

**LICENSEE EVENT REPORT (LER)**

FACILITY NAME (1) Turkey Point Unit 3															DOCKET NUMBER (2) 0 5 0 0 0 2 5 0					PAGE (3) 1 OF 1		
TITLE (4) Engineered Safety Feature Actuation - Reactor Trip																						
EVENT DATE (6)			LER NUMBER (8)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (9)													
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES				DOCKET NUMBER(S)									
									N/A				0 5 0 0 0									
0 2	1	2 8	4 8	4	0 0 6	0	0	0 3	1	3	8	4	N/A									
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 8. (Check one or more of the following) (11)																			
N			20.402(b)			20.405(e)			X			80.73(a)(2)(iv)			73.71(b)							
POWER LEVEL (10)			20.405(a)(1)(i)			80.36(a)(1)						80.73(a)(2)(v)			73.71(a)							
1 0 1 0			20.405(a)(1)(ii)			80.36(a)(2)						80.73(a)(2)(vi)			OTHER (Specify in Abstract below and in Text, NAC Form 365A)							
			20.405(a)(1)(iii)			80.73(a)(2)(i)						80.73(a)(2)(vii)(A)										
			20.405(a)(1)(iv)			80.73(a)(2)(ii)						80.73(a)(2)(vii)(B)										
			20.405(a)(1)(v)			80.73(a)(2)(iii)						80.73(a)(2)(x)										
LICENSEE CONTACT FOR THIS LER (12)																						
NAME										TELEPHONE NUMBER												
Paul A. Roach, Regulation and Compliance Engineer										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 NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC												
X	F	K 8 1 7	G	0 8 1 0	N																	
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)												
YES (If yes, complete EXPECTED SUBMISSION DATE)										MONTH DAY YEAR												
X NO																						

On February 12, 1984, a reactor trip occurred. The root cause was determined to be due to an electrical relay malfunction which resulted in loss of power to a non-safety related 4160 volt bus. This de-energized the 4160 volt power supply to a steam generator (S/G) feedwater pump. The reduced feedwater flow transient resulted in a reactor trip on Reactor Protection System logic - "Steam Flow/Feedwater Flow Mismatch" coincident with "Low 'C' S/G Water Level". All equipment functioned as designed on initiation of the Engineered Safety Feature Actuation Signal (ESFAS). Immediate corrective actions included a design review and completion of satisfactory testing of the automatic turbine governor runback logic circuitry to verify that a runback is initiated on loss of a S/G feedwater pump. Long term corrective actions will be addressed in LER 250-84-007. The health and safety of the public were not affected. Similar occurrences: None.

8403160058 840313  
PDR ADCK 05000250  
S PDR

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104  
EXPIRES 8/31/85

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

TEXT (If more space is required, use additional NRC Form 365A's) (17)

On February 12, 1984, at 6:38 a.m., the Unit 3 reactor tripped from 100% power. The root cause was determined to be due to a malfunction of a 'C' phase differential fault protection relay which initiated a lock-out of the Northeast 240 KV switchyard bus, de-energizing the 3C auxiliary transformer and the non-safety related 3C 4160 volt bus and its power supply to the 3B steam generator (S/G) feedwater pump. The reduced feedwater flow transient resulted in a reactor trip on Reactor Protection System (RPS) logic - "Steam Flow/Feedwater Flow Mismatch" (1/2 channels) coincident with "Low 'C' S/G Water Level" (1/3 S/Gs).

A spurious actuation of the 'C' phase differential fault protection relay on the adjacent fossil Units 1 and 2 startup transformer initiated the lock-out of the NE 240 KV bus in the switchyard. This resulted in de-energizing the 3C auxiliary transformer (240 KV/4 KV) originally powered from the NE 240 KV bus, and its feeder circuits associated with 4160 volt bus feeder breakers 3AC16 and 4AC01 (the normal and alternate supplies to the 3C and 4C 4160 volt busses, respectively). Breaker 3AC16 was closed-in on the non-safety related 3C 4160 volt bus when the lock-out occurred and, thus, loss of power to the 3C bus resulted which ultimately resulted in the reactor trip.

The loss of a S/G feedwater pump above 70% power initiates an automatic turbine governor runback. However, anytime the oil pressure setting of the turbine load limit valve is below that of the turbine governor valve, the runback feature will not actually reduce turbine load until the governor valve oil pressure drops below the load limit valve oil pressure. Information gathered during the post trip review indicates that the turbine did not runback and reduce load. This was determined to be due to the governor valve oil pressure being above that of the load limit valve as described above. In the future, the turbine governor valve oil pressure normally will be maintained below that of the load limit valve unless control oil problems necessitate otherwise.

Additional information regarding this event will be presented and addressed in LER 250-84-007. All equipment functioned as designed on initiation of the Engineered Safety Feature Actuation signal generated in the RPS. Following completion of the post trip review, having identified no other problems, the unit evolution - hot shutdown to power operation commenced.



March 13, 1984  
PNS-LI-84-92

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

Gentlemen:

Re: Reportable Event 84-06  
Turkey Point Unit 3  
Date of Event: February 12, 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,

A handwritten signature in dark ink, appearing to read "J.W. Williams, Jr.", is written over the typed name.

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

JWW/PLP:js

Attachment

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

IE22  
11