excure Nuclear Instruments Power Range Channel N41 [EIIS:IG] had been taken out of service to allow maintenance work, and its associated bistables had been tripped, including the Overpower Delta T (OPAT), and Overtemperature Delta T (OTAT) bistables in Protection Channel I. The reactor trip breakers [EIIS component BRK] were closed to allow testing of other components in preparation for an integrated safeguards test. An Instrument and Controls Specialist was installing cables and a microswitch for an "Open Door" annunciator [EIIS: component ANN] in relay rack 3QR14 (Protection Channel III) [EIIS component RLY RK]. In doing so, he bumped a rocker switch-type source breaker, one of five such breakers in 3QR14. This particular breaker supplies power to one of the Eagle Partial Trip modules of the newly installed Eagle 21 Process Protection system.

The Eagle 21 system monitors reactor coolant temperatures, and is part of the RTD Bypass Elimination project. Among other functions, this system calculates  $T_{avg}$  and  $\Delta T$  for each of the three Reactor Coolant System [EIIS:AB] loops, and supplies these signals to the OPAT and OTAT circuits. Loss of power to the Eagle Partial Trip module caused a reactor trip signal in Protection Channel III, satisfying the 2 out of 3 coincidence requirement, and generating the Reactor Trip signal which opened the reactor trip breakers.

At 1217 on July 23, 1991, FPL notified the NRC Operations Center of a significant event in accordance with 10CFR50.72(b)(2)(ii).

## II. EVENT CAUSE

The root cause of this event was licensed operators applying inadequate work controls. While the unit has been defueled, and the reactor trip breakers open, it has not been unusual to allow maintenance to be performed on two and sometimes three protection channels at a time, as no protection systems would be challenged. Despite having no fuel in the reactor, closure of the reactor trip breakers should have caused the operators to initiate more stringent work controls, including denial of permission to work in more than one channel/train of reactor protection instrumentation simultaneously.

A contributing cause to this particular event is that the five breakers inside the cabinet are not protected from bumping. Normally the lack of bumping protection would not be a factor, because work would be allowed on only one channel. In addition, with the completion of the Eagle 21 installation, the "Door Open" annunciator would alert the licensed operator to activity inside the cabinet prior to risk of bumping any of the five breakers.

## III. EVENT SAFETY ANALYSIS

Other than the automatic initiation of a reactor trip signal, there were no manual or automatic reactor protection system or engineered safety features actuations. Since the unit was defueled, there was no rod movement, and no other manual or automatic actions were required or expected. Based on the above, the health and safety of the public were not adversely affected.

# LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME	DOCKET NUMBER	LER NUMBER	PAGE NO.
TURKEY POINT UNIT 3	05000250	91-002-00	03 OF 03

## IV. CORRECTIVE ACTIONS

1. All work was stopped in the following areas: the Control Room; the Emergency Diesel Generator rooms; Load Centers; Motor Control Centers 3B and 4B; Cable Spreading room; Inverter room; 4160 Volt Bus Rooms A, B, and D; and the new Electrical Equipment room.
2. The I&C Specialist who bumped the source breaker was counseled on his actions, and a series of meetings was held with operations, maintenance, and construction personnel, to raise plant awareness and emphasize work controls prior to allowing work to resume. These controls are to assure that all work is performed safely and to prevent inadvertent actuation of plant equipment/emergency systems.
3. Additional work controls were instituted requiring the following:
  - a) The Plant Supervisor - Nuclear (PS-N) or the Assistant PS-N must review all safety-related work orders, and work orders related to Technical Specifications.
  - b) Licensed operators must review all Engineered Safety Feature/Reactor Protection System (ESF/RPS) bistable status lights, and the Sequence of Events (Recorder) at least once per shift.
  - c) Work is only allowed in one safety channel or train per unit.
  - d) During safeguards testing, work in vital areas is limited to that reviewed by an approved member of the Configuration Control Team and authorized by the PS-N.
4. Training Brief No. 329, "Work Controls Awareness," and a special edition of the plant's weekly newsletter have been issued to ensure plant personnel are made aware of the necessity for heightened attention to detail in work controls. These two documents specified and clarified the traditional and additional work controls described above.

## V. ADDITIONAL INFORMATION

LER 251-91-004 describes an inadvertent containment isolation just four days prior to this event, attributed to an inadequate procedure. The corrective actions listed above dealt in part with both events, the common thread being increased attention to operational concerns during a long dual unit outage.