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 OF 0 2

TITLE (4)
Engineered Safety Feature 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)
0 8	0 7	8 4	8 4	0 1 7	0 0	0 9	0 6	8 4	Turkey Point Unit 3	0 5 0 0 0 2 5 0
									N/A	0 5 0 0 0

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 0	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
Jesus Arias, Jr., Regulation and Compliance Supervisor	AREA CODE 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 August 7, 1984, with both Unit 3 and Unit 4 at 100% power, Unit 4 experienced a reactor trip coincident with a loss of the Unit 3 start-up transformer. The root cause was determined to stem from an incorrect switching order that, when executed from the Fossil Units 1 and 2 control room, caused the Unit 3C transformer to be de-energized, thus, de-energizing the 4C 4KV bus. The 4B steam generator feed pump and 4C condensate pump are powered by the 4C bus and each, therefore, tripped. The Unit 4 reactor trip occurred when the reactor protection logic of steam flow greater than feed flow, coincident with steam generator low level for A steam generator was made up, caused by the feedwater flow reduction. The source of off-site power, that was inadvertently disconnected, supplies power to the Unit 3C transformer (which powers Unit 4C bus) and the Unit 3 start-up transformer. Unit 4 was stabilized and power was restored to the Unit 3 start-up transformer, Unit 3C transformer and to the Unit 4C bus shortly after the reactor trip. All equipment functioned as designed on initiation of the Engineered Safety Feature Actuation Signal (ESFAS). The health and safety of the public were not affected. Similar occurrences: 250-84-007.

IE22
1/1

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(9-83)

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Turkey Point Unit 4	0 5 0 0 0 2 5 1	8 4	0 1 7	0 0	0 2 OF 0 2

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

On August 7, 1984, with both Unit 3 and Unit 4 at 100% power, Unit 4 experienced a reactor trip coincident with a loss of off-site power to the Unit 3 start-up transformer. Earlier this year, certain changes were made to the electrical system. These included: a) Unit 3C transformer provides power to Unit 4C bus, b) Unit 4C transformer provides power to Unit 3C bus, c) the 240KV Flagami No. 2 line was isolated from the switchyard and d) caution tags were placed in the G and J switches related to Flagami No. 2 line.

At 10:12 a.m., Fossil Units 1 and 2 control room operators executed a switching order that had been communicated to them by Division Dispatch. In an attempt to clear a fault on the 240KV Flagami No. 2 line from the Turkey Point switchyard, the power feed from the switchyard to Unit 3C transformer and Unit 3 start-up transformer was de-energized; therefore, Unit 4C bus was also de-energized. Unit 4 reactor trip occurred when the reactor protection logic of steam flow greater than feed flow coincident with low steam generator level on A steam generator was made up, caused by the feedwater flow reduction. All equipment functioned as designed on initiation of the Engineered Safety Feature Actuation Signal (ESFAS). Unit 4 was stabilized and all off normal operating procedures and immediate actions were successfully completed.

Based on previous commitments in that a nuclear unit will not be allowed to operate above 50% power with its corresponding start-up transformer out of service, a decision was made to reduce load on Unit 3; however, load reduction was not initiated since Unit 3's start-up transformer was re-energized at approximately 10:55 a.m. At 11:15 a.m., power was restored to the Unit 4C bus from the Unit 3C transformer. The following notifications were made via the ENS in accordance with 10 CFR 50.72:

1) Unit 3 - Unusual Event - Loss of Start-up Transformer
2) Unit 4 - Significant Event - ESF Actuation - Reactor Trip

The root cause was determined to be an error in the switching order requested and executed by non-nuclear personnel. The switchyard oil circuit breaker controls for the Flagami No. 2 line are located at the Fossil Units 1 and 2 control room. In order to preclude recurrence, the following corrective actions were developed:

1) Caution tags were placed on the control switches for the Flagami No. 2 line oil circuit breakers located at the Units 1 and 2 Control Room. These tags instruct the fossil unit operators to notify the Plant Supervisor - Nuclear prior to operating these breakers.
2) Update the Turkey Point CRT diagrams to properly show auxiliary feeds to the nuclear units. These diagrams are used by System Operations personnel as an aid to their duties.
3) Institute an independent verification to be used in the switching orders issued at both nuclear sites.
4) Update the Division Dispatch map board to show the Turkey Point auxiliary transformers and appropriate breakers designated with special flags.
5) Strengthen Division Dispatch training in the area of nuclear plant switching procedures. Special classes will be held to review normal operating procedures and the effect on nuclear unit operation.
6) Review the switchyard operation at both plants for special operating considerations. Review with System Protection personnel for impact to the reliability of the nuclear units.
7) Review the "Special Considerations" with Division Dispatchers, System Operators and Transmission Coordinators periodically. These "Special Considerations" are instructions used by the aforementioned personnel to warn them of peculiar configurations within the FPL electrical systems that may differ from normal.
8) Further modifications are being evaluated as part of the auxiliary power evaluation which included switchyard line-ups.

FPL

FLORIDA POWER & LIGHT COMPANY

September 6, 1984
PNS-LI-84-318

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

Gentlemen:

Re: Reportable Event 84-17
Turkey Point Unit 4
Date of Event: August 7, 1984
Engineered Safety Feature 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,

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

JWW/PLP/js

Attachment

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

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