

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Turkey Point Unit 4										DOCKET NUMBER (2) 0 5 0 0 0 2 5 1 1										PAGE (3) 1 OF 0 2																													
TITLE (4) 'A', 'B' and 'D' 480 Volt Load Center Feeder Breakers Trip																																																	
EVENT DATE (5) 0 5 0 9 8 4 8 4										LER NUMBER (6) 0 0 7 0 0 0 6 0 8 8 4										REPORT DATE (7) 0 5 0 9 8 4										OTHER FACILITIES INVOLVED (8) N/A																			
MONTH DAY YEAR										YEAR SEQUENTIAL NUMBER REVISION NUMBER										MONTH DAY YEAR										FACILITY NAMES N/A										DOCKET NUMBER(S) 0 5 0 0 0 0									
OPERATING MODE (9) N										THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)																																							
POWER LEVEL (10) 01010										20.402(b)										20.408(a)										80.73(a)(2)(iv)										73.71(b)									
										20.408(a)(1)(i)										80.38(a)(1)										80.73(a)(2)(v)										73.71(a)									
										20.408(a)(1)(ii)										80.38(a)(2)										80.73(a)(2)(vi)										OTHER (Specify in Abstract below and in Text, NRC Form 365A)									
										20.408(a)(1)(iii)										80.73(a)(2)(i)										80.73(a)(2)(vii)(A)																			
										20.408(a)(1)(iv)										80.73(a)(2)(ii)										80.73(a)(2)(vii)(B)																			
										20.408(a)(1)(v)										80.73(a)(2)(iii)										80.73(a)(2)(viii)																			
LICENSEE CONTACT FOR THIS LER (12)																																																	
NAME Paul A. Roach, Regulation and Compliance Engineer																				TELEPHONE NUMBER 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									
SUPPLEMENTAL REPORT EXPECTED (14)																																																	
YES (If yes, complete EXPECTED SUBMISSION DATE)																				X NO										EXPECTED SUBMISSION DATE (15)										MONTH DAY YEAR									

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On May 9, 1984, with Unit 4 in a scheduled refueling outage (core reload completed), tripping of three 480 volt load center feeder breakers occurred. The root cause was determined to stem from a procedural deficiency that allowed direct current (d.c.) electrical power to be applied to an alternating current (a.c.) type of coil. The coils provide input to a computer input relay board for monitoring of 'breaker closed' position indication during performance of Operating Procedure 4104.2, Engineered Safeguards and Emergency Power Systems -Integrated Test. The a.c. coils shorted out approximately one hour after being installed and resulted in tripping of the three 480 volt load center feeder breakers. Immediate corrective actions included restoring power to the three 480 volt load centers, procedure revisions to install d.c. coils and to modify the monitoring circuits to look at 'breaker open' position indication to preclude another breaker trip on a fault in the monitoring circuit, removal of the failed a.c. coils and installation of replacement d.c. coils. The health and safety of the public were not affected. Similar occurrences: None.

IE22

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Turkey Point Unit 4	05000251	84	007	00	02	OF	02

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

On May 9, 1984, with Unit 4 in a scheduled refueling outage (core reload completed), tripping of 'A', 'B', and 'D' 480 volt load center feeder breakers occurred at 6:10 p.m., 6:25 p.m., and 6:10 p.m., respectively. The root cause was determined to stem from a procedural deficiency that allowed direct current (d.c.) electrical power to be applied to an alternating current (a.c.) type of coil. The a.c. coils shorted out approximately one hour after being installed and resulted in tripping of the three 480 volt load center feeder breakers.

During preparations for performance of Operating Procedure 4104.2, Engineered Safeguards and Emergency Power Systems - Integrated Test, coil connections for a computer input relay board were being made per Maintenance Procedure (MP) 4107.5, Electrical Preparations for Integrated Test of Engineered Safeguards and Emergency Power Systems. A procedural deficiency in MP 4107.5 existed that resulted in d.c. power being applied to an a.c. coil. Previously, these coils (coil numbers 21, 22, 23, and 24) monitored a.c. motor operated valves. A procedure change was instituted that changed them to monitoring load center feeder breakers (with d.c. control circuits) but did not specifically address the requirement for the coils to be changed out from a.c. to d.c. prior to landing leads. As a result, the leads were landed on the a.c. coils while efforts were underway to obtain and install the d.c. coils. The a.c. coils, which were wired in parallel with the 'breaker closed' position indication light circuit, which is in series with the breaker trip coil, shorted to ground and actuated the trip coils, tripping the associated feeder breakers. Note that the current flow through the 'breaker closed' position indication light circuit is not enough to pickup the breaker(s) trip coil, but a short circuit in the a.c. coil is since essentially no resistance to current flow remains. Thus, the circuits monitored were transferred over to the 'breaker open' position indication light circuit to preclude a coil fault tripping the breaker being monitored.

On May 11, 1984, the Integrated Test of Engineered Safeguards and Emergency Power Systems was completed satisfactorily. This test is not performed in any mode other than refueling shutdown, and therefore, the possibility of losing three load centers simultaneously in the same manner under more restrictive plant conditions (e.g., at full power) does not exist. Throughout this event, one train of shutdown cooling remained available and no reactivity changes were made.



June 8, 1984  
PNS-LI-84-206

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

Gentlemen:

Re: Reportable Event 84-007  
Turkey Point Unit 4  
Date of Event: May 9, 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,

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

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

EE22  
11