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 4	0 5 0 0 0 2 5 1 1	1 OF 0 2

TITLE (4)

Engineered Safety Feature Actuation - 4KV Bus Stripping

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
0 5	0 5	8 4	8 4	—	0 0 6	—	0 0	0 6	0 4	8 4	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)			
	N	20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	0 1 0 0	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
Paul A. Roach, 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	

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 May 5, 1984, with Unit 4 in a scheduled refueling outage (core off-loaded), actuation of bus stripping relays on a 4KV bus occurred. The root cause was determined to stem from personnel accidentally jarring or shorting an electrical auxiliary relay contact pair. This occurred during performance, by members of the plant construction work force, of modifications in the 4KV bus sequencer cubicle and associated with the addition of undervoltage relay protection. This resulted in a loss of voltage condition that did not actually exist, appearing to the logic circuitry for bus stripping. Actuation of the bus stripping relays resulted, stripping the affected 4KV bus, starting the associated diesel generator and initiating sequencer action. Immediate corrective actions included transferring the 4KV bus back onto the associated start-up transformer and securing the diesel generator. Additionally, Supervisors overseeing the undervoltage modifications were instructed to exercise more care in the implementation of the work to preclude a recurrence. The health and safety of the public were not affected. Similar occurrences: 250-84-012.

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

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

On May 5, 1984, at 3:18 a.m., with Unit 4 in a scheduled refueling outage (core off-loaded), actuation of bus stripping relays on the safety related 4A 4160 volt (4KV) bus occurred. The root cause was determined to stem from personnel accidentally jarring or shorting an electrical auxiliary relay contact pair (e.g., loss of voltage relay). This resulted in a loss of voltage condition that did not actually exist, appearing to the logic circuitry for bus stripping. Actuation of the bus stripping relays and other associated electrical auxiliary relays resulted and functioned as designed, stripping the 4A 4KV bus, initiating an automatic start of the 'A' emergency diesel generator (EDG), tieing the 4A 4KV bus onto the 'A' EDG, and initiating sequencing of loads onto the 4A 4KV bus.

The performance of undervoltage relay modifications (Plant Change/Modification 80-44) in the emergency load sequencer cubicle (No. 1, 4C23A) for Unit 4, were in progress when actuation of the bus stripping relays occurred. This work included the addition of an undervoltage relay (327HX/4A) to essentially function in parallel with existing 4A 4KV bus loss of voltage relays (127X1/4AA and 127X1/4AA5). Relay 327HX/4A, contacts 1 and 5, were being wired in parallel with two parallel contact pairs associated with the above loss of voltage relays. Thus, a 4A 4KV bus loss of voltage or undervoltage condition would then energize the bus stripping relays, initiating 'A' EDG start and subsequent sequencer action. In the process of installing 327HX/4A and related wiring, a loss of voltage condition that did not actually exist, appeared to the bus stripping relays and caused them to actuate.

A manual start of the component cooling water (CCW) and intake cooling water (ICW) pumps was performed by licensed operators prior to completion of sequencer action. By design, following a loss of voltage on the 4A 4KV bus, CCW and ICW pumps are sequenced on at 47 and 54 seconds, respectively, by the sequencer. The circuitry for sequencing these pumps back on (bus stripping took them off) was intact, but the operators took action to start them, reasoning that the process of implementing the modification may have affected the associated sequencer circuits. In either case, these components functioned as designed during performance and satisfactory completion of Operating Procedure 4104.2, Engineered Safeguards and Emergency Power Systems -Integrated Test, on May 11, 1984.

FPL

FLORIDA POWER & LIGHT COMPANY

June 4, 1984
PNS-LI-84-201

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

Gentlemen:

Re: Reportable Event 84-006
Turkey Point Unit 4
Date of Event: May 5, 1984

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,

for J. W. Williams, Jr.
Group Vice President
Nuclear Energy

JWW/RJS/js

Attachment

cc: J. P. O'Reilly, Region II, USNRC
Harold F. Reis, Esquire
File 933.1 TP

IE22
1/1